RESPONSE TO COMMENTS
PRELIMINARY ENVIRONMENTAL ASSESSMENT REPORT
CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

Comment No.	Page	Section	DTSC COMMENT	NINYO & MOORE RESPONSE
Review Comments by Christine Chiu, Project Manager, Schools Unit, DTSC, October 23, 2014				
1.a.	53	11.2	*"This section recommends placement of a cover over exposed waste in the planter area as soon as possible for purposed of compliance with CCR Title 27 requirements, implementation of a land use covenant, and operation and maintenance activities. However, the text does not recommend further action of such cover via the removal action workplan (RAW) process. As indicated in DTSC's letter, dated June 25, 2014, regarding the previous PEA Report, any further action as part of the school cleanup up [sic] process is to be conducted via a RAW as a final remedy; these activities would be conducted under DTSC oversight. For the purposed of the PEA, the placement of a cover should be recommended as further action should be conducted under the RAW process. If the San Diego Unified School District (District) decides to comply with CCR Title 27 requirements, which is under another regulatory agency's jurisdiction, by placing cover prior to the RAW, DTSC is not 'delaying' any such action and the cover may have to be altered based on the final RAW (see Comment 1b)."*	Ninyo & Moore recommends placement of cover in areas where wastes are exposed should be performed; however, we do not recommend that it be performed as part of the Removal Action Work Plan (RAW) process due to the length of time it will take for the RAW process to be completed (typically more than 6 months). Ninyo & Moore recommends that the placement of cover be performed as soon as possible to be in compliance with California Code of Regulations (CCR) Title 27 and to be protective of human health and the environment. The California Department of Toxic Substances Control (DTSC) recommends that "any further action as part of the school cleanup up [sic] process is to be conducted via a RAW" as is stated in comment 1.a. of DTSC's letter dated October 23, 2014. Since a portion of the area requiring placement of cover is within the City of San Diego (City) right-of-way, the District must perform the work in conjunction with the City for cost sharing purposes. Mr. Loren Chico of the District has been coordinating with the City and has been informed by the City that they will not move forward with cost-sharing agreements for the placement of cover without the approval of the lead regulatory agency on the project, which is DTSC. As a result, the District cannot move forward with the placement of cover until DTSC provides their approval. DTSC has stated that cannot provide their approval unless it is done through the RAW process. The RAW process is estimate d to take more than 6 months. The report has been revised to reflect this. It our opinion that the RAW process (typically more than 6 months) will cause significant delay in the placement of cover resulting in the site being out of regulatory compliance for a longer period of time and more importantly could result in the exposure of burned wastes to human health and the environment. Although, not in agreement for reasons stated the report was revised to reflect that DTSC requires that any further action as part of the school cleanup be performed via a RAW.

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1.b.	53	11.2	*"The text states 'DTSC stated in their letter dated June 25, 2014 that this action can only be performed via a Removal Action Work Plan (RAW) and therefore implementation of this recommendation will be delayed until that process can be complete.' The text is inaccurate as DTSC did not make such statements and is used out of context misrepresenting DTSC; strike such text from the Report. Also, DTSC explained the following in its October 7, 2014 e-mail to Sergio Salinas with the District: '[i]f the District decides to cover the planter area now as a temporary measure to reduce nuisance complaints, any action taken which is not part of the RAW process would be outside of DTSC's regulatory authority. In addition, any such temporary cover may have to be altered based upon the final RAW. If the District decides to place a temporary cover, the burned waste material should not be disturbed and appropriate health and safety measures should be taken to prevent such activities, future Site documents (e.g., the RAW) should document the action taken."*	Please see previous response to comment 1.a. with regards to the placement of temporary cover. As noted by DTSC in their comment 1.a., if the District does elect to install cover over the exposed waste to be in compliance with Title 27 CCR that would not be under the jurisdiction of the DTSC. This work, if performed, may involve the disturbance of burned waste materials, but would be performed under the oversight of the City of San Diego Solid Waste Local Enforcement Agency, which would ensure the activities were protective of human health and the environment. In addition, please note that Sergio Salinas with the District is not the District contact for this site. Mr. Loren Chico has been the District contact on this site since the project began and remains the site contact. Please direct any and all communications related to this site to Mr. Chico. Please also note that the date of the e-mail sent to Mr. Salinas (October 7, 2014) is dated after the issuance of the previous version of the Draft PEA report (August 29, 2014); therefore, it would not have been possible for Ninyo & Moore to incorporate those comments into that report.
1.c.	--	11.2	*"Based on the Report, Ute Drive, which is part of the City of San Diego, was removed from the Site area. Since DTSC does not have jurisdiction for property outside of the Site area at this time, DTSC recommends that the District ensure the appropriate agency oversee any future activities which may disturb the soil beneath Ute Drive."*	The City of San Diego was notified of the presence of the burned wastes in July 2011 when they were first encountered. The City of San Diego Solid Waste Local Enforcement Agency (LEA) is the local regulatory agency with jurisdiction over the site and would be responsible for overseeing any work within City-owned property. In addition, an encroachment permit would be required, which would be overseen by the City of San Diego Public Works Department.

Comment No.	Page	Section	DTSC COMMENT	NINYO & MOORE RESPONSE
1.d.	--	11.2	*"This section recommends further action with a proposed strategy including specific details. Note that the specifics of any response action will be finalized in the removal action workplan (RAW)."*	Comment noted.
2.	--	Fig. 3	*"This figure was not included in the hard copy of the document. Include this figure in the revised document."*	A copy of Figure 3 will be included in the hard copy of the revised document.
Review Comments Shulka Roy-Semmend, Ph.D., DTSC, October 23, 2014				
COMMENTS				
1.	--	--	*"**Data evaluated in the risk assessment:** The report should be revised to include data collected from 0-10 feet below ground surface (bgs). A residential scenario should be evaluated to determine whether a land use covenant (LUC) is appropriate for the area. If the site is safe for residential land use, a No Furth Action (NFA) determination can be supported. If no, a Land Use Covenant (LUC) should be considered. For a residential scenario, it is assumed that people may come in contact with contaminants present at 0-10 feet bgs due to digging /mixing of soils during redevelopment activities. Currently, the report uses only date collected from 0-2 feet in the risk evaluation."*	This comment is in contradiction to your Comment No. 4, which states that a Land Use Covenant (LUC) is appropriate for this site based on the elevated concentrations of lead and arsenic in the burned waste. Ninyo & Moore and the District concur that an LUC is appropriate, which is why the RAW recommends an LUC as part of the remedial action. The District is not seeking to receive a status of No Further Action (NFA) for this site and is not planning to change the site use from the current use as a high school. Since the District is not seeking an NFA or seeking approval for use of the site for residential purposes and recommends an LUC for the site, we do not feel it is necessary to evaluate the top 10 feet of soil as a potentially complete exposure pathway. As stated in the RAW, LEA Advisory #56 considers 2 feet of unimpacted cover to be adequate cover for landfill sites and therefore Ninyo & Moore evaluated the top two feet of soil as a potentially complete exposure pathway.

Comment No.	Page	Section	DTSC COMMENT	NINYO & MOORE RESPONSE
2.	44 45 46 52	7.2, 7.3, 7.5, 11.1	*"**Blood lead modeling:** Soils lead data should be evaluated using DTSC's leadspread 8.0. Blood lead levels can be estimated for people who may come into contact with the contaminated soils, with the most vulnerable populations being young children and unborn fetuses of pregnant women. Please include this evaluation in the report."*	The LeadSpread 8 spreadsheet downloaded from the DTSC's website in January 2015 was utilized to evaluate the potential blood lead concentration at the site and is discussed in the report.
3.	--	--	*"**Screening level assessment:** The report evaluated non-cancer hazards for only seven metals detected at the site (Table 6), using the maximum detected concentrations and the residential screening levels. If the residential screening levels are being used in the evaluation, data collected from 0-10 feet bgs should be included in the analysis, to allow for an apples-to-apples comparison. As stated above, we support the evaluation of a residential scenario for this site when various land use options, are being considered (such as NFA, LUC). Cancer risk evaluation was entirely omitted from the report, since carcinogens were not reported to be detected in the surface soils (0-2 feet bgs). Please revise the report and the Conceptual Site Model (Figure 7) to include a residential scenario in the risk analysis."*	Please see our previous response to comment 1. In addition, please note the following: • The residential screening levels were utilized in the screening level assessment to provide the most conservative health risk estimate for the potentially complete exposure pathways and we feel that the commercial/industrial screening levels would not be an appropriate screening level for this site. • The cancer risk evaluation was not "omitted" from the report as stated in the comment. The RAW states that a cancer risk could not be calculated because no carcinogenic compounds were detected in soil samples within the top 2 feet of soil.
4.	--	--	*"**Land Use Covenant:** Due to the presence of high concentrations of lead and arsenic in the burn dump area, a land use covenant is appropriate for this area."*	Ninyo & Moore and the District concur that an LUC is appropriate, which is why the RAW recommends an LUC as part of the recommended remedial action.

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Comment No.	Page	Section	DTSC COMMENT	NINYO & MOORE RESPONSE
Review Comments Shulka Roy-Semmend, Ph.D., DTSC, March 24, 2015				
COMMENTS				
1.	iii 3 29 43-48 49 55-56 62 Tables 2-8 Tables I-1 to I-5 Figure 7	TOC Ex. Sum 5.2.1 7.1-7.3 7.5 11.1-11.2 15.0 Tables Appendix I Figures	*"**Data evaluated in the risk assessment:** The report should be revised to include data collected from 0-10 feet below ground surface (bgs). A residential scenario should be evaluated to determine whether a land use covenant (LUC) is appropriate for the area. If the site is safe for residential land use, a No Furth Action (NFA) determination can be supported. If no, a Land Use Covenant (LUC) should be considered. For a residential scenario, it is assumed that people may come in contact with contaminants present at 0-10 feet bgs due to digging /mixing of soils during redevelopment activities. Currently, the report uses only date collected from 0-2 feet in the risk evaluation."*	The District is not seeking an NFA or seeking approval for use of the site for residential purposes and recommends an LUC for the site; therefore, we do not feel it is necessary to evaluate the top 10 feet of soil or to evaluate the site for potential or future residential land use. In addition, the California Integrated Waste Management Board (now called the California Department of Resources Recycling and Recovery) LEA Advisory #56 considers 2 feet of unimpacted cover to be adequate cover for landfill. Based on this information and that the majority of the site is also covered by hardscape, the only complete exposure pathways at the site are associated with the top 2 feet of soil within unpaved areas of the site. Although DTSC has not provided any statutory requirement that the top 10 feet of must be evaluated, the District has agreed to include an evaluation of the top 10 feet of soil/burned waste regardless of the current guidance and practices of CalRecycle (the State agency that oversees burn sites) in an effort to keep the evaluation and cleanup process moving forward without further unnecessary delays in receiving approval from DTSC to cover or cap the exposed burned waste at the site.

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2.	iii 3 29 43-48 49 55-56 62 Tables 2-8 Tables I-1 to I-5 Figure 7	TOC Ex. Sum 5.2.1 7.1-7.3 7.5 11.1-11.2 15.0 Tables Appendix I Figures	*"**Screening level assessment:** The report evaluated non-cancer hazards for only seven metals detected at the site (Table 6), using the maximum detected concentrations and the residential screening levels. If the residential screening levels are being used in the evaluation, data collected from 0-10 feet bgs should be included in the analysis, to allow for an apples-to-apples comparison. As stated above, we support the evaluation of a residential scenario for this site when various land use options, are being considered (such as NFA, LUC). Cancer risk evaluation was entirely omitted from the report, since carcinogens were not reported to be detected in the surface soils (0-2 feet bgs). Please revise the report and the Conceptual Site Model (Figure 7) to include a residential scenario in the risk analysis."*	Please see our previous response to comment 1. In addition, please note the following: • The residential screening levels were utilized in the screening level assessment to provide the most conservative health risk estimate for the potentially complete exposure pathways and we feel that the commercial/industrial screening levels would not be an appropriate screening level for this site. • The cancer risk evaluation was not "omitted" from the report as stated in the comment. The report stated that a cancer risk could not be calculated because no carcinogenic compounds were detected in soil samples within the top 2 feet of soil. • Please note that the top 10 feet of soil/burned waste is not a complete exposure pathway at the site per LEA Advisory #56 and therefore should not be included in the risk calculations; however, the District has agreed to include an evaluation of the top 10 feet of soil/burned waste regardless of the current guidance and practices of CalRecycle (the State agency that oversees burn sites) in an effort to keep the evaluation and cleanup process moving forward without further unnecessary delays in receiving approval from DTSC to cover or cap the exposed burned waste at the site. • Figure 7 has been revised to show the DTSC-required exposure pathway; however, this pathway is not considered to be complete.

PRELIMINARY ENVIRONMENTAL ASSESSMENT REPORT CLAIREMONT HIGH SCHOOL 4150 UTE DRIVE SAN DIEGO, CALIFORNIA

PREPARED FOR:
San Diego Unified School District
4860 Ruffner Road
San Diego, California 92111

PREPARED BY:
Ninyo & Moore
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5710 Ruffin Road
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April 30, 2015
Project No. 105338106

April 30, 2015
Project No. 105338106

Mr. Loren Chico
San Diego Unified School District
4860 Ruffner Street
San Diego, California 92111

Subject: Preliminary Environmental Assessment Report
Clairemont High School
4150 Ute Drive
San Diego, California

Dear Mr. Chico:

In accordance with your request, Ninyo & Moore has prepared a Preliminary Environmental Assessment (PEA) Report for a portion of Clairemont High School located at 4150 Ute Drive, in the city and county of San Diego, California. The attached PEA Report documents previous the results of the investigations performed by Ninyo & Moore in 2011 and 2013.

We appreciate the opportunity to be of service to you on this project. Should you have any questions, please contact us at your convenience.

Respectfully submitted,
NINYO & MOORE

Lisa Bestard
Senior Project Environmental Scientist

Beth S. Abramson-Beck, PG 4580
Principal Geologist

REGISTERED GEOLOGIST
BETH S. ABRAMSON-BECK
No. 4580
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Distribution: (1) Addressee
(1) Ms. Christine Chiu; Department of Toxic Substances Control, Cypress
(1) Mr. Daron Warkentin; City of San Diego Solid Waste Local Enforcement Agency

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LIST OF ACRONYMS

AAI	All Appropriate Inquiry
APCD	Air Pollution Control District
APN	Assessor's Parcel Number
ASTM	American Society of Testing and Materials
ATL	Advanced Technology Laboratories
AUL	Activity and Use Limitations
CalRecycle	California Department of Resources Recycling and Recovery
CCR	California Code of Regulations
CERCLA	California Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CGI	Combustible Gas Indicator
COC	Contaminant of Concern
COPEC	Contaminant of Potential Ecological Concern
CSM	Conceptual Site Model
DDD	4,4'-dichlorodiphenyldichloroethane
DDE	4,4'-dichlorodiphenyldichloroethylene
DDT	4,4'-dichlorodiphenyltrichloroethane
DEH	County of San Diego Department of Environmental Health
DTSC	Department of Toxic Substances Control
ECR	Excess Cancer Risk
EDR	Environmental Data Resources
EP	Environmental Professional
HA	Hydrologic Area
HHSE	Human Health Screening Evaluation
HI	Hazard Index
HSP	Health and Safety Plan
ID	Identification
LDC	Laboratory Data Consultants
LEA	Local Enforcement Agency
mg/kg	Milligrams per kilogram
MSCP	City of San Diego Multiple Species Conservation Program
MSL	Mean Sea Level
ng/kg	Nanograms per kilogram
NOAA	National Oceanographic and Atmospheric Administration
OCP	Organochlorine Pesticides
PAH	Polynuclear Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PEA	Preliminary Environmental Assessment
PG	Professional Geologist
PID	Photoionization Detector
ppm	Parts per million
QA/QC	Quality Assurance/Quality Control
RWQCB	San Diego Regional Water Quality Control Board

RSLs	United States Environmental Protection Agency, Region 9, Regional Screening Levels (November 2013)
District	San Diego Unified School District
SSI	Supplementary Site Investigation
SWIS	Solid Waste Information System
TPH-e	Total Petroleum Hydrocarbons Extended Range (C8-C40)
UCL	Upper Confidence Limit
ug/dl	Micrograms per kilogram
ug/kg	Micrograms per deciliter
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds

EXECUTIVE SUMMARY

Ninyo & Moore was retained by the San Diego Unified School District (District) to prepare a Preliminary Environmental Assessment (PEA) report for a portion of Clairemont High School in San Diego, California. The site is located at 4150 Ute Drive, and has been occupied by Clairemont High School since its construction in 1958. The site consists of an asphalt-paved parking lot and associated landscaped planter located on the northwest side of Ute Drive and an undeveloped area located southeast of Ute Drive. Ute Drive, the associated sidewalks, and a strip of land southeast of Ute Drive is part of the public right-of-way and is owned by the City of San Diego; therefore, it is not considered to be part of the site.

The objectives of the PEA were to:

- compile data from this and previous investigations,
- perform an investigation to supplement the previous data,
- assess the types of contaminants, concentrations and general extent of contamination associated with the burned wastes at the site; and
- estimate the potential threat to public health and the environment based on a risk analysis.

The PEA report was prepared in accordance with the Department of Toxic Substances Control (DTSC) guidelines, as presented in the PEA Guidance Manual (DTSC, 2013).

The PEA field investigation, conducted in August 2013, included sampling and analysis of burned wastes and soils. PEA field activities focused on evaluating areas of the site corresponding to where wastes were disposed of in a former canyon or finger canyon and burned prior to construction of the school. Trenching and sampling was also previously performed by Ninyo & Moore in September 2011 (Ninyo & Moore, 2012). The following is a summary of the results of the 2011 and 2013 investigations:

- Eleven trenches were excavated and sampled in September 2011 and 12 trenches were excavated and sampled in August 2013. With the exception of the area to the southeast of Ute Drive, the extent of burned wastes was generally delineated horizontally and appears to be limited to within the site boundaries. The canyon slope southeast of Ute Drive was not accessible and the extent of wastes in this direction is not known.
- The majority of the burned waste is located underneath asphalt and concrete paving. The unpaved areas of the site include a landscaped planter and the area of the site southeast of Ute Drive. Burned wastes were observed at some locations at the surface in the landscape planter. At the area at the top of the slope southeast of Ute Drive, burned wastes were not observed at the surface and based on the exploratory trench excavations in this area, the wastes are covered by 4 to 9.5 feet of fill.

- Based on field observations, there appears to be two kinds of wastes at the site, primary and secondary waste deposits. The primary wastes appear to have been disposed of and burned or partially burned in place. Primary waste deposits comprise the majority of burned wastes at the site. These wastes are mixed with variable amounts of fill soils and typically, the percentage of burned wastes ranges from 10 to 95%. Burned wastes and burned wastes mixed with fill were encountered in 13 exploratory trenches (T-2 through T-6, T-8, T-11, OT, and T-12 through T-16) from below the asphalt or surface grade to depths greater than 21 feet below ground surface, which was the maximum depth excavated. Waste thicknesses ranged from several inches to greater than 11 feet.

  The secondary waste deposits consist of minor amounts (less than 1%) of what appears to have been primary waste deposits that were subsequently moved/mixed with fill soils, likely related to site grading associated with construction of the school. The secondary waste deposits consist almost entirely of fill soils with occasional pieces of waste debris, generally broken pieces of glass. What are interpreted to be secondary waste deposits are represented by trench excavations T-5, T-6, T-8, T-21, and T-22, which contain only minor wastes, estimated at approximately 1% or less at relatively shallow depths.

- Seventy-four samples were collected from the 23 trench locations. Each of the samples was analyzed for lead and at least one sample per trench was analyzed for Title 22 Metals. Samples known or suspected of containing the highest lead or other metal concentrations were additionally analyzed for total petroleum hydrocarbons extended range (TPH-e), polynuclear aromatic hydrocarbons (PAHs), and organochlorine pesticides (OCPs). Eight samples were analyzed for polychlorinated biphenyls (PCBs) and four samples were analyzed for dioxins.

- Antimony, barium, chromium, cobalt, copper, mercury, molybdenum, nickel, silver, vanadium, and zinc were detected at concentrations exceeding their respective background metals concentrations. Arsenic, lead, and cadmium were detected at concentrations exceeding their respective DTSC ambient or screening levels. The elevated metal concentrations correlated with samples that contained burned wastes. Samples outlying the primary and secondary wastes did not contain elevated concentrations of metals.

- The PAHs acenapthylene and phenanthrene were detected at low concentrations in samples of burned waste and were not detected in the other samples analyzed. PCBs were not detected in the eight samples analyzed. Dioxins were detected in two of the four samples analyzed at concentrations of 14 and 120 nanograms per kilogram. The OCPs 4'-dichlorodiphenyldichloroethane, 4,4'-dichlorodiphenyldichloroethylene, and 4,4'-dichlorodiphenyltrichloroethane were detected in several samples of burned wastes at maximum concentrations of 11, 740, and 940 micrograms per kilogram, respectively, which are below their respective Regional Screening Levels. TPH-e was detected in three samples of burned waste at concentrations of 18, 94, and 230 milligrams per kilogram.

- HHSE risk calculations were performed either using the 95% UCL or maximum concentration (for COCs in which a 95% UCL could not be calculated) for COCs that exceeded their background concentrations in three scenarios: top 10 feet of soil/burned waste (regardless of cover materials), top 2 feet of soil/burned waste (unpaved areas), and top 2 feet of soil excluding the landscaped planter (unpaved areas).
    - As required by DTSC, this risk assessment considered exposure to receptors (adult and child in a residential setting, regardless of actual or future land uses) from COCs within the top 10 feet. However, it should be noted that it is the opinion of Ninyo & Moore that the exposure pathway to soil/burned waste overlain by hardscape (i.e., asphalt or concrete) or a minimum of 2 feet of fill is not complete under the current or future land uses (i.e., high school) and as indicated in LEA Advisory #56 (CIWMB, 1998). Therefore, the evaluation of the complete exposure pathways within the top 2 feet in areas not covered by hardscape (i.e., unpaved) is also included in this PEA. The District has agreed to include an evaluation of the top 10 feet of soil regardless of the current guidance and practices of CalRecycle (the State agency that oversees burn sites) in an effort to keep the evaluation and cleanup process moving forward without further unnecessary delays.
    - The potential health risks of the current site conditions are best represented by the scenario that evaluated 2 feet of soil/burned waste in unpaved areas of the site. The calculated risks for the top 2 feet of unpaved soil/burned wastes indicate that there is a potential non-carcinogenic health risk; however, the carcinogenic risk is below the action level of $1x10^{-6}$.
    - For comparative purposes, the health risks for the top 2 feet of the unpaved areas of the site excluding the landscaped planter were calculated. If the landscaped planter was no longer a complete exposure pathway (e.g., covered with hardscape or 2 feet of clean cover), the concentrations of COCs would be below their respective background, ambient, and screening levels and therefore potential health risks would not be present.
    - The unpaved area consisting of the canyon slope was not accessible to sampling; therefore, conclusions regarding the potential health risks do not include this area at this time.
- Although Contaminants of Potential Environmental Concern are present and there are potentially complete exposure pathways in the unpaved areas of the site, the site and areas potentially impacted by the site are not likely to be significantly utilized by biota or to contain significant wildlife habitats. Based on this information, an ecological risk at the site is not likely.

Ninyo & Moore provides the following recommendations:

- As required by the DTSC, prepare a Removal Action Work Plan (RAW) to evaluate potential remedial actions.

- Even though the area of exposed wastes in the landscaped planter that parallels Ute Drive is temporarily fenced off to limit site access, the wastes continue to be a risk to human health and the environment. It was previously recommended that the exposed wastes in the planter area be covered with 2 feet of soil); however, the DTSC is requiring a Removal Action Work Plan (RAW) be prepared to evaluate potential remedial actions. The anticipated additional length of time associated with the RAW process may result in additional risk to public health, safety, and during this time the environment and the site remains in violation of California Code of Regulations (CCR) Title 27 requirements. It is recommended that:

    - The wastes be covered with hardscape (e.g., asphalt, concrete, etc.) or at least 2 feet of unimpacted soils. It is recommended that the cover be placed over the wastes in the planter area as soon as possible to be protective of public health, safety and the environment, to be in compliance with applicable CCR Title 27 requirements, and to avoid potential Notice of Violations by the City of San Diego Solid Waste Local Enforcement Agency based on their semi-annual site inspections. However, the DTSC stated in a letter dated October 23, 2014 that the "placement of cover should be recommended for as further action should be conducted under the RAW process" and that "any further as part of the school cleanup up [sic] process is to be conducted via a RAW as the final remedy." Since a portion of the area requiring placement of cover is within the City of San Diego (City) right-of-way, the District must perform the work in conjunction with the City for cost sharing purposes. The District has been coordinating with the City and has been informed by the City that they will not move forward with cost-sharing agreements for the placement of cover without the approval of the lead regulatory agency on the project, which is DTSC. As a result, the District cannot move forward with the placement of cover until DTSC provides their approval, which they cannot provide unless it is done through the RAW process. The estimated time frame for completion of the RAW process is greater than six months, over which time there remains the potential for the exposed wastes to adversely impact public health, safety, and the environment.

    - The cover be maintained in general compliance with applicable sections of CCR Title 27 pertaining to the post-closure maintenance of landfills (waste disposal sites) including requirements pertaining to final cover.

    - An Operations & Maintenance (O&M) Plan be prepared that describes the methods to be employed to protect public health, safety, and the environment from potential impacts associated with the burned wastes at the site.

    - A land use covenant (LUC) be recorded for the site to include the areas underlain by burned wastes that describes the restrictions associated with the site and provides information regarding changes in site use and/or land transfers.

- Further vertical delineation of the wastes in the area of trenches T-14 and T-15, southeast of Ute Drive and northwest of the canyon is not recommended since the wastes in this area are covered with 8.5 to 9.5 feet of fill soils. However, the existing soil cover should be maintained in accordance with applicable sections of CCR Title 27, a site O&M Plan, and a LUC to protect the integrity of the cover materials, public health, safety, and the environment as described above.

- The canyon slope southeast of Ute Drive is not readily accessible and the extent of wastes in this direction is not known. However, due to the steep canyon slope and difficult access to this area, exposure to potentially exposed waste, if present, is not likely. A LUC should be recorded for the site to assure relevant persons are knowledge about the site conditions and to minimize the potential for exposure to the burned wastes, if present.

- Trench T-13, located southeast of Ute Drive, contained none to a maximum thickness of 0.5 feet of burned wastes. These minor wastes were overlain by approximately 4 feet of cover soil. Based on the absence to minimal thickness of wastes at this location, this was interpreted to generally represent the southeastern extent of wastes. It is our opinion that the southern extent of wastes is generally as shown on Figure 3. Additional lateral delineation is not warranted based on the minimal amounts of wastes, which are interpreted to represent the waste limits in this area, and more than adequate thickness of the overlying cover soils.

- Trench T-16, located on the southeast side of Ute Drive, contained wastes that are approximately 6.5 feet thick. Based on comparison of pre- and post- waste placement topographic contour intervals indicated on historic and current maps, it appears the lateral extent of wastes is generally as indicated on Figure 3. A combination of historical research, field data, the presence of approximately five feet of cover soils overlying wastes at T-16 and more than adequate cover at other exploratory trenches located southeast Ute Drive provide adequate rationale to support our opinion that the extent of waste northeast of T-16 is generally delineated. However, the existing soil cover should be maintained in accordance with applicable sections of CCR Title 27, a site O&M Plan, and a LUC to protect the integrity of the cover materials, public health, safety, and the environment as described above.

1. INTRODUCTION

This document presents the draft Preliminary Environmental Assessment (PEA) report for a portion of Clairemont High School, located at 4150 Ute Drive, in the city and county of San Diego, California (Figure 1). For the purposes of the PEA, the site is defined as the area on the school property where burned wastes were encountered during construction activities and subsequent environmental investigations and undeveloped property southeast of Ute Drive (Figures 2 and 3). This PEA report is being submitted by Ninyo & Moore on behalf of the San Diego Unified School District (District) to address the presence of burned waste on the site.

1.1. Preliminary Environmental Assessment Objectives

The District has requested Department of Toxic Substances Control (DTSC) oversight to ensure that the PEA activities are being completed in accordance with the DTSC's PEA Guidance Manual and other relevant guidance documents, including the requirements of 40 Code of Federal Regulations (CFR) §312 titled "Standards and Practices for All Appropriate Inquiries (AAI)," as required under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The District is currently operating in compliance with a programmatic Memorandum of Agreement with the DTSC.

In general, the objectives of this PEA include:

- compiling data from this and previous investigations,
- performing an investigation to supplement the previous data,
- assessing the types of contaminants, concentrations and general extent of contamination associated with the burned wastes at the site; and
- estimating the potential threat to public health and the environment based on a risk analysis.

Based on information developed during the PEA, the DTSC will make an informed decision regarding potential risks at the site. Possible outcomes of the PEA decision include the requirement for further assessment through limited additional site characterization, the Remedial Investigation/Feasibility Study process, or preparation of a Removal Action Work Plan or Remedial Action Plan.

1.2. Scope of Work

The scope of work for this PEA included the following:

- performed additional site characterization in an attempt to delineate the vertical and horizontal extent of the burned waste;
- conducted historical research of the site, including a review of historical aerial photographs, as-built construction plans, and in-house/online resources,
- conducted a Human Health Screening Evaluation (HHSE),
- compiled and analyze data, and
- prepared this report.

1.3. Report Organization

The PEA report is organized in general accordance with the suggested format presented in Chapter 3 of the DTSC's PEA Guidance Manual (DTSC, 2013). This PEA Report contains the following sections:

- **Section 1** presents the Introduction, PEA objectives, scope of work, and report organization, significant assumptions, Environmental Professionals (EP), deviations from AAI, and owner-provided information;
- **Section 2** presents the site identification, including site geology and hydrogeology;
- **Section 3** discusses background information, including site history and previous assessments, records reviews, and site reconnaissance, and interviews;
- **Section 4** defines the apparent problem;
- **Section 5** discusses the environmental setting of the site;

- **Section 6** presents the sampling activities and results;
- **Section 7** discusses the HHSE;
- **Section 8** discusses the Ecological Screening Evaluation;
- **Section 9** contains information pertaining to public participation;
- **Section 10** presents the opinion of the EP;
- **Section 11** presents the summary, conclusions, and recommendations of the PEA;
- **Section 12** discusses data gaps;
- **Section 13** provides the signature and qualifications of the EP**;**
- **Section 14** presents the report limitations; and,
- **Section 15** lists the selected references cited in the PEA.

The tables and figures following the report text provide visual aids and tabulated data to supplement the report discussion. Appendices include supporting documentation to the report.

1.4. Significant Assumptions

Significant assumptions were not made during the preparation of this report.

1.5. Involved Parties

Ms. Lisa Bestard, Senior Project Environmental Scientist, performed regulatory and historical research and performed a site reconnaissance in August 2013. Ms. Beth Abramson-Beck, Principal Geologist, performed the site characterization activities and provided project oversight and quality review. The site investigations were performed on September 1, 2011 and from August 20 to 22, 2013.

1.6. Deviations from All-Appropriate Inquiry

Deletions or deviations from the standard practice of American Society of Testing and Material (ASTM) method E 1527-13 and AAI were not noted during this assessment.

1.7. Owner-Provided Information

The District provided historical aerial photographs and as-built construction/grading plans that are discussed in Sections 3.1 and 3.5.2.

2. SITE DESCRIPTION

The site consists of a portion of Clairemont High School, which is addressed 4150 Ute Drive in the City of San Diego, California (Figure 1). The site consists of an asphalt-paved parking lot and associated landscaped planter located on the northwest side of Ute Drive and an undeveloped area located southeast of Ute Drive (Figure 2). The site occupies approximately 2.3-acres. Ute Drive traverses the southern portion of the site and is not considered to be part of the site because it is part of the City of San Diego (City) right-of-way and is not owned by the District (Figure 3).

The site is bound by the Clairemont High School Campus to the north, west, east, and southwest. The site is bounded to the southeast by the Sea Canyon multi-family residential complex.

2.1. Site Identification

This section provides a summary of the general information regarding the site.

- The site is located on Clairemont High School and consists of an asphalt-paved parking lot with landscaped planter and an undeveloped area southeast of Ute Drive.
- The designated contact for this project is Mr. Loren Chico, Civil Engineer for the District Facilities Planning and Construction Unit, located at 4860 Ruffner Street, San Diego, California 92111-1522; telephone number: (858) 573-5731; fax number: (858) 496-1772.
- According to the County of San Diego, Assessor's Office, the site occupies a portion of the parcel assigned Assessor's Parcel Number (APN) 425-800-01-00. A copy of the parcel map is provided in Appendix A.
- Based on a review of the United States Geological Survey (USGS) 7.5-minute topographic series, La Jolla, California quadrangle map, the site is located in Township 16 South, Range 3 West, Section 4 of the San Bernardino Baseline and Meridian (USGS, 2012). The geographic coordinates of the approximate center of the site are -117.202911^{o} west and 32.808579^{o} north (North American Datum of 1983).

- Clairemont High School is associated with one active federal permanent United States Environmental Protection Agency (USEPA) Identification (ID) number, CAD981452642, which appears to be related to the disposal of hazardous waste from school operations (e.g., oil/water separation sludge, laboratory chemical wastes, asbestos-containing waste, etc.). In a search performed for the previous assessment, a temporary state ID number, CAC00242865, was listed associated with the school that did not appear to have been related to disposal of waste (Ninyo & Moore, 2011). The number was listed as inactive as of October 25, 2000. A search for USEPA ID number CAC00242865 performed as part of this report did not return a listing in the DTSC's Hazardous Waste Tracking System.

- The site is listed on the California Department of Resources Recycling and Recovery (CalRecycle) Solid Waste Information System (SWIS) as the "Clairemont H.S. Burnsite" and is assigned SWIS No. 37-CR-0015. The SWIS listing indicates that the site is a closed waste disposal site that operated pre-regulations and ceased operations in approximately 1957.

2.2. Site Geology

Based on the Geologic Map of the San Diego 30' x 60' Quadrangle by Kennedy and Tan (2008), the parking lot area of the site is generally underlain by Very Old Paralic Deposits with minor amounts of the Scripps Formation closest to Ute Drive. The area of the site corresponding to and southeast of Ute Drive is underlain by the Scripps Formation.

Based on field observations made during the September 2011 and August 2013 site investigations, the site is generally underlain by fill, burned wastes, Very Old Paralic Deposits, and the Scripps Formation (Figures 4, 5, and 6). Copies of the trench logs describing the materials encountered at specific locations sampled are provided in Appendix B. The fill materials are variable and generally consist of light brownish reddish yellow to brownish yellowish red, light gray, gray to gray brown, light to medium brown, damp to moist, silty sand to clayey silty sand, very silty fine sand, clayey sandy silt to clayey silt, silty clay, and clay often with abundant well-rounded gravels and cobbles from below the asphalt paving to depths of up to 8.5 feet below ground surface (bgs). Southeast of Ute Drive, fill containing cobbles was encountered from the surface to depths of up to 9.5 feet bgs.

The Very Old Paralic Deposits or the Scripps Formation were encountered below the fill and/or burned wastes. The Very Old Paralic Deposits typically consist of brownish yellowish red, light grayish yellow, light brownish yellowish-gray, damp to slightly moist, silty clayey sand to cemented sandstone and conglomerate. The Scripps Formation generally consists of light brownish yellow, brown yellow red, gray to brown yellowish red, and light gray, damp, indurated clayey siltstone, siltstone, and claystone with interbedded sandstone, sandstone, very silty fine-grained to medium-grained sandstone, friable sandstone, and cemented sandstone.

Based on field observations, there appears to be two kinds of wastes at the site, primary and secondary waste deposits. The primary waste deposits are those that comprise the majority of the site and consist of wastes that appear to have been disposed of and burned or partially burned in place and often contain pockets or areas of ashy soils. In general, the burned wastes were observed to be mottled black to black brown, light gray to black gray, and reddish brown with areas of gray-white ash and contain primarily broken and fused glass, bottles, jars, porcelain, dishware, metal debris with some charred wood, ceramics, battery cores, and chunks of densely fused metal and glass debris. These wastes are mixed with variable amounts of fill soils and typically, the percentage of burned wastes ranges from 10 to 95%. Burned wastes and burned wastes mixed with fill were encountered in 13 exploratory trenches (T-2 through T-6, T-8, T-11, OT, and T-12 through T-16) from below the asphalt or surface grade to depths greater than 21 feet bgs, the maximum depth excavated. Waste thicknesses ranged from several inches to greater than 11 feet (Figures 3 through 6).

The secondary waste deposits, also referred to as fill since they consist of minor (less than 1%) of wastes, most likely are primary waste deposits that were disturbed subsequent to disposal during site grading associated with construction of the school (Figure 3). The secondary waste deposits consist almost entirely of fill soils with occasional pieces of waste debris, generally broken pieces of glass. What are interpreted to be secondary waste deposits are represented by trench excavations T-5, T-6, T-8, T-21, and T-22, which contain only minor wastes, estimated at approximately 1% or less, primarily minor broken glass, at relatively shallow depths (Appendix B).

2.3. Site Hydrogeology

The following sections describe groundwater and surface water at the site and vicinity.

2.3.1. Groundwater

Based on a review of the California Regional Water Quality Control Board (RWQCB), San Diego Region, Basin Plan, the site is located within the Miramar Hydrologic Area (HA) of the Penasquitos Hydrologic Unit. There are currently no existing beneficial uses of groundwater identified by the RWQCB in the Miramar HAs; however, industrial service supply is a potential beneficial use within the Miramar HA. Groundwater in the Miramar HAs been excepted from municipal supply (RWQCB, 1994).

Based on information obtained from the State Water Resources Control Board GeoTracker database, groundwater monitoring wells previously installed at properties located approximately 0.2 mile northeast of the site at the intersection of Clairemont Drive and Balboa Avenue report depths to groundwater ranging at elevations ranging from approximately 271 to 313 feet above mean sea level (MSL) (Secor, 2005; Conestoga-Rovers & Associates, 2010). However, groundwater was not encountered to the maximum depth explored by Ninyo & Moore on the site of 21 feet bgs or approximately 265 feet MSL. Based on this information, the depth to groundwater at the intersection of Clairemont Drive and Balboa Avenue is not representative of groundwater conditions at the site.

Based on our observations in August 2013, groundwater was not present at the bottom of the canyon adjacent to the south of the site, which is at an elevation of approximately 200 feet MSL (USGS, 2012). As indicated on the original as-built grading plan for Clairemont High School, the site is located at elevations ranging from approximately 280 to 295 feet MSL (Appendix C). Based on this information, it is assumed that depth to groundwater at the site is greater than 80 feet bgs. Groundwater flow direction at the site is not known; however, based on the physical setting of the site and vicinity, is anticipated to flow to the south-southwest toward the adjacent canyon. Groundwater levels can fluctuate due to seasonal variations, groundwater withdrawal or injection, and other factors.

2.3.2. Surface Water

Based on our site reconnaissance, review of the USGS, La Jolla Quadrangle Map, named natural surface water bodies, such as streams, rivers, ponds, and lakes, are not situated on the site. The nearest water body is Mission Bay, approximately 0.75-mile to the southwest of the site. Surface drainage at the site and vicinity appears to flow to the southwest toward the unnamed canyon south of Ute Street. Surface water runoff resulting from precipitation in the asphalt-paved parking lot will flow into storm drains located in the parking lot or into the street and into the storm drain system. In the unpaved area, surface water runoff resulting from precipitation that does not infiltrate into the soil will likely drain into the adjacent canyon and, if burned wastes are present at the surface of the canyon slope, may transport debris into the canyon. However, it is unlikely that surface drainage potentially affected by possible contamination at the site would reach surface water bodies in sufficient quantities to affect them primarily because the majority of the impacted area is paved and not accessible to surface water run off, burned waste is not present at the surface in the majority of the unpaved portions of the site, due to the storm water infrastructure, and because of dilution with other surface water runoff.

3. BACKGROUND INFORMATION AND PREVIOUS ASSESSMENTS

The following sections discuss the background information for the site.

3.1. Site Status and History

Historical aerial photographs for the years 1945, 1949, 1953, 1955, 1957, 1958, 1959, and 1964 were obtained from the County of San Diego Department of Public Works, District in-house resources, Ninyo & Moore in-house resources, and publicly available online sources. The as-built grading plans for the construction of the school were obtained from the District. Copies of the historical aerial photographs and grading plan reviewed are provided in Appendix C (the 1964 photograph has not been reproduced here due to copyright issues).

Based on the review of historical aerial photographs, the site was undeveloped from as early as 1945. Sometime between 1949 and 1953, grading and filling operations appear to have occurred along the southern portion of the site adjacent to the canyon, which appear to have continued until 1957 when grading for the construction of the school began. Equipment and vehicles can be seen along the canyon edge in the 1955 and 1957 photographs. By 1958, the school had generally been constructed similar to the present configuration except for the structures in the northwest corner of the site.

The as-built grading plan, dated June 5, 1957, indicates that the site was primarily a cut area (Appendix C). The plan indicates that the amount of cut was the least (i.e., from 0 to 1 foot of material cut) in the north and northwest portion of the site and increased toward the south-southwest to a maximum cut of approximately 8 feet of material (Appendix C). Based on this information (i.e., the site was a cut area rather than a fill area) and the historical aerial photographs reviewed, it is likely that the wastes were disposed of at the site and burned from approximately 1949 to 1957, prior to grading the site for the construction of the school. The site was developed by the District as part of Clairemont High School in approximately 1958 and has remained developed generally as at present since that time. Information regarding the site owners and contact information is provided in Section 2.1.

A review of regulatory agency files for the site address was performed at the City of San Diego Solid Waste Local Enforcement Agency (LEA). The records indicated that the site is known as the "Clairemont H. S. Burnsite" or the "Brandywine Burnsite." Based on the topography of the site the LEA concluded that it appears that the canyon fill method was used to dispose of wastes; however, the exact location, volume, or type of wastes was not known. The LEA also states that it appears that the area thought to be the approximate location of the burn site was located underneath the parking lot of Clairemont High School and that it was unknown if burned wastes were removed or remained in place during construction/grading of the school. The records state that the LEA inspected the site and did not detect gas migration or observe burned waste or settlement at the site related to filling activities. The site was listed on the CalRecycle SWIS database and assigned SWIS

No. 37-CR-0015; however, the site was considered to be an unconfirmed burn site and was removed from the SWIS database by CalRecycle in 2000 (Appendix D).

Subsequent to the environmental investigations summarized in this report, the site was added back into the SWIS database on May 27, 2014 and is listed as a closed pre-regulations solid waste disposal site with the LEA performing semi-annual inspections. The most recent inspection record on file for the site performed by the LEA on May 23, 2014 states that the site is in violation of California Code of Regulations (CCR) Title 27, Section 21140 for the maintenance of final cover and notes that "the owner shall maintain Final Cover that provides waste containment to protect public health and safety." The inspection report states that exposed wastes were observed in the landscape planter area located north of Ute Drive and south of Ute Drive along the upper rim of the canyon (Appendix D).

3.2. Hazardous Materials/Substances/Waste Management Information

District representatives indicated during an interview on January 21, 2014 that hazardous material/substances/wastes have not been utilized, stored, treated, or disposed of within the site boundaries since the District has owned the property. Clairemont High School currently and in the past has utilized and stored hazardous substances/wastes associated with the school's science laboratories, auto shop, wood shop, metal shop, nurse's office, and arts departments. In addition, the District has disposed of hazardous building materials (i.e., asbestos-containing wastes, polychlorinated biphenyl (PCB)-containing light ballasts) and PCB-containing transformer oil. The school currently has a hazardous materials business plan and permit with the County of San Diego Department of Environmental Health (DEH) associated with the wastes stored and generated from the auto shop (car batteries), nurses office (sharps), and custodial department (paint). A copy of the DTSC's hazardous waste tracking system report and DEH records for the school is included in Appendix D and lists the types and quantities of wastes disposed of from the site by year.

Records were reviewed associated with the site address at the LEA. Records on file at the LEA indicated that prior to the discovery of the burned waste at the site in 2011, the site was considered to be an unconfirmed burn site by the LEA and CalRecycle. At one time the site was listed on CalReycle's SWIS database (37-CR-0015); however, CalRecycle removed the site from the SWIS database in 2000 pending confirmation of the presence of burned waste; however, the site was re-listed on May 27, 2014. The records state the information regarding the volume, location, and waste type was not available. Copies of the LEA records are provided in Appendix D.

Based on review of limited background information and observations of the types of wastes encountered during the September 2011 and August 2013 site investigations, it appears that wastes were dumped and burned on site from approximately 1949 to 1957, prior to the construction of the school. A newspaper found in one of the exploratory trenches was dated November 4, 1951. It appears that during subsequent grading of a portion of the site for construction of the school, minor amounts of wastes were mixed into the fill soils.

As is typical of these types of sites, information regarding the methods and types of wastes disposed of and burned was not found during the review of historical or regulatory agency records. Burning and partial burning of wastes results in the accumulation and concentration of certain types of wastes such as glass and metal debris. At locations explored, the wastes were observed to be mostly burned at some locations and only partially burned at other locations. Wastes typically consisted of glass bottles and jars, broken glass, fused glass, masses of fused and melted glass and metal, bricks, ceramic debris, ashy soils, and lesser amounts of partially burned and often damp paper and plastic debris. Additional information regarding previous assessments performed at the site is provided in Section 3.8.

3.3. Site Vicinity Land Use

Based on a review of historic aerial photographs, the site vicinity was generally undeveloped until sometime between 1949 and 1953 when residential development began to the east and south of the site. By approximately 1957 the generally site vicinity was developed as resi-

dential with commercial development along Clairemont Drive and Balboa Avenue, which is similar to the present day development. The school was constructed in approximately 1958 and has generally remained as at present (Appendix C).

3.4. All-Appropriate Inquiry Required Information

Mr. Loren Chico, a representative of the District, indicated that he is not aware of any clean-up liens, activity and use limitations (AULs), specialized knowledge, or commonly known or reasonably ascertainable information for the site beyond the previous site investigation work performed by Ninyo & Moore (Ninyo & Moore, 2011).

3.5. Records Review

The following sections summarize the records reviewed for the site and vicinity.

3.5.1. Land Records

The majority of the site is currently developed as an asphalt paved parking lot associated with Clairemont High School. The remainder of the site consists of a landscaped planter and an undeveloped area located southeast of Ute Drive, which includes a relatively level area, followed by a southeast facing canyon slope. The following land use records were reviewed:

- According to the County of San Diego, Assessor's Office, the site occupies a portion of the parcel assigned APN 425-800-01-00.
- Based on a review of the USGS 7.5-minute topographic series, La Jolla, California quadrangle map, the site is located in Township 16 South, Range 3 West, Section 4 of the San Bernardino Baseline and Meridian (USGS, 2012). A copy of the parcel map is provided in Appendix A.
- Based on a review of the City of San Diego, Development Services Department, Official Zoning Map, Grid 22, the portion of the site north of Ute Drive is zone for residential single-family units and the portion southeast of Ute drive is zoned as residential multi-family units.

- Based on a review of a chain-of-title report provided by Environmental Data Resources, Inc. (EDR), the District is the only property owner of record in documents searched back to 1940. The report states that the City of San Diego was granted an easement on the property on September 25, 1958; however, information on the purpose of the easement was not provided. The report includes the following legal description of the property:

  "*All that certain piece or parcel of land beginning that portion of Lot 3 in the subdivision of Pueblo Lot 1209 of the Pueblo Lands of San Diego, according to the Partition Map thereof filed in the Office of the County Clerk of San Diego, in Case No.8341, situate and lying in the County of San Diego, State of California.*"

  A copy of the chain-of-title report is provided in Appendix E.

- An environmental lien search report performed by EDR stated that environmental liens and AULs were not found associated with the property; however, the ongoing investigation of the site by the DTSC and the District was noted. A copy of the lien search report is provided in Appendix E.

3.5.2. Aerial Photographs/Site Photographs

Based on the review of historical aerial photographs, the site was undeveloped from as early as 1945. Sometime between 1949 and 1953, grading and filling operations appear to have occurred along the southern portion of the site adjacent to the canyon, which appear to have continued until 1957 when grading for the construction of the school began. Equipment and vehicles can be seen along the canyon edge in the 1955 and 1957 photographs. By 1958, the site had generally been constructed similar to the present configuration. Copies of select aerial photographs reviewed are provided in Appendix C.

3.5.3. Sanborn Fire Insurance Maps

Sanborn® fire insurance maps were not found for the site. Environmental Data Resource's (EDR) unmapped Certified Map Report is provided in Appendix D.

3.5.4. Other Historical Use Sources

USGS topographic maps provided by EDR and USGS online topographic maps (store.usgs.gov) were reviewed. Site coverage is available for the years 1903, 1904, 1930, 1943, 1953, 1967, 1975, 1996, and 2012. The 1903 through 1953 maps show the site as undeveloped with a finger canyon visible south of the site and extending onsite. An unpaved road in similar configuration to the present day Ute Drive is shown crossing the site on the 1943 and 1953 maps. The 1967 through 2012 maps show the site as developed with Clairemont High School and Ute Drive crossing through the southern portion of the site. The finger canyon is visible to the south of the site but is no longer depicted as extending on to the site.

3.5.5. Federal, State, Tribal, and Local Records

A computerized, environmental information database search was performed by EDR on January 21, 2014. The search included federal, state, tribal, and local databases. A summary of the environmental databases searched, their corresponding search radii, and number of noted properties of potential environmental concern, is presented in the associated EDR report in Appendix E. The review was conducted to evaluate whether the site or properties within the vicinity of the site have been documented as having experienced significant unauthorized releases of hazardous substances or other events with potentially adverse environmental effects. The figures in the EDR report indicate approximate locations of properties that may pose environmental concerns.

The following table lists select databases that were searched and the number of listings (excluding non-geocoded [unmapped] facilities). See Appendix E for a full list and descriptions of the searched databases.

ASTM Standard Environmental Databases (January 2014)

Database Name	Search Radius (mile)	Number of Listings
FEDERAL DATABASES		
NPL (National Priority List)	1	0
Proposed NPL	1	0
NPL LIENS (Federal Superfund Liens)	TP	0
Delisted NPL	1	0
CERCLIS (Comprehensive Environmental Response Compensation and Liability Information System)	0.5	0
FEDERAL FACILITY (Federal Facility Site Information listing)	0.5	0
CERC-NFRAP (Former CERCLIS sites where no further remedial action is planned under CERCLA)	0.5	0
CORRACTS (facilities subject to Corrective action under Resource Conservation Recovery Act [RCRA])	1	0
RCRA-TSDF (hazardous waste treatment, storage, or disposal facilities)	0.5	0
RCRA-LQG (large quantity generator)	0.25	0
RCRA-SQG (small quantity generator)	0.25	2
RCRA-CESQG (conditionally exempt SQG)	0.25	0
US ENGINEERING CONTROL (EC)	0.5	0
US INSTITUTIONAL CONTROL (IC)	0.5	0
LUCIS (Land Use Control Information System)	0.5	0
ERNS (Emergency Notification System)	TP	0
STATE/TRIBAL DATABASES		
RESPONSE (State Response Sites, State- and Tribal- equivalent NPL)	1	0
ENVIROSTOR (The Department of Toxic Substances Control's [DTSC's] Site Mitigation and Brownfields Reuse Program; CERCLIS-equivalent)	1	2
Solid Waste Facility/LF (SWF/LF) (Solid Waste Information System)	0.5	0
LUST (GeoTracker's Leaking Underground Storage Tank [UST] Report)	0.5	5
SLIC (Spills, Leaks, Investigation and Cleanup database by the California Regional Water Quality Control Board)	0.5	0
SAN DIEGO CO. SAM (UST release cases pertaining to properties contaminated with hazardous substances under the review of the Site Assessment and Mitigation Program)	0.5	4
INDIAN LUST (Leaking USTs on Indian Land)	0.5	0
UST (registered USTs)	0.25	1
Aboveground Storage Tank (AST) (registered ASTs)	0.25	0
INDIAN UST (USTs on Indian Land)	0.25	0
FEMA UST (Federal Emergency Management Agency UST Listing)	0.25	0
VCP (Voluntary Cleanup Program Properties)	0.5	0
INDIAN VCP	0.5	0
Note: TP - Target Property		

The site address was listed on 10 databases in the database report as described below:

- HAZNET (DTSC's Facility and Manifest Database) and RCRA-SQG: The HAZNET and RCRA-SQG, listings are associated with the disposal of hazardous waste associated with school operations. Additional information regarding waste disposal associated with school operations is provided in Section 3.2.

- DTSC's School Property Evaluation Program (SCH) and Envirostor: The SCH and Envirostor listings are associated with the ongoing assessment of the burned waste at the site of which this PEA is a part.

- National Pollutant Discharge Elimination System (NPDES): The NPDES listing is associated with a general storm water discharge permit associated with construction activities. The permit is listed as terminated on June 13, 2013.

- Historical UST and Statewide Environmental Evaluation and Planning System (SWEEPS) UST: The listings state that a waste oil UST of unknown capacity was installed at Clairemont High School in 1958. DEH records reviewed for the site address indicated that a 6,000-gallon boiler fuel UST was located off site on the campus of the school. The UST was removed under the oversight of the DEH in 1988 and indicators of soil or groundwater contamination were not noted by the DEH inspector (Appendix D). Based on this information, the former UST is not a concern to the site at this time.

- California Hazardous Material Incident Report System (CHMIRS): The CHMIRS listing indicates that a release of sewage occurred in 2005 due to grease blockage in a pipe. Based on this information, this release is not a concern to the site at this time.

- Facility Index System/Registration System (FINDS): The site address is listed twice on the FINDS database. The first listing is associated with the RCRA-SQG listing for Clairemont High School discussed above. The second listing lists states the site address is associated with the Clairemont High School burn site and indicates that the address is listed on the National Emissions Inventory for sources that emit hazardous air pollutants. Additional information was not available regarding this listing; however, a request was made to review files at the San Diego Air Pollution Control District (APCD) for the site address. The APCD indicated that the only record on file for the site address is an asbestos notification associated with the demolition of a building at the school. A copy of the APCD response is provided in Appendix D.

- DEH Hazardous Materials Management Division (HMMD) database: The listing indicates that the site address has a permit for hazardous materials handling that is associated with wastes that appear to be related to school operations as discussed under the HAZNET and RCRA-SQG listings above. This listing also states that the site address is associated with a 6,000-gallon diesel UST that was removed on March 30, 1988. Additional information regarding the UST removal is provided in the previous Historical UST and SWEEPS UST listings.

Properties/facilities listed in the database report were evaluated as to their potential to impact soil and/or groundwater at the site. The properties/facilities in the table below were interpreted to represent a potential environmental concern to the site, based on their proximity to the site, the nature of the database on which they are listed, and/or the assumed direction of groundwater flow in the site vicinity (toward the east and north-east at the intersection of Clairemont Drive and Balboa Avenue):

Facility Name/Address	Distance/ Direction from Site	Database	Notes
Marston Middle School 3799 Clairemont Drive	627 feet ENE	LUST SWEEPS UST HMMD SAM RGA LUST FINDS RCRA-SQG Hist CORTESE	The property is associated with one closed case involving a release of heating oil/fuel oil to soil only (H17108-001). Based on the nature of the release, the case closed status, and the distance from the site, this property is not considered a concern to the site at this time.
Wilde Service 3895 Clairemont Drive	1217 feet NNE	RGA LUST LUST SWEEPS UST Hist CORTESE HMMD SAM Hist UST	The property is associated with two closed cases (H15044-001 and -002) associated with unauthorized releases. Information regarding the -001 release case was not available in the EDR report or on GeoTracker. GeoTracker states that the -002 case is associated with a release of gasoline to soil only. Based on the distance from the site, the assumed direction of groundwater flow (east-northeast, as stated in documents reviewed on GeoTracker), and that the property was observed to have been redeveloped as a commercial shopping center, the property is not considered a concern to the site at this time.
Shell Oil 3901 Clairemont Drive	1304 NNE	SAM UST SWEEPS UST EMI HMMD LUST RGA LUST	The property is associated with one closed case (H21237-001) involving a release of gasoline that impacted groundwater. The case closure summary provided on GeoTracker states that the groundwater flow direction is to the east and that the dissolved contaminant plume does not present a risk to human health or the environment. Based on this information, the property is not considered a concern to the site at this time.

Facility Name/Address	Distance/ Direction from Site	Database	Notes
Tune Craft #2 3904 Clairemont Drive	1334 feet NNE	SWEEPS UST HMMD SAM LUST Hist CORTESE Notify 65 RGA LUST	The property is associated with two closed cases (H15045-001 and -002). The case closure summary for the -001 case provided on GeoTracker states that a release of gasoline that impacted groundwater was identified during the removal of USTs at the property. Free product removal was performed and vapor extraction system was installed. The DEH stated that the residual soil and groundwater contamination do not pose a threat to human health or the environment. The case closure summary for the -002 case was provided on GeoTracker and stated that impacted soil was over excavated and removed from the site associated with the removal of a waste oil UST. Based on this information the property is not considered a concern to the site at this time.

3.5.6. Site Owner/Operator Records

The District provided the original site grading plan dated 1957 and historical aerial photographs dating from 1955 through 1959, which are discussed in Section 3.1. and 3.4.2. Mr. Loren Chico, a representative of the District, completed a property background questionnaire. He indicated that to the best of his knowledge the site was undeveloped prior to the construction of the school in 1957/1958 and that he was not aware of any other environmental issues at the site other than the burned waste being assessed as part of this PEA report.

3.6. Site Reconnaissance

A site reconnaissance was performed in August 2013 by Ms. Lisa Bestard. The sloped area on the southeast side of the site was not accessible due to the steep terrain and the natural vegetation limited visual observations of the area from the top of the slope.

3.6.1. Interior/Exterior Observations

The northwestern portion of the site consists of an asphalt paved parking lot utilized by Clairemont High School. A landscaped planter was present paralleling Ute Boulevard along the southeast side of the parking lot. Ute Drive and the associated sidewalk cross the southeastern portion of the site from the northeast to the southwest. The portion of

the site southeast of Ute Drive consists of an unpaved area that extends approximately 50 feet southeast from Ute Drive followed by a steep west-northwest slope that is covered with vegetation.

Exposed burned and unburned wastes consisting primarily of broken glass debris and bottles and lesser broken pieces of ceramic debris were observed on the ground surface within the landscaped planter on the site. The lateral extent of surficial wastes in the landscaped planter was not defined due primarily to the presence of shrubs; however, areas where the ground surface could be observed, at trench T-12 and areas to the northeast and southwest, surficial wastes were noted.

Structures are not present on the site; therefore, interior observations were not made.

3.6.2. Evidence of a Release or Threatened Release

The landscaped area paralleling the parking lot and Ute Drive is mostly covered with shrubs; however, at some locations where the ground surface could be observed, burned and unburned wastes are present at the surface, consisting primarily of broken glass debris and bottles and lesser broken pieces of ceramics. Some of the exposed wastes were the result of animal burrows as evidenced of holes and adjacent piles of waste debris. Based on the types of wastes observed at the surface and at depth, the majority of these surficial wastes are considered to be associated with the former burn site and not with more recent waste disposal activities (see photograph of T-12 in Appendix F).

The southeastern most area of the site is unpaved and the surface consists of soils with gravels and cobbles. Wastes were not observed at the surface on the southeast side of Ute Drive; however, the area of the canyon slope was not readily accessible due to steep terrain. Other evidence of a release or threatened release (e.g., staining, spills, odors, stressed vegetation, corrosion, pools of liquid, discolored water, ground surface alternations, dead or ill wildlife, etc.) was not observed during the site reconnaissance.

3.7. Interviews

Ms. Lisa Bestard interviewed Mr. Loren Chico and Mr. John Baker of the District regarding the site on January 22, 2014. Mr. Chico and Mr. Baker stated that to the best of their knowledge the site was undeveloped prior to the construction of the school in 1957/1958 and that they were not aware of any other environmental issues at the site other than the burned waste being assessed as part of this PEA report.

3.8. Previous Assessments

A Supplemental Site Investigation (SSI) report was prepared by Ninyo & Moore, dated December 9, 2011 (Ninyo & Moore, 2011). The objective of the SSI activities was to evaluate the extent and chemical characteristics of burned wastes encountered during a construction project at the site.

On July 21, 2011 a contractor excavating utility trenches at the site encountered burned wastes (trench OT on Figure 3). The materials in the excavation and stockpile were observed to be darkly colored and ashy and to contain broken glass/ceramics and some metal debris. Samples were collected from the excavation and stockpile. The analytical results indicated that the material contained elevated concentrations of cadmium, chromium, copper, lead, and zinc and was characterized as a California-hazardous waste for lead (Table 1). Approximately 31 tons of excavated burned wastes/soils associated with utility trench OT were transported from the site and disposed of at the South Yuma County Landfill as California-hazardous, Arizona non-hazardous waste. Copies of the weigh tickets and waste manifests were forwarded to DTSC via e-mail on December 12, 2011.

The DTSC and LEA were notified of the presence of burned wastes at the site. The DTSC requested additional assessment and a Technical Memorandum was prepared and approved by the DTSC with conditions. As part of the SSI, Ninyo & Moore performed a review of relevant historical information pertaining to the site. Based on the review, Ninyo & Moore concluded that wastes were disposed of at the site from approximately 1949 to 1957, prior to grading the site for the construction of the school.

As part of the SSI, in September 2011, Ninyo & Moore directed excavation and sampling of 11 exploratory trenches in areas outward of utility trench OT and also deepened utility trench OT to delineate the vertical extent of wastes. The report concluded that it is possible that a small finger canyon was previously located on the site and that wastes were dumped into the canyon, burned in place, and covered over during grading and/or construction activities and that the minor amounts of burned wastes observed at relatively shallow depths (in T-5, T-6, and T-8) may be associated with subsequent grading of the site for the construction of the school as opposed to primary waste deposits observed at other locations.

Arsenic and lead were detected in burned wastes samples at concentrations exceeding the upper bound ambient level of arsenic in Southern California (DTSC, 2009) and the DTSC's lead screening level (DTSC, 2013). The contaminants of concern (COCs) at the site were identified as antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, vanadium, zinc, 4,4'-dichlorodiphenyldichloroethane, 4,4'-dichlorodiphenyldichloroethylene, 4,4'-dichlorodiphenyltrichloroethane, acenapthylene, and phenanthrene in burned wastes (Tables 2 and 3).

An HHSE was performed based on the data collected during the SSI and considered exposure to receptors (adult and child) in a residential setting. The only potentially complete exposure pathway identified was associated with the unpaved portions of the site. The complete pathways associated with the unpaved portions are the inhalation of dust particulates, ingestion of dust particulates or burned wastes, or dermal absorption through direct contact with contaminants in the burned wastes or impacted surface run off. The HHSE concluded that there is not a significant risk to human health in the paved areas of the site as long as they remain paved, but that additional data were needed to evaluate the risks in the unpaved portions of the site.

The DTSC reviewed the SSI report and concurred with the recommendation to perform additional assessment activities in the unpaved landscaped planter and the unpaved area southeast of Ute Drive. In addition, the DTSC requested that additional assessment be performed in the area northwest of exploratory trench T-3 and to better identify the waste boundaries identified in the SSI as inferred (Figure 3).

The DTSC stated in a letter dated January 25, 2012, that the vertical delineation of the burned wastes was not adequate in the areas of T-11 and OT because "formation was only observed in limited areas in the bottom of the trenches." However, it is the professional opinion of Ninyo & Moore that the vertical delineation in these trenches is adequate. Approximately 1.5 to 3 feet horizontally along the bottom of the trenches was excavated and formational soils (Scripps Formation) underlying wastes were observed in the excavation bucket. Additional excavation was attempted in both trenches but was not possible due to the instability of the burned wastes, which resulted in repeated caving of the trench excavation sidewalls. Based on this information, the vertical extent of wastes in the areas of trenches OT and T-11 is delineated and additional excavation is not necessary. A Technical Memorandum Work Plan, dated June 28, 2013, to perform the additional assessment activities performed as part of this PEA was submitted and approved by the DTSC in a letter dated August 9, 2012.

4. APPARENT PROBLEM

Based on historical information and data collected from previous investigations, it appears that wastes were brought onto the site, dumped into a canyon, and burned sometime around 1949 to 1957. The exact location, volume, and type of wastes dumped and burned at the site are unknown. During construction of the school it appears that the area of the former canyon was graded and developed as a parking lot for the school and as Ute Drive. The COCs at the site are typical of the contaminants associated with burned wastes and generally consist of elevated metals, polynuclear aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), and dioxins. Arsenic exceeded the DTSC's upper-bound ambient level (DTSC, 2009). Lead and cadmium exceeded their respective DTSC screening levels (DTSC, 2013). The remaining metals that exceeding background concentra-

tions are antimony, barium, chromium, cobalt, copper, mercury, molybdenum, nickel, vanadium, and zinc. The OCPs 4,4'-dichlorodiphenyldichloroethane (DDD), 4,4'-dichlorodiphenyldichloroethylene (DDE), and 4,4'-dichlorodiphenyltrichloroethane (DDT), the PAHs acenapthylene and phenanthrene, and dioxins were also detected in burned wastes at the site. Fill and formational materials at the site do not appear to have not been impacted by the presence of the burned wastes. Based on the presence of the burned waste and the COCs associated with the burned waste, there is a potential health risks to receptors that come into direct contact with the burned wastes or inhale burned waste/dust. Based on the estimated depth to groundwater at the site (greater than 80 feet bgs) and that burned wastes generally do not generate landfill gases, the potential exposures related to the water and air pathways (other than inhalation of dust) are not considered to be complete.

5. ENVIRONMENTAL SETTING

The following sections discuss the environmental setting of the site, including factors related to soil, water, and air pathways for exposures to the COCs.

5.1. Conceptual Site Model

A Conceptual Site Model (CSM) was prepared to assess potential source and release mechanisms that could create pathways of exposure to sensitive receptors (human and biota) at the site. The CSM is attached to this PEA report as Figure 7 and is discussed in Section 7.

5.2. Factors Related to Soil Pathways

The following sections describe the factors related to soil pathways at the site.

5.2.1. Site Accessibility

The site is currently accessible to the public; however, access to exposed burned wastes in the landscaped planter on the northwest side of Ute Drive is currently limited by temporary chain-link fencing installed as an interim protective measure. The sloped portion of the site is not easily accessible due to the steep nature of the slope, but access is not currently restricted.

The presence of ground surface cover can reduce the exposure of residents and students to the COCs. The majority of the site is covered with concrete or asphalt paving that prevents access to the underlying burned waste. The unpaved landscape planter northwest of Ute Drive represent potentially complete exposure pathways; however, the unpaved area at the top of the slope southeast of Ute Drive is not considered to have potential complete exposure pathways due to the presence of a minimum thickness of approximately 4 feet of fill soils overlying the wastes at locations explored. Access to the unpaved landscaped area is temporarily restricted by fencing and the sloped areas are not easily accessible due to the steepness of the slope. Burned waste present at depths of greater than 2 feet bgs are not considered accessible in accordance with LEA Advisory No. 56 (CIWMB, 1998), which considers 2 feet of unimpacted fill to be adequate cover for a burned waste site. Based on this information, the soil and burned waste below 2 feet is not considered to be accessible under the current and future land uses (i.e., high school).

5.2.2. Soil Types

During the site investigations conducted at the site, soils were not logged using the Unified Soil Classification System (UCSC) terminology. Site-specific exploratory trench logs describe the soils encountered based solely on visual observations (laboratory testing for soil classification purposes was not performed) at specific locations explored. Section 2.2 - Site Geology provides descriptions of soil types encountered at specific locations. Permeability tests were not conducted as part of the assessments. A loose gray brown pocket of sand (fill) was observed in Trench T-12 located in the landscaped area northwest of Ute Drive. This sand is likely permeable and the origin of this material is not known. Fill containing gravels and cobbles had both sandy and clayey matrixes; the sandier matrix would likely be more permeable Formational soils underlying burned wastes were observed to be hard/cemented at some locations. (Appendix B).

5.2.3. Site Topography

Based on a review of the USGS, La Jolla Quadrangle Map, and the as-built grading plans, elevations at the site range from approximately 295 feet above MSL in the north-east end of the parking lot and slope to approximately 280 feet MSL in the southwest end of the parking lot. The top of the canyon slope parallels the elevations of the parking lot and slopes steeply to the southwest to an elevation of approximately 200 feet MSL near the bottom of the canyon.

5.2.4. Distance to Nearest Receptors

The site is located on Clairemont High School and is adjacent to a multi-family residential complex (located at the bottom of the canyon). The nearest businesses are located approximately 300 feet east of the site along Clairemont Drive and the nearest day care facility is located approximately 0.25 mile south-southeast of the site (3502 Clairemont Drive). Hospitals, senior communities, and nursing homes are not known to be located within 1-mile of the site.

5.3. Factors Related to Water Pathways

Based on the assumed depth to water at the site, non-beneficial use groundwater designation, distance to the nearest surface water (0.75-mile west), the nature of the waste, and that the majority of the waste footprint is covered in asphalt or concrete paving, it is our opinion that a release or threatened release of hazardous substances/material to water is not associated with the presence of the burned waste at the site. Therefore, water pathways were eliminated from further consideration as a potential exposure pathway.

5.4. Factors Related to Air Pathways

According to the regulatory agency records reviewed, there is no documentation of historical hazardous substance releases to the atmosphere and of known toxic air emission sources at the site. Information provided by the APCD indicates that the site address is not associated with violations or permits related to hazardous air emissions. Based on this information and

that burned wastes typically do not generate landfill gas, air pathways, with the exception of inhalation of dust, was eliminated from further consideration as a potential exposure pathway. The sections below are in reference to the inhalation of dust only.

5.4.1. Potential for Release

The burned waste exposed at the surface and near-surface in the landscape planter is the source of a potential release of hazardous substances to the air. Surface and near surface soils are subject to wind dispersal, evaporation, and dispersal from fire/explosion. Burned wastes were observed in surface soil (i.e., top 2 feet) in the unpaved landscaped planter; therefore, they may potential be intermittently released if the soil in the area is disturbed. At the unpaved landscaped planter southeast of Ute Drive elevated COCs were detected in the burned wastes; however, fill soils were present at a minimum thickness of 4 feet overlying these wastes at the locations explored, and therefore are not considered a source of a potential release of hazardous substances to the air. It is unlikely that the burned waste in this area would be disturbed except during planned excavation activities. The canyon slope was not accessible for visual observation or sampling due to the steepness of the slope; therefore, there is the potential that burned wastes and/or COCs are present in the surface soil in the area.

5.4.2. Climate and Wind Direction

The climate within the San Diego Coastal Plain may be generally categorized as Mediterranean, with warm, dry summers and mild winters. Most of the rainfall within San Diego County falls primarily from November through March. Average rainfall for San Diego is approximately 10 inches, according to the National Oceanic and Atmospheric Administration (NOAA). The average maximum daily temperatures typically range between 70 and 57 degrees Fahrenheit (^{o}F). The average daily minimum temperatures range between 68 and 48 ^{o}F. The average daily temperatures generally peak in August/September at approximately 78 ^{o}F and drop down to 48 ^{o}F in December (NOAA, 2004).

The prevailing wind direction is generally westerly from 6 to 8 knots. Strong winds, referred to as Santa Ana winds, commonly occur between October and February with winds at speeds of 35 knots through and below passes and canyons with gusts up around 50 knots. Santa Ana Winds can have gusts greater than 60 knots over widespread areas and gusts greater than 100 knots in favored areas (NOAA, 2004).

5.4.3. Potential Receptors

The majority of the site is covered with asphalt or concrete paving or a minimum of 2 feet of unimpacted cover soil, which prevents the release of COCs to the air pathway by wind erosion. Disturbance of burned wastes in the landscaped planter and/or the canyon slopes may result in a release of COCs to the air; however, both areas are generally covered with some vegetation that serves to hold the burned waste in place and minimize wind erosion. Based on this information, the population that could potentially be impacted by a release to air at a level that would present a concern would be very limited.

The area surrounding the site is developed with a high school, elementary school, residences, and commercial/retail businesses. In addition to the receptors described in Section 5.2.4, the following potential receptors are located near the site:

- Coastal/freshwater wetlands: Mission Bay and Rose Creek located approximately 1-mile west of the site.
- Habitat for Special Species: Tecolote Canyon, approximately 0.25-mile east of the site, is part of the City of San Diego's Multi-Habitat Planning Area, which delineates core biological resource areas and corridors targeted from conservation (City of San Diego, 1997).

6. SAMPLING ACTIVITIES AND RESULTS

The following sections describe the rationale for sampling activities, strategy, methodology and handling, decontamination procedures, management of investigation-derived waste, analytical program, and sample results. The results from this and previous site investigations were used in the HHSE to evaluate the potential health risk to receptors at the site (Section 7).

6.1. Background

Previous environmental assessments have been conducted on the site as described in Section 3.8. The sampling program for this PEA supplemented the previous sampling activities to further delineate the horizontal and vertical extent of the burned waste at the site.

6.2. Summary of Activities

The following presents a discussion of the activities performed and sampling procedures for the August 2013 investigation.

6.2.1. Health & Safety Plan

In accordance with Ninyo & Moore's Standard Operating Procedures and Occupational Safety and Health Administration requirements, a project-specific Health and Safety plan (HSP) was prepared. The HSP outlined the on-site organization and responsibilities of field personnel and presented a discussion of the hazards associated with soil contaminated with metals, PAHs, and dioxins. The HSP was kept at the site during all field activities. Prior to beginning fieldwork at the site, highlights of the HSP were reviewed particularly safety issues pertaining to excavating deep trenches with possible cave ins due to the presence of loose materials, COCs, health and safety personal protection levels, and the directions to the closest hospital. Field personnel reviewed and signed copies of the employee acknowledgment and field health and safety meeting forms, which are included in the HSP.

In accordance with the HSP, during subsurface disturbance activities (e.g., trench excavating, sampling and backfilling, etc.), air within the work zones was monitored for dust utilizing an aerosol dust monitor, for volatile organic compounds (VOCs) utilizing a photoionization detector (PID), and for combustible gases using a combustible-gas indicator (CGI). Readings from the dust monitor, PID, and CGI were recorded every approximately 30 minutes to one hour on a field monitoring form. In additional visual monitoring for dust monitoring was also performed. The screening levels were visible

dust or 1 milligrams per cubic meter particulates, 2 parts per million (ppm) sustained for VOCs, less than 19.5% or greater than 22% oxygen, and 25 ppm for carbon monoxide.

If visible dust was noted, then dust suppression techniques (e.g., misting active work surfaces, minimizing soil drop height from the bucket, misting the stockpile surfaces, etc.) were implemented until visible dust was no longer visible. The PID did not detect VOCs and the CGI did not detected hazardous levels of combustible gases during the air monitoring activities.

6.2.2. Utility Clearance

Underground Service Alert, a public utility locating service, was notified 48 hours prior to fieldwork of the propose trench locations. In addition, on August 9, 2013 Southwest Geophysics, Inc., a licensed geophysical surveyor, investigated the proposed trench locations to evaluate and mark potential buried utilities or other subsurface anomalies. A combination of electromagnetic induction, magnetometry, and ground penetrating radar was utilized. Trenches were relocated based on the presence of utilities or anomalies detected as needed.

6.2.3. Sample Identification

Soil sample IDs began with ‘T’ to designate the samples as those collected from a trench, followed by the trench number, and the depth bgs the sample was collected (e.g., T-12-0.5). Surface soil samples were assigned with the identifier ‘S’ in place of the depth in the sample ID (e.g., T-12-S).

Field duplicate split samples submitted to the laboratory were assigned a number that consisted of “DUP,” followed by a sequential number to uniquely identify the sample (e.g., DUP-01).

6.2.4. Sample Locations

For the August 2013 assessment, information obtained from the initial September 2011 assessment pertaining to locations and thicknesses of burned wastes were used to select locations for excavation and sampling. Trench excavations and sampling locations were based on the project objective of delineating the lateral and vertical extent of burned wastes. Additional trench locations and sampling in the paved parking lot were selected to delineate the lateral extent of wastes based on results from the previous assessment. In addition to the paved parking lot area of the site, the August 2013 assessment included evaluating the landscaped area to the northwest of the parking lot (Trenches T-17 and T-18), the landscaped planter to the adjacent southeast of the parking lot (Trench T-12) and the undeveloped area southeast of Ute Drive (Trenches T-13 through T-16). For the landscaped planter southeast of the parking lot, the location of excavation was based on accessibility (i.e., outlying dense vegetation, at a location where the backhoe and spoils stockpile would not interfere with street traffic and at a location of observed surficial burned wastes). The four trenches southeast of Ute Drive were located based on the assumed lateral extent of wastes in the parking lot area, assumed topography of the site prior to waste disposal, spaced to obtain adequate coverage of the area, accessibility, and were adjusted in the field based on results of earlier excavated trenches.

The trenches were excavated to depths adequate to confirm the absence of wastes (i.e., visual observation of the samples indicated formational or native material) or to the maximum depths possible based on caving of the excavation sidewalls. Typically if wastes were encountered, the goal was to excavate several feet of formational or native material underlying wastes; however this was not always possible due to caving or because wastes extended below the depth that could be excavated.

Three to eight samples were collected per trench excavation; the actual number depended on the depth of the trench and subsurface materials encountered. At each trench location, one sample was collected at the surface prior to excavation or near the surface (i.e., 0.5 feet bgs). One to four samples were collected of the burned wastes, with more

samples collected if the wastes were observed to be relatively thick and/or highly variable. A sample was also collected in the underlying formational or native material, directly beneath the wastes, unless caving of the excavation prevented sampling this material or at locations where wastes extended beyond the depth that could be excavated and sampled with the backhoe without constructing ramps.

At locations where wastes were not observed in the trench excavation, a surface sample and typically two additional samples at depth (the deepest typically in formation/native materials) were collected for analytical testing to confirm the absence of wastes. Sample locations were selected by a California-registered Professional Geologist (PG) experienced in conducting these types of assessments.

6.2.5. Sample Collection Procedures

At each trench location, the near surface samples were collected by coring the laboratory supplied jar directly into the surface. Subsequent representative samples of burned wastes and/or underlying materials were collected directly from the trench excavation, if sufficiently shallow, from the excavator bucket, or from the spoils pile by coring the laboratory-supplied glass jars directly into the relatively intact waste or soil mass. Sample depths and locations were selected based on the field observations of subsurface materials encountered and sample locations were measured and recorded on individual trench logs. Sample containers were supplied by Advanced Technology Laboratories, Inc. (ATL), a state-certified analytical laboratory. Only discrete samples were collected (i.e., samples were not composited). The PG conducting the investigation utilized authoritative sampling protocol to determine sample locations/depths.

6.2.5.1. Decontamination Procedures

Sampling equipment was not utilized during trenching activities; therefore, decontamination was not necessary. Sampling personnel utilized a new pair of disposable nitrile gloves between sample locations.

6.2.5.2. Collection of Field Equipment Blank Samples

Since sampling equipment was not utilized during the collection of soil samples from the trenches, an equipment blank sample was not collected.

6.2.6. Investigation Derived Waste Disposal

Investigative derived wastes were not generated during the PEA. The material excavated from each trench was placed back into the same excavation from which it was removed in approximately the reverse order, compacted, and as applicable, capped to match the surrounding surface cover material. The backfill was not placed as an engineered fill and was not tested for compaction.

6.3. Variances from the Work Plan

The PEA was performed in general accordance with the Technical Memorandum Work Plan (Ninyo & Moore, 2012). Notable variances are listed below; however, implementing these variances resulted in a more thorough assessment of the burned wastes at the site.

- Proposed locations of some exploratory trenches had to be modified based on the presence of subsurface utilities and/or accessibility.
- Trenches T-14 and T-15 located southeast of Ute Drive were initially proposed to be excavated with hand tools due to the proximity of the locations to the top slope of the canyon to the southeast. However, once at the site with the excavation subcontractor, it was apparent that these two locations could be excavated with backhoe equipment since there was sufficient distance from the excavation to the top of the canyon slope. Burned wastes at trenches T-14 and T-15 were observed to be overlain by 9.5 and 8 feet of fill, respectively.
- The work plan indicated two to three burned wastes/soils/formation samples from each exploratory trench would be collected; however, at some locations additional samples were collected for possible analytical testing.
- Soils and burned wastes excavated from the trenches were placed back into the excavation from which they were removed; therefore, soils and/or burned wastes were not temporarily stockpiled. However, a pile of cobbles was temporarily stockpiled on plastic sheeting at the southeast area of the parking lot adjacent to the landscape area since they could not fit back into the excavations from which they were removed. It was indicated to school personnel that possibly the cobbles could be used for decorative purposes or to cover the surface wastes in the landscape area to the adjacent southeast.

The cobbles originated from trench excavations T-19, T-20, T-22, and T-23 and burned wastes were not observed at these locations.

- Because excavated soils and wastes were placed back into the excavations form which they were removed and not stockpiled, samples were not collected from the stockpiles and submitted to a laboratory for analysis. For the same reason, transportation and disposal of stockpiled excavated materials to appropriate accepting facilities was not applicable.

6.4. Analytical Program and Results

The following sections describe the analytical program and results.

6.4.1. Analytical Program

The analytical testing was performed in general accordance with the Technical Memorandum Work Plan (Ninyo & Moore, 2012). During the August 2013 investigation, 38 samples, including two duplicates, were collected from the 12 trench locations (Figure 8 and Tables 2 and 3). The samples were analyzed for lead by USEPA method 6010B. At least one sample per trench was analyzed for Title 22 Metals by USEPA method 6010B/7471A.

Soil samples known or suspected of containing the highest lead or other metal concentrations were additionally analyzed for total petroleum hydrocarbons extended range (TPH-e) by USEPA test method 8015(M)B, PAHs by USEPA test method 8270C, and OCPs by USEPA test method 8081A. The two samples with the highest lead concentrations were additionally analyzed for dioxins by USEPA test method 8280.

Sampling activities performed in September 2011 is described in the SSI Report (Ninyo & Moore, 2011). The discussion of the analytical results of both investigations is included in the following sections.

6.4.2. Analytical Results

The following section summarizes the soil and waste analytical results from the September 2011 and August 2013 site investigations. The sections below refer to screening levels for lead and cadmium of 80 mg/kg and 4 mg/kg, respectively that were developed

by the DTSC and will be referred to as DTSC screening levels (DTSC, 2013). The DTSC also developed an upper-bound ambient level for arsenic in Southern California of 12 mg/kg and this will be referred to as the ambient level (DTSC, 2009). The analytical data is summarized on Figure 4 and Tables 2 through 5. Copies of the laboratory an-analytical reports are provided in Appendix G.

6.4.2.1. Background Metals Sample Results

During the September 2011 assessment, five background soil samples were collected from areas off the site and two samples were collected of formational material on site that were considered representative of background conditions (T-4-2.75 and T-10-1). During the August 2013 assessment, one sample of formation considered representative of background conditions was collected (T-16-12) (Figures 8 and 9). The background soil samples were analyzed for Title 22 metals by USEPA test method 6010B/7471A (Table 4). The 95% Upper Confidence Limit (UCL) of the mean was calculated using the results for each detected metal (except arsenic, lead, and cadmium for which the DTSC has established ambient or screening levels) using the USEPA's ProUCL Version 4.1, which represents the background concentrations of metals at the site (USEPA, 2010). The 95% UCL (i.e., background concentration), maximum, and mean concentrations are provided on Table 4.

6.4.2.2. Metals

Antimony, barium, chromium, cobalt, copper, mercury, molybdenum, nickel, silver, vanadium, and zinc were detected at concentrations exceeding the background metals concentrations. Arsenic, lead, and cadmium were detected at concentrations exceeding their respective ambient or screening levels (i.e., 12, 80, and 4 mg/kg, respectively) (Tables 2 and 5). The elevated metal concentrations correlated with samples that contained burned wastes and samples outlying the primary and secondary waste areas did not contain elevated concentrations of metals (Figure 8), except as noted below:

- Cobalt, copper, and nickel were detected at concentrations (7.2, 30J, and 10 mg/kg, respectively) exceeding the background concentrations in sample T-16-12. However, sample T-16-12 was collected from formation and was part of the background metals dataset. In addition, the detected concentrations were significantly below the United States Environmental Protection Agency Regional Screening Levels (RSLs). Based on this information, the concentrations of cobalt, copper, and nickel in T-16-12 are not indicative of impacts related to burned wastes.

- Vanadium was detected at a concentration (28 mg/kg) exceeding the background concentration to 27.7 mg/kg in sample T-1-2. However, the background metals dataset for vanadium ranged from 22 to 35 mg/kg and the detected concentration exceeded the background concentration by 0.3 mg/kg. Based on this information, the concentration of vanadium in T-1-2 is not indicative of impacts related to burned wastes.

6.4.2.3. Polynuclear Aromatic Hydrocarbons, Polychlorinated Biphenyls, and Dioxins

Two PAHs (acenapthylene at a concentration of 15 micrograms per kilogram [µg/kg] and phenanthrene at a concentration of 0.128J µg/kg) were detected in samples of burned waste collected from trench T-2. PAHs were not detected in the other samples analyzed. PCBs were not detected in the eight samples analyzed. Dioxins were detected in two of the four samples analyzed at concentrations of 14 and 120 nanograms/kilogram (ng/kg) (Tables 3 and 5).

6.4.2.4. Organochlorine Pesticides

The OCPs DDD, DDE, and DDT were detected in several samples of burned wastes. DDD was detected in one sample from trench T-2 at a concentration of 11 µg/kg. DDE was detected in five samples of burned waste at concentrations ranging from of 3.3 to 740 µg/kg. DDT was detected in two samples of burned waste at concentrations of 6.2 and 940 µg/kg in the samples of burned waste from trenches T-2 and T-11, respectively. OCPs were not detected in the other samples analyzed (Tables 3 and 5).

6.4.2.5. Total Petroleum Hydrocarbons

TPH-e was detected in three samples of burned waste at concentrations of 18, 94, and 230 mg/kg (Tables 3 and 5). TPH-e was not detected in the other samples analyzed.

6.4.3. Discussion of Analytical Results

The analytical results were consistent with field observations of samples collected from the primary burned wastes deposits, secondary waste deposits, and of fill and formation not containing wastes.

- The COCs and detected concentrations are characteristic of disposal sites where wastes were burned and include elevated metal concentrations (primarily lead) and the presence of PAHs, OCPs, TPH, and dioxins.
- Secondary waste deposits consisting primarily of fill soils and minor debris did not generally contain elevated concentrations of COCs.
- Typical of burn sites, elevated metal concentrations and COCs were not found in samples of fill soils and formation at locations outlying the wastes.

Summaries of analytical results are provided on Figure 4 and Tables 2 through 5 and laboratory reports are presented in Appendix G.

6.5. Quality Assurance and Quality Control Measures

An integral part of the sampling and analysis plan is the quality assurance/quality control (QA/QC) program to ensure the reliability and compatibility of data generated during the PEA activities. During the PEA investigation, a variety of data were collected. Field QC data consisted of field duplicates.

6.5.1. Evaluation of Field QC Data

Two field-split duplicate samples were collected and analyzed for Title 22 metals, TPH-e, OCPs, and PAHs by a fixed-based laboratory for QA/QC purposes during the PEA. The detected concentrations for primary samples and their duplicates were below the 100 percent relative difference that is typically specified for soil samples analyzed for

metals. Trip blanks were not collected because VOCs are not of concern at the site due to the nature of burned waste. Equipment blank samples were not collected because sampling equipment was not utilized during this PEA.

6.5.2. Laboratory Data Validation

Laboratory Data Consultants (LDC), a subcontractor specializing in the evaluation and validation of laboratory data, was contracted to perform a review of the ATL data from August 2013 using EPA Level III protocols. Laboratory parameters reviewed by LDC included data completeness, percent surrogate recovery, holding times, matrix spike/matrix spike duplicates, laboratory control standards, and method blank results.

Based on LDC's review, the following data were considered not useable:

- Lead and barium: results reported as non-detect in samples from T-12 through T-16. However, all samples from T-12 through T-16 contained detectable concentrations of lead and barium that were deemed useable as qualified.

The remaining qualifiers were assigned based upon technical validation criteria; therefore, the data are considered useable as qualified. Copies of the laboratory data validation reports are included as Appendix H. A review of the data from the September 2011 report was provided in the SSI report (Ninyo & Moore, 2011).

7. HUMAN HEALTH SCREENING EVALUATION

This section evaluates the COCs at the site from previous and current investigations, reviews the CSM described in Section 5.1 for potentially complete exposure pathways, and evaluates the risk to site receptors from COCs for the potentially complete exposure pathways. Consistent with DTSC's guidance on HHSE, this evaluation consists of four major steps described below.

Exposure Pathways and Media of Concern:
This step includes reviewing the CSM to evaluate the exposure pathways, the media of exposure, and the receptor populations. The CSM describes the sources of contamination, the release mechanism, the transport mechanism, the transport media, the exposure point, the routes of exposure, and the receptor population for the possible pathways of contaminant exposure. The model discriminates potentially complete pathways from incomplete pathways for the various routes of exposure.

Exposure Concentrations of COCs:
This step describes the COCs identified through this PEA and previous site investigations, evaluates the physical and chemical characteristics of the individual compounds used in the exposure assessment, and provides the rationale for including or excluding chemical groups or individual compounds from the HHSE process.

Toxicity Values:
This step compiles the relevant and significant human toxicity of the selected individual compounds from various sources.

Risk Characterization Summary:

This step integrates the results of the exposure assessment and the toxicity assessment to quantify the risk and hazard from the chemical groups or compounds screened in the previous steps for potentially complete exposure pathways. The risk and hazard is summed for all chemical groups or compounds for the corresponding exposure pathway.

7.1. Exposure Pathways and Media of Concern

As discussed in the preceding sections, the site is located on a high school and is comprised of hardscape areas (concrete and asphalt pavement), landscaped planter, vegetated canyon slope, and an unpaved, unvegetated area southeast of Ute Drive (Figure 10). The receptor population includes schoolchildren, faculty, staff, and the general public. However, as required by DTSC, the land use of the site was assumed to be residential regardless of the actual proposed use and zoning and the receptor population was assumed to be a child and adult in a residential setting. This scenario was utilized because it is the most conservative and would be the most protective of human health. It should be noted that the site is not currently used for residential purposes and the District does not intend at any time for the property to be used for residential purposes.

A complete exposure pathway for COCs on a site requires four elements: chemical sources, migration routes (i.e., environmental transport), an exposure point for contact (i.e., soil, air or water; or collectively, "media"), and human exposure routes (i.e., oral, dermal, inhalation). A pathway is not considered to be complete unless all four elements are present. The CSM (Figure 7) shows the relationship between the contaminant sources, exposure pathways, and potential receptors for the site. The source-pathway-receptor relationships provide the basis for the quantitative exposure assessment. Only those complete source-pathway-receptor relationships were included in the toxicity assessment and risk characterization steps. Although the pathway to the top 10 feet of soil/burned waste at the site is not complete based upon LEA Advisory #56 (CIWMB 1998), DTSC required that risk characterization be performed for soil/burned wastes within the top 10 feet at the site without regard to the completeness of the pathway. Therefore, the risk calculations were revised as required by DTSC to include an evaluation of the incomplete pathway within the top 10 feet of soil/burned waste regardless of the presence of cover overlying the wastes. The default exposure pathways present in the PEA Manual are considered complete and reasonable to assume for this site.

The contamination is the burned wastes. The burned wastes were observed at depths ranging from the surface to the maximum depth explored of 21 feet bgs and were generally observed to be mottled black to black brown, light gray to black gray, and reddish brown with areas of gray-white ash and contain primarily broken and fused glass, bottles, jars, porcelain, dishware, metal debris with some charred wood, ceramics, battery cores, and chunks of densely fused metal and glass debris. Photographs of the trench excavations are provided in Appendix F and descriptions are provided on the trench logs in Appendix B.

Based on the discussion of soil, air, and groundwater pathways in Section 5, the potentially complete exposure pathways for the site are as follows:

- inhalation of airborne dust from burned wastes and debris at the surface and near surface (i.e., upper 2 feet in accordance with LEA Advisory #56),

- incidental ingestion of COCs in burned wastes and debris at the surface, and
- dermal absorption of COCs from direct contact with surficial burned wastes and debris.

As previously discussed the exposure pathway for burned waste in areas beneath hardscape and/or at depths of 2 feet bgs or greater are not considered to be complete pathways because hardscape prevents access and 2 feet of unimpacted cover is considered to be adequate cover for a burned dump site per LEA Advisory #56. It is the opinion of Ninyo & Moore that soil below the top 2 feet is not a complete pathway for the site under the current and future land use (i.e., high school), which is consistent with the current guidance and practices of the California Department of Recycling and Recovery (CalRecycle), the State agency that oversees burned waste sites. However, DTSC has required that the District evaluate the top 10 feet of soil as a potentially complete pathway as they required for residential use properties regardless of the actual or planned site land use. It should be noted that the site is not currently used for residential purposes and the District does not intend at any time for the property to be used for residential purpose. The potentially complete, incomplete, DTSC-required, and no pathway relationships are shown on Figure 7.

For the inhalation of airborne dust pathway, erosion of burned wastes and debris is the release mechanism, wind dispersion of the airborne particles is the transport mechanism, and the ambient air at the site is the exposure media. The exposure point is indoor or outdoor air, where the receptor can potentially inhale the contaminated particles.

For incidental ingestion or dermal absorption of burned wastes and debris, direct contact is the release and transport mechanism, and the exposure point is the location where the receptor is exposed to the wastes.

7.2. Chemical Groups and Exposure Concentrations

As required by DTSC, this risk assessment considered exposure to receptors (adult and child in a residential setting, regardless of actual or future land uses) from COCs within the top 10 feet. However, it should be noted that it is the opinion of Ninyo & Moore that the exposure

pathway to soil/burned waste overlain by hardscape (i.e., asphalt or concrete) or a minimum of 2 feet of fill is not complete under the current or future land uses (i.e., high school) and as indicated in LEA Advisory #56 (CIWMB, 1998). Therefore, the evaluation of the complete exposure pathways within the top 2 feet in areas not covered by hardscape (i.e., unpaved) is also included in this PEA. The District has agreed to include an evaluation of the top 10 feet of soil regardless of the current guidance and practices of CalRecycle (the State agency that oversees burn sites) in an effort to keep the evaluation and cleanup process moving forward without further unnecessary delays. The risk calculations are presented in Appendix I.

The COCs considered for the health risk assessment included arsenic, lead, cadmium, other metals with concentrations exceeding site background concentrations and OCPs, PAHs, PCBs, TPH-e, and dioxins with concentrations exceeding the laboratory-reporting limit for the corresponding analytical method. The 95% upper confidence limit (UCL) of each COC from all data sets (2011 and 2013 environmental site investigations) within the top 10 feet of soil (as required by DTSC) and also within the complete exposure pathways (i.e., top 2 feet of unpaved areas of the site) were used as exposure point concentrations. If there was insufficient data to calculate the 95% UCL, then the maximum detected concentration was used as the exposure point concentration (Tables 5 and 6). The total chromium concentrations were considered to be trivalent chromium.

7.2.1. COCS within the Top 10 Feet

In the top 10 feet of soil/burned waste across the site (regardless of the presence of adequate cover overlying wastes) the 95% UCL for arsenic, lead, and cadmium concentrations exceeded their respective DTSC ambient/screening levels of 80, 7.0, and 4 mg/kg and are discussed in the HHSE for the top 10 feet of soil/burned waste. Detected metals (other than arsenic, lead, and cadmium) with a 95% UCL or maximum concentration, as applicable, exceeding background concentrations in the top 10 feet of soil/burned waste at the site are antimony, barium, chromium, cobalt, copper, mercury, molybdenum, nickel, silver and zinc and were included in the risk calculations for the top 10 feet of soil/burned waste and were therefore included in the risk calculations

(Appendix I, Table I-1). The 95% UCL for vanadium did not exceed the background concentration and therefore was not considered to be a COC in the top 10 feet of soil/burned waste at the site and no further evaluation of vanadium was performed for the HHSE of the top 10 feet of soil/burned waste.

TPH, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT, phenanthrene, acenaphthylene, and dioxin were detected in samples of soil/burned waste within the top 10 feet of the site and were evaluated as part of the HHSE for the top 10 feet of soil/burned waste (Appendix I, Tables I-1 and I-2).

7.2.2. COCs within the Top 2 Feet of (Unpaved Areas)

In the top 2 feet of soil/burned waste in unpaved areas of the site, the maximum detected lead concentration exceeded the DTSC screening level of 80 mg/kg and is discussed as part of the HHSE for the top 2 feet of soil/burned waste. The maximum detected arsenic and cadmium concentrations were below the ambient and screening levels, respectively. Detected metals (other than arsenic, lead, and cadmium) with a 95% UCL or maximum concentration, as applicable, exceeding background concentrations for the site are antimony, barium, copper, molybdenum, nickel, and zinc and were included in the risk calculations for the top 2 feet of soil/burned waste in unpaved areas of the site (Appendix I, Table I-3). The 95% UCL or maximum detected chromium, cobalt, and vanadium concentrations are below their respective background concentrations ; therefore, they are not considered to be a concern in the top 2 feet of unpaved soil at the site and no further evaluation was performed for the HHSE within the top 2 feet of unpaved soil/burned waste. Mercury, silver, PAHs, and OCPs, were not detected in the samples collected within the top 2 feet of unpaved soil/burned waste at the site and the samples were not analyzed for dioxins or PCBs; therefore, these COCs were not included in the risk calculations for the top 2 feet of soil/burned waste at the site. TPH was detected in one sample from within the top 2 feet of soil/burned waste in unpaved areas at the site and therefore was included in the risk calculations (Appendix I, Table I-4).

It is important to note that the burned waste, evidenced by both visual observations and lead concentrations, were not observed in the upper 2 feet of unpaved soil, with the exception of a surface sample collected in trench T-12, located within the landscaped planter (Figure 4). At locations explored, burned waste are at depths greater than 2 feet bgs at the unpaved area of the site at the top of the canyon slope southeast of Ute Drive. Therefore, a subset of the data consisting of the data from within the top 2 feet of unpaved soil excluding the landscape planter was evaluated for comparative purposes. The risk calculations were performed as indicated above, but excluding the landscaped planter (i.e., excluding T-12). In the remaining unpaved area southeast of Ute Drive, the maximum concentrations of COCs did not exceed their respective ambient/screening levels or background concentrations; therefore, risk were not able to be calculated (Appendix I, Tables I-5).

7.3. Human Health Screening Levels

The human health screening levels utilized to perform the HHSE are provided in Appendix I. The concentration used to evaluate arsenic was the ambient level of 12 mg/kg and for lead (for adults) and cadmium were the DTSC screening levels of 80 and 4 mg/kg, respectively. The lead concentrations were also evaluated utilizing the DTSC's Lead Risk Assessment Spreadsheet (LeadSpread 8) for children with a threshold blood level concentration of 1 microgram per deciliter (ug/dl) in the 90th percentile. The remaining metals and OCP concentrations were compared to RSLs for soil under a residential land use scenario (USEPA, 2013). The residential land-use scenario was utilized not because the current or future land uses are residential, but because this is the most conservative value for comparative purposes. The risks associated with the concentrations of TPH were evaluated as described in Section 7.4 below.

7.4. Toxicity Values

The screening levels described in Section 7.3 were utilized to perform the HHSE for COCs other than TPH; therefore, toxicity values were not utilized. For TPH, the toxicity criteria established by the Office of Human and Ecological Risk and provided in Table 2-6 of the PEA Manual were utilized (DTSC, 2013).

7.5. Risk Characterization Summary

The risk characterization is summarized below and on Tables 7 and 8. Risk calculations are provided in Appendix I.

- The risk calculations performed for the top 10 feet of soil/burned waste regardless of the presence of adequate cover overlying wastes indicated an excess cancer risk (ECR) of 3.85×10^{-6} and a non-cancer health hazard index (HI) of 22.43 (Table 7). The 95% UCL of lead (1,773 mg/kg) exceeds the DTSC's screening level of 80 mg/kg for an adult. The LeadSpread 8 spreadsheet returned a blood lead concentration of 23 ug/dl for a child and 48.5 ug/dl for a pica child, which exceed the threshold concentration of 1 ug/dl. The 95% UCL of arsenic (22.19 mg/kg) and cadmium (5.672 mg/kg) are above their respective ambient and screening levels, respectively.

- The risk calculation performed for the top 2 feet of soil/burned waste in unpaved areas of the site indicated an ECR of 6.53×10^{-10} and a non-cancer HI of 2.10 (Table 8). The maximum concentration of lead (190 mg/kg) exceeded the DTSC's screening level of 80 mg/kg for an adult and the LeadSpread 8 spreadsheet returned a blood lead concentration of 2.5 ug/dl for a child and 4.9 ug/dl for a pica child, which exceed the threshold concentration of 1 ug/dl. The maximum concentrations of arsenic (7.0 mg/kg) and cadmium (2.1 mg/kg) are below their ambient and screening levels, respectively.

- Risk calculations were not performed for the top 2 feet of soil within unpaved areas of the site excluding the landscaped planter because the 95% UCL or maximum concentration of COCs, as applicable, did not exceed their respective background, screening, or ambient levels. The LeadSpread 8 spreadsheet returned a blood lead concentration of 0.1 ug/dl for a child and 0.3 ug/dl for a pica child, which are below the threshold concentration of 1 ug/dl.

Based on the calculated risks, there are potential carcinogenic and non-carcinogenic health risks associated with the top 10 feet of soil/burned waste at the site; however, since the majority of the site is covered with hardscape and/or at least 2 feet of unimpacted soil, which results in an incomplete exposure pathway, the potential health risks evaluated by this sce-

nario are not representative of current site conditions or of future site conditions. The potential health risks of the current site conditions are best represented by the scenario that evaluated 2 feet of soil/burned waste in unpaved areas of the site. The calculated risks for the top 2 feet of unpaved soil/burned wastes indicate that there is a potential non-carcinogenic health risk; however, the carcinogenic risk is below the action level of $1x10^{-6}$. However, if the landscaped planter was no longer a complete exposure pathway, the concentrations of COCs at the site would be below their respective background, ambient, and screening levels and therefore potential health risks would not be present. The unpaved area consisting of the canyon slope was not accessible to sampling; therefore, conclusions regarding the potential health risks do not include this area at this time.

8. ECOLOGICAL SCREENING EVALUATION

The purpose of this qualitative screening-level ecological evaluation is to identify potentially complete exposure pathways between the areas of contamination and biota (i.e., non-human receptors) that utilize the site or may potentially utilize the site in the future or habitats outside of the site boundary that may potentially be impacted by contamination from the site.

8.1. Site Characterization

The site is located within a heavily urbanized area of the City of San Diego. The majority of the site is paved (1.3-acres, approximately 57% of site area) with these areas consisting of an asphalt-paved parking lot. The unpaved portions of the site (1-acre, approximately 43% of site area) consist of a planter that is planted with shrubbery (0.16-acres or 6,900 square feet), an area southeast of Ute Drive that is undeveloped and is not vegetated, and a canyon slope that appears to be covered with native and non-native vegetation (Figure 10). The surrounding properties are developed with a high school and residential and commercial structures. The site topography and hydrology are discussed in Sections 5.2.3 and 2.3, respectively. The contaminants of potential ecological concern (COPEC) are identified in Table 5.

8.2. Biological Characterization

Based on a review of the City of San Diego, Development Services Department, Official Zoning Map, Grid 22, the portion of the site north of Ute Drive is zone for residential single-family units and the portion south of Ute Drive is zoned as residential multi-family. The City of San Diego's Multiple Species Conservation Program (MSCP), MSCP Subarea Plan indicates that the site is located in the City of San Diego Urban Subarea and is not on or adjacent to areas identified for the preservation of biological resources (City of San Diego, 1997). The nearest area identified for the preservation of biological resources is Tecolote Canyon located approximately 0.25-mile east of the site. Based on this information, the site and areas potentially impacted by the site are not likely to be significantly utilized by biota or to contain significant wildlife habitats.

8.3. Pathway Assessment

The presence of ground surface cover can reduce the exposure of biota to the COPECs. The majority of the site is covered with concrete or asphalt paving (66%) that prevents access to the underlying burned waste. The unpaved landscaped planter and canyon slope represent potentially complete exposure pathways. Access to the unpaved landscaped planter currently is restricted by temporary fencing, which may prevent larger animals from accessing the area, but would not prevent smaller animals, plants, or birds from accessing the area. Small animal burrows were observed within the landscaped planter. In addition, the canyon slope areas are access to biota.

The burned waste in the landscaped planter (and potentially the canyon slope, if burned wastes are present near the surface) is the source of a potential release of hazardous substances through direct contact with the burned waste or inhalation and ingestion through a release to the air from surficial wastes (e.g., wind dispersal) or indirect contact through the ingestion of food. Surface water is not located on or near the site and groundwater is anticipated to be at a depth of greater than 80 feet; therefore, the water pathway is considered to be incomplete.

8.4. Qualitative Summary

Although COPECs are present and there are potentially complete exposure pathways in the unpaved landscaped planter of the site (and potentially the canyon slope), the site and areas potentially impacted by the site are not likely to be significantly utilized by biota or to contain significant wildlife habitats. Based on this information, an ecological risk at the site is not likely.

9. PUBLIC PARTICIPATION

A public notification of the PEA sampling activities was distributed to the residents and tenants of the adjacent properties, indicating the dates and nature of PEA sampling activities, and where to find more information. Because the site conditions necessitated the preparation of this PEA report, the District will comply with the public participation requirements as published in California Education Code Section 17213.1(a)(6)(A). This may include the preparation of public notices to inform the surrounding community and DTSC representatives of the public review, comment period, and hearing after the PEA report is submitted. The public notices will be prepared and distributed in accordance with the DTSC guidance and in accordance with Assembly Bill 2644. The public review period will take place concurrently with the DTSC's review of this document.

10. OPINION OF THE ENVIRONMENTAL PROFESSIONAL

It is our opinion that this assessment has identified conditions indicative of releases or threatened releases of hazardous substances, pollutants, contaminants, and/or petroleum/petroleum products at the site. It is our opinion that this assessment has revealed obvious indicators of the presence or likely presence of contamination at the site.

10.1. Evaluation of Recognized Environmental Conditions

It is our opinion that the presence of the burned waste at the site is considered a REC.

10.2. Additional Appropriate Investigation

Additional investigations were performed as part of this PEA and are summarized in this report.

11. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This section provides a summary of findings, conclusions, and recommendations.

11.1. Summary of Findings and Conclusions

The objectives of this PEA included the following:

- compiling data from this and previous investigations,
- performing an investigation to supplement the previous data,
- assessing the types of contaminants, concentrations and general extent of contamination associated with the burned wastes at the site; and
- estimating the potential threat to public health and the environment based on a risk analysis.

The PEA field investigation, conducted in August 2013, included sampling and analysis of burned wastes and soils. PEA field activities focused on evaluating areas of the site corresponding to where wastes were disposed of in a former canyon or finger canyon and burned prior to construction of the school. Trenching and sampling was also previously performed by Ninyo & Moore in September 2011 (Ninyo & Moore, 2012). The following is a summary of the results of the 2011 and 2013 investigations:

- Eleven trenches were excavated and sampled in September 2011 and 12 trenches were excavated and sampled in August 2013. With the exception of the area to the southeast of Ute Drive, the extent of burned wastes was generally delineated horizontally and appears to be limited to within the site boundaries (Figure 3). The canyon slope southeast of Ute Drive was not readily accessible due to steep terrain.
- The majority of the burned waste is located underneath asphalt and concrete paving. The unpaved areas of the site include a landscaped planter that runs parallel to Ute Drive and the school parking lot and the area of the site southeast of Ute Drive. Burned wastes were observed at some locations at the surface in the landscaped planter. At the area at the top of the slope southeast of Ute Drive, burned wastes were not observed at the surface and based on the exploratory trench excavations in this area, the wastes are covered by 4 to 9.5 feet of fill. The canyon slope further southeast was not accessible due to the steep terrain and the presence of vegetation limited the visual observations from the top of the slope; therefore, it is not known if burned wastes are present in this area.

- Based on field observations, there appears to be two kinds of wastes at the site, primary and secondary waste deposits. The primary wastes appear to have been disposed of and burned or partially burned in place. Primary waste deposits comprise the majority of burned wastes at the site and in general were observed to be mottled black to black brown, light gray to black gray, and reddish brown with areas of gray-white ash and contain primarily broken and fused glass, bottles, jars, porcelain, dishware, metal debris with some charred wood, ceramics, battery cores, and chunks of densely fused metal and glass debris. These wastes are mixed with variable amounts of fill soils and typically, the percentage of burned wastes ranges from 10 to 95%. Burned wastes and burned wastes mixed with fill were encountered in 13 exploratory trenches (T-2 through T-6, T-8, T-11, OT, and T-12 through T-16) from below the asphalt or surface grade to depths greater than 21 feet bgs, which was the maximum depth excavated. Waste thicknesses ranged from several inches to greater than 11 feet (Figures 3 through 6).

  The secondary waste deposits consist of minor amounts (less than 1%) of what appears to have been primary waste deposits that were subsequently moved/mixed with fill soils, likely related to subsequent site grading associated with construction of the school. The secondary waste deposits consist almost entirely of fill soils with occasional pieces of waste debris, generally broken pieces of glass. What are interpreted to be secondary waste deposits are represented by trench excavations T-5, T-6, T-8, T-21, and T-22, which contain only minor wastes, estimated at approximately 1% or less, primarily minor broken glass, at relatively shallow depths (Figures 3 through 6).

- Trenching and sampling was not performed in the canyon slope southeast of Ute Drive; therefore the extent of the burned wastes in that direction was not delineated. It is not known whether burned wastes are exposed at the surface on the slope face.

- Seventy-four samples were collected from the 23 trench locations. Each of the samples was analyzed for lead and at least one sample per trench was analyzed for Title 22 Metals. Samples known or suspected of containing the highest lead or other metal concentrations were additionally analyzed for TPH-e, PAHs, and OCPs. Eight samples were analyzed for PCBs and four samples were analyzed for dioxins (Tables 1 through 4).

- Antimony, barium, chromium, cobalt, copper, mercury, molybdenum, nickel, silver, vanadium, and zinc were detected at concentrations exceeding their respective background metals concentrations. Arsenic, lead, and cadmium were detected at concentrations exceeding their respective DTSC ambient or screening levels (i.e., 12, 80, and 4 mg/kg, respectively) (Tables 1 and 2). The elevated metal concentrations correlated with samples that contained burned wastes. Samples outlying the primary and secondary wastes did not contain elevated concentrations of metals.

- Two PAHs (acenapthylene and phenanthrene) were detected at low concentrations in samples of burned waste and were not detected in the other samples analyzed (Tables 3 and 5).

- PCBs were not detected in the eight samples analyzed (Tables 3).
- Dioxins were detected in two of the four samples analyzed at concentrations of 14 and 120 ng/kg (Tables 3).
- DDD, DDE, and DDT were detected in several samples of burned wastes at maximum concentrations of 11, 740, and 940 µg/kg, respectively, which are below their respective RSLs (Tables 3).
- TPH-e was detected in three samples of burned waste at concentrations of 18, 94, and 230 mg/kg (Tables).
- The laboratory analytical data were reviewed by LDC, a data validation specialist. LDC indicated the data reviewed were useable as qualified.
- HHSE risk calculations were performed either using the 95% UCL or maximum concentration (for COCs in which a 95% UCL could not be calculated) for COCs that exceeded their background concentrations in three scenarios: top 10 feet of soil/burned waste (regardless of cover materials or completeness of pathway), top 2 feet of soil/burned waste (unpaved areas), and top 2 feet of soil excluding the landscaped planter (unpaved areas).
    - As required by DTSC, this risk assessment considered exposure to receptors (adult and child in a residential setting, regardless of actual or future land uses) from COCs within the top 10 feet. However, it should be noted that it is the opinion of Ninyo & Moore that the exposure pathway to soil/burned waste overlain by hardscape (i.e., asphalt or concrete) or a minimum of 2 feet of fill is not complete under the current or future land uses (i.e., high school) and as indicated in LEA Advisory #56 (CIWMB, 1998). Therefore, the evaluation of the complete exposure pathways within the top 2 feet in areas not covered by hardscape (i.e., unpaved) is also included in this PEA. The District has agreed to include an evaluation of the top 10 feet of soil regardless of the current guidance and practices of CalRecycle (the State agency that oversees burn sites) in an effort to keep the evaluation and clean-up process moving forward without further unnecessary delays.
    - The potential health risks of the current site conditions are best represented by the scenario that evaluated 2 feet of soil/burned waste in unpaved areas of the site. The calculated risks for the top 2 feet of unpaved soil/burned wastes indicate that there is a potential non-carcinogenic health risk; however, the carcinogenic risk is below the action level of $1x10^{-6}$.

- For comparative purposes, the health risks for the top 2 feet of the unpaved areas of the site excluding the landscaped planter were calculated. If the landscaped planter was no longer a complete exposure pathway (e.g., covered with hardscape or 2 feet of clean cover), the concentrations of COCs would be below their respective background, ambient, and screening levels and therefore potential health risks would not be present.
- The unpaved area consisting of the canyon slope was not accessible to sampling; therefore, conclusions regarding the potential health risks do not include this area at this time.

- Although COPECs are present and there are potentially complete exposure pathways in the unpaved areas of the site, the site and areas potentially impacted by the site are not likely to be significantly utilized by biota or to contain significant wildlife habitats. Based on this information, an ecological risk at the site is not likely.

11.2. Recommendations for Further Action

Based on the site history information, the results of the September 2011 and August 2013 site investigations, and the HHSE, we recommend the following:

- Even though the area of exposed wastes in the landscaped planter that parallels Ute Drive is temporarily fenced off to limit site access, the wastes continue to be a risk to human health and the environment. It was previously recommended that the exposed wastes in the planter area be covered with 2 feet of soil); however, the DTSC is requiring a RAW be prepared to evaluate potential remedial actions. The anticipated additional length of time associated with the RAW process may result in additional risk to human health and the environment. Based on this, the following is recommended:
  - The wastes be covered with hardscape (e.g., asphalt, concrete, etc.) or at least 2 feet of unimpacted soils. It is recommended that the cover be placed over the wastes in the planter area as soon as possible to be protective of public health, safety and the environment, to be in compliance with applicable CCR Title 27 requirements, and to avoid potential Notice of Violations by the City of San Diego LEA based on their semi-annual site inspections. However, the DTSC stated in a letter dated October 23, 2014 that the "placement of cover should be recommended for as further action should be conducted under the RAW process" and that "any further as part of the school cleanup up [sic] process is to be conducted via a RAW as the final remedy." Since a portion of the area requiring placement of cover is within the City of San Diego (City) right-of-way, the District must perform the work in conjunction with the City for cost sharing purposes. The District has been coordinating with the City and has been informed by the City that they will not move forward with cost-sharing agreements for the placement of cover without the approval of the lead regulatory agency on the project, which is DTSC. As a result, the District cannot move

forward with the placement of cover until DTSC provides their approval, which they cannot provide unless it is done through the RAW process. The estimated time frame for completion of the RAW process is greater than six months, over which time there remains the potential for the exposed wastes to adversely impact public health, safety, and the environment.

- The cover be maintained in general compliance with applicable sections of CCR Title 27 pertaining to the post-closure maintenance of landfills (waste disposal sites) including requirements pertaining to final cover.

- An Operations & Maintenance (O&M) Plan be prepared that describes the methods to be employed to be protect public health, safety, and the environment from potential impacts associated with the burned wastes at the site.

- A land use covenant (LUC) be recorded for the site to include the areas underlain by burned wastes that describes the restrictions associated with the site and provides information regarding changes in site use and/or land transfers.

- Further vertical delineation of the wastes in the area of trenches T-14 and T-15, southeast of Ute Drive and northwest of the canyon is not recommended since the wastes in this area are covered with 8.5 to 9.5 feet of fill soils. However, the existing soil cover should be maintained in accordance with applicable sections of CCR Title 27, a site O&M Plan, and a LUC to protect the integrity of the cover materials, public health, safety, and the environment as described above.

- The canyon slope southeast of Ute Drive is not readily accessible and the extent of wastes in this direction is not known. However, due to the steep canyon slope and difficult access to this area, exposure to potentially exposed waste, if present, is not likely. A LUC should be recorded for the site to assure relevant persons are knowledge about the site conditions and to minimize the potential for exposure to the burned wastes, if present.

- Trench T-13, located southeast of Ute Drive, contained none to a maximum thickness of 0.5 feet of burned wastes. These minor wastes were overlain by approximately 4 feet of cover soil. Based on the absence to minimal thickness of wastes at this location, this was interpreted to generally represent the southeastern extent of wastes. It is our opinion that the southern extent of wastes is generally as shown on Figure 3. Additional lateral delineation is not warranted based on the minimal amounts of wastes, which are interpreted to represent the waste limits in this area, and more than adequate thickness of the overlying cover soils.

- Trench T-16, located on the southeast side of Ute Drive, contained wastes that are approximately 6.5 feet thick. Based on comparison of pre- and post- waste placement topographic contour intervals indicated on historic and current maps, it appears the lateral extent of wastes is generally as indicated on Figure 3. A combination of historical research, field data, the presence of approximately five feet of cover soils overlying wastes at T-16 and more than adequate cover at other exploratory trenches located southeast Ute Drive provide adequate rationale to support our opinion that the extent of waste northeast of T-16 is generally delineated. However, the existing soil cover should be maintained in accordance with applicable sections of CCR Title 27, a site O&M Plan, and a LUC to protect the integrity of the cover materials, public health, safety, and the environment as described above.

12. DATA GAPS

Trenching and sampling was not performed in the canyon slope southeast of Ute Drive; therefore the extent of the burned wastes in that direction was not delineated. It is not known whether burned wastes are exposed at the surface on the slope face; however, due to the steep canyon slope and difficult access to this area, exposure to potentially exposed waste is not likely. Other significant data gaps were not encountered during this assessment.

13. SIGNATURE AND QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

As required by 40 CFR §312.21(d) the following statement is included:

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental professional as defined by §312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Beth S. Abramson-Beck, PG 4580
Principal Geologist

Resumes, which document the professional qualifications, pursuant to 40 CFR §312.10(b)(2), of the persons that prepared and reviewed this report are provided as Appendix J.

14. LIMITATIONS

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard-of-care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Please note that this study did not include an evaluation of geotechnical conditions or possible geologic hazards.

This document is intended to be used only in its entirety. No portion of the document by itself is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information or has questions regarding the content, interpretations presented, or completeness of this document.

Our conclusions and opinions are based on an analysis of the observed site conditions and the referenced literature. It should be understood that the conditions of a site can change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This report is intended exclusively for use by the San Diego Unified School District. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than those noted is undertaken at said parties' sole risk.

15. REFERENCES

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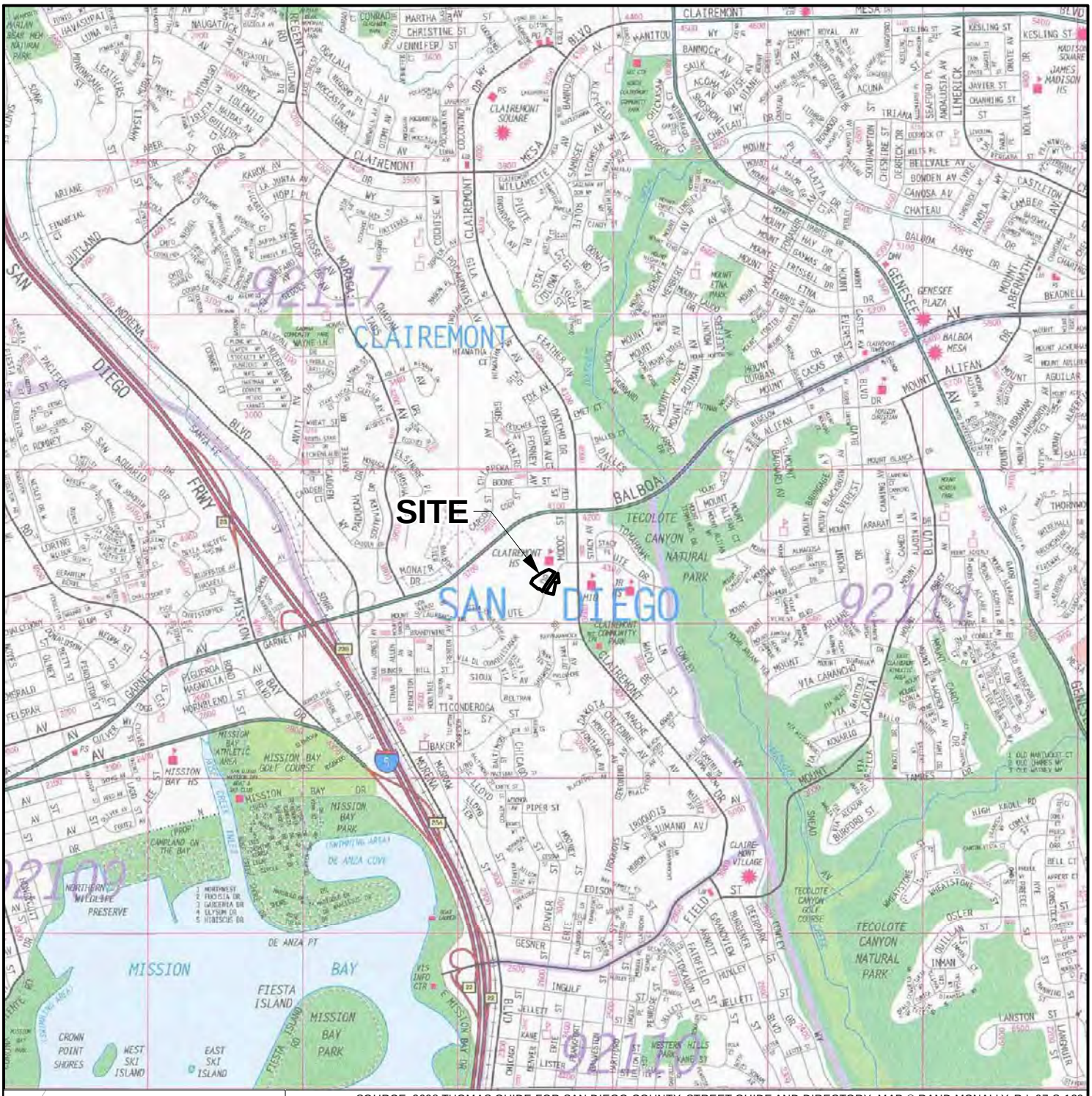
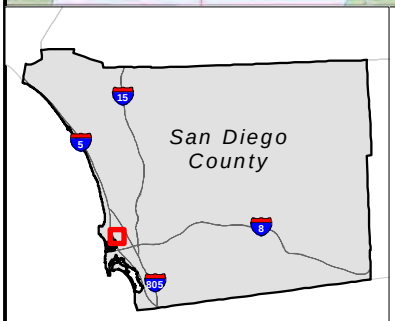


SOURCE: 2008 THOMAS GUIDE FOR SAN DIEGO COUNTY, STREET GUIDE AND DIRECTORY; MAP © RAND MCNALLY, R.L.07-S-129



MAP INDEX

N

SCALE IN FEET

0 2,400 4,800

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore	SITE LOCATION	FIGURE
PROJECT NO. / DATE	CLAIREMONT HIGH SCHOOL 4150 UTE DRIVE SAN DIEGO, CALIFORNIA	1
105338106 / 4/15		

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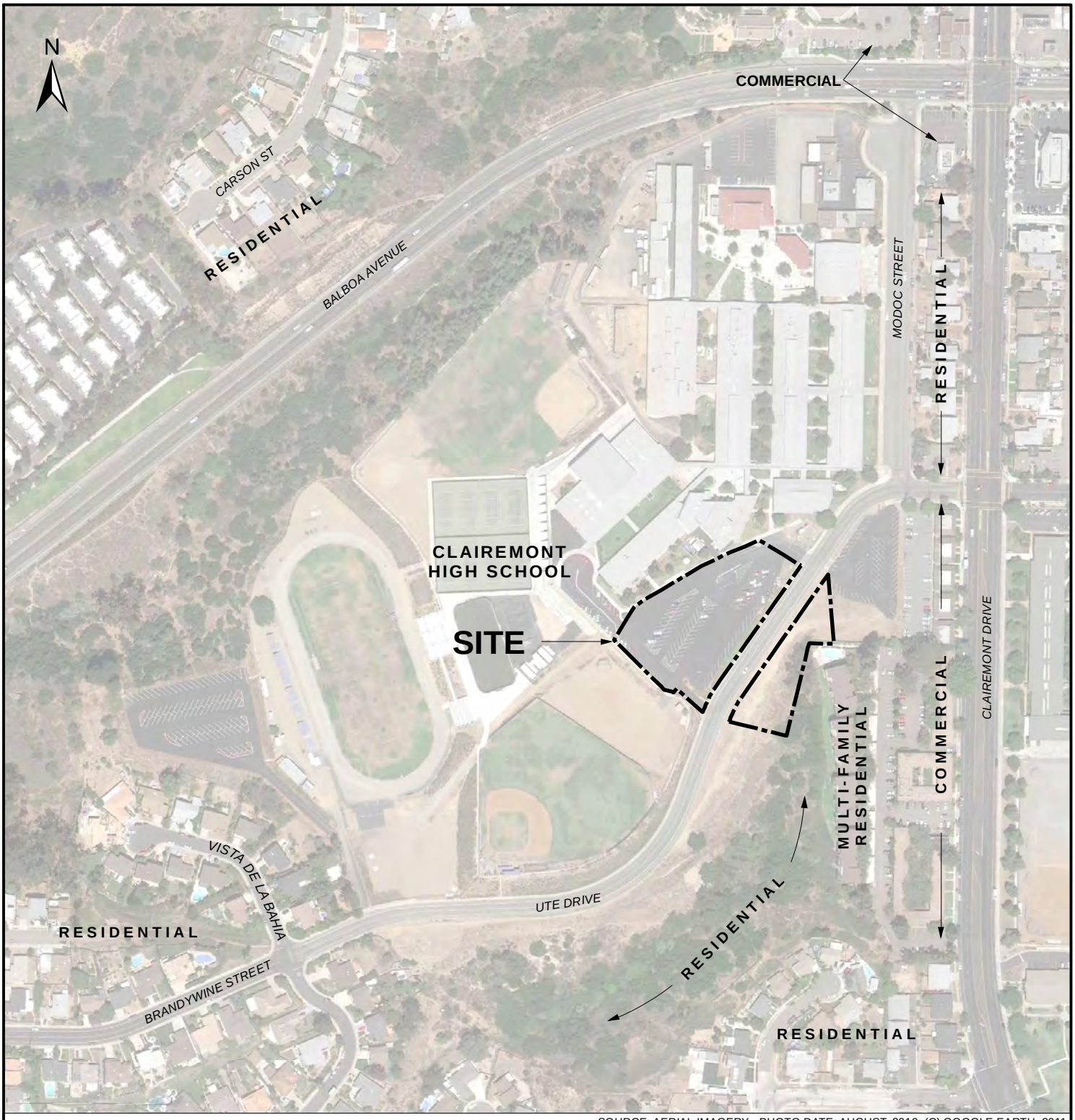

SOURCE: AERIAL IMAGERY - PHOTO DATE: AUGUST, 2010; (C) GOOGLE EARTH, 2011

LEGEND

SITE BOUNDARY

SCALE IN FEET

0 300 600

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore		SITE AND VICINITY	FIGURE
PROJECT NO.	DATE	CLAIREMONT HIGH SCHOOL 4150 UTE DRIVE SAN DIEGO, CALIFORNIA	2
105338106	4/15		

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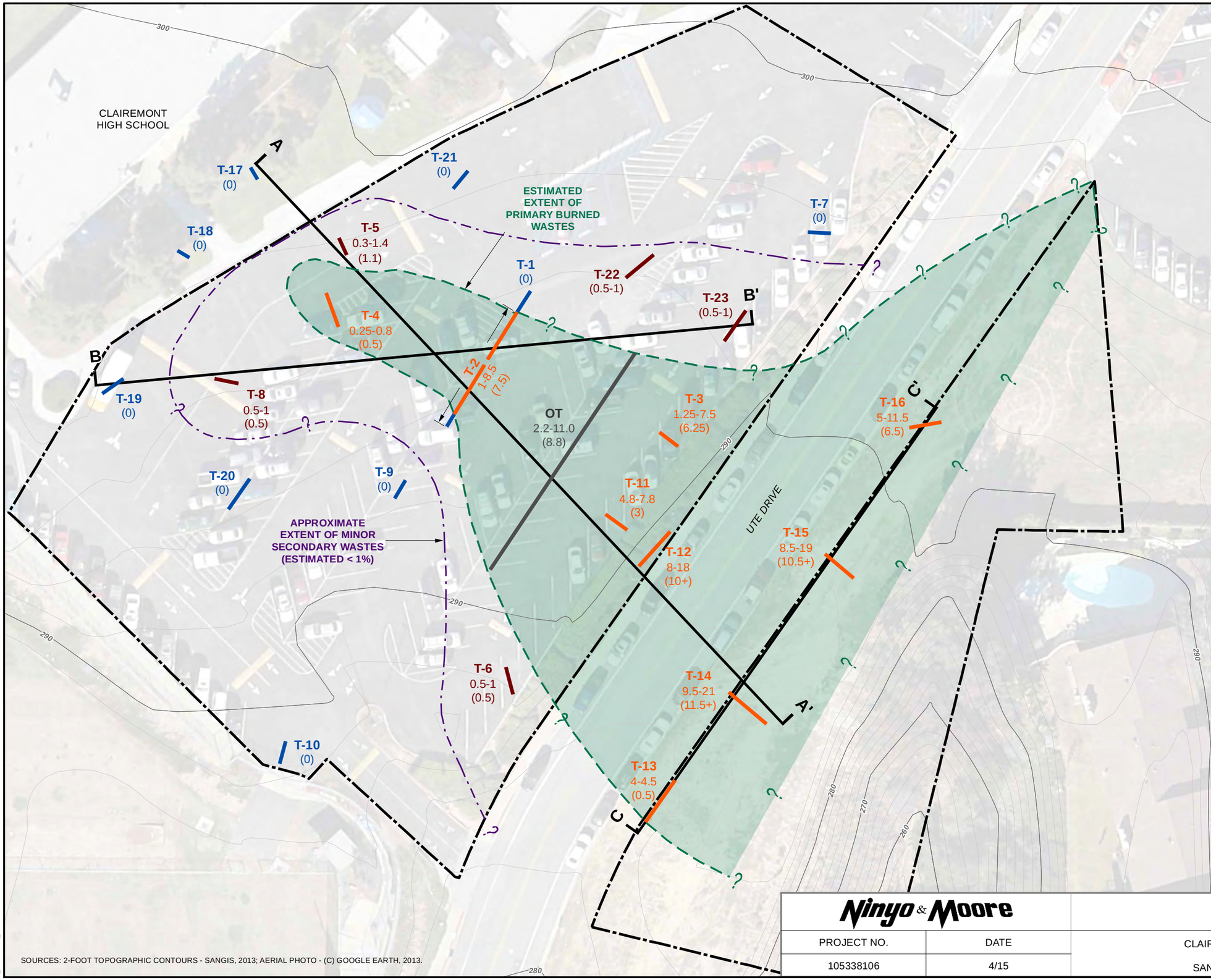


LEGEND

T-23 TRENCH, NINYO & MOORE, JULY 2011, AUGUST 2013

9.5-21 (11.5+) APPROXIMATE DEPTH WASTES WERE ENCOUNTERED IN FEET BELOW GROUND SURFACE (bgs), ( ) INDICATES APPROXIMATE WASTE THICKNESS IN FEET

ORANGE INDICATES PRESENCE OF PRIMARY BURNED WASTES

MAROON INDICATES PRESENCE OF MINOR SECONDARY WASTE DEBRIS ESTIMATED <1%

BLUE INDICATES ABSENSE OF BURNED WASTES

OT LOCATION OF UTILITY TRENCH, AUGUST 2011

2.2-11.0 (8.8) APPROXIMATE DEPTH WASTES WERE ENCOUNTERED IN FEET BELOW GROUND SURFACE (bgs), ( ) INDICATES APPROXIMATE WASTE THICKNESS IN FEET

SITE BOUNDARY

CLAIREMONT HIGH SCHOOL BURN SITE FOOTPRINT, QUERIED WHERE INFERRED

C C' CROSS SECTION

N

SCALE IN FEET

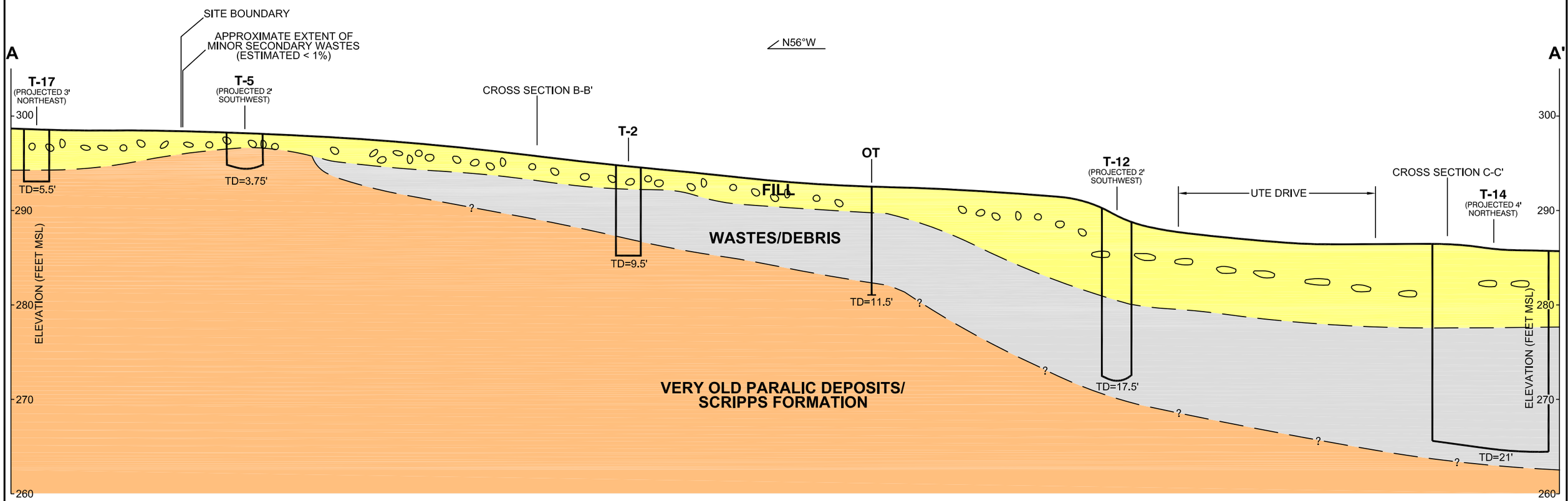
0 40 80

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

SOURCES: 2-FOOT TOPOGRAPHIC CONTOURS - SANGIS, 2013; AERIAL PHOTO - (C) GOOGLE EARTH, 2013.

3_105338106_TL.mxd 4/28/2015 5:56:39 PM JDL

Ninyo & Moore		SITE PLAN	FIGURE
PROJECT NO.	DATE	CLAIREMONT HIGH SCHOOL 4150 UTE DRIVE SAN DIEGO, CALIFORNIA	3
105338106	4/15		



20 0

SCALE IN FEET

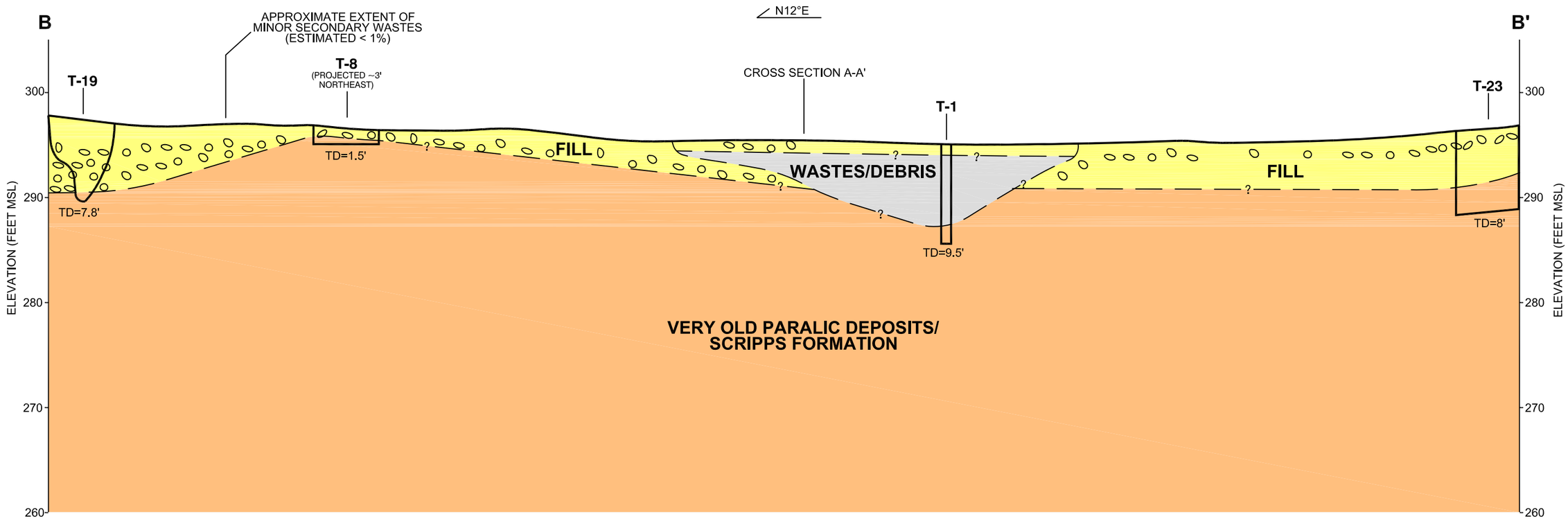
10

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE

LEGEND

T-17 □ TD=5.5'	EXPLORATORY TRENCH TD=TOTAL DEPTH IN FEET
—— ——?	GEOLOGIC CONTACT, QUERIED WHERE QUESTIONABLE

Ninyo & Moore	CROSS SECTION A-A'	FIGURE
PROJECT NO. / DATE	CLAIREMONT HIGH SCHOOL SAN DIEGO, CALIFORNIA	4
105338106 / 4/15		



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SCALE IN FEET

10

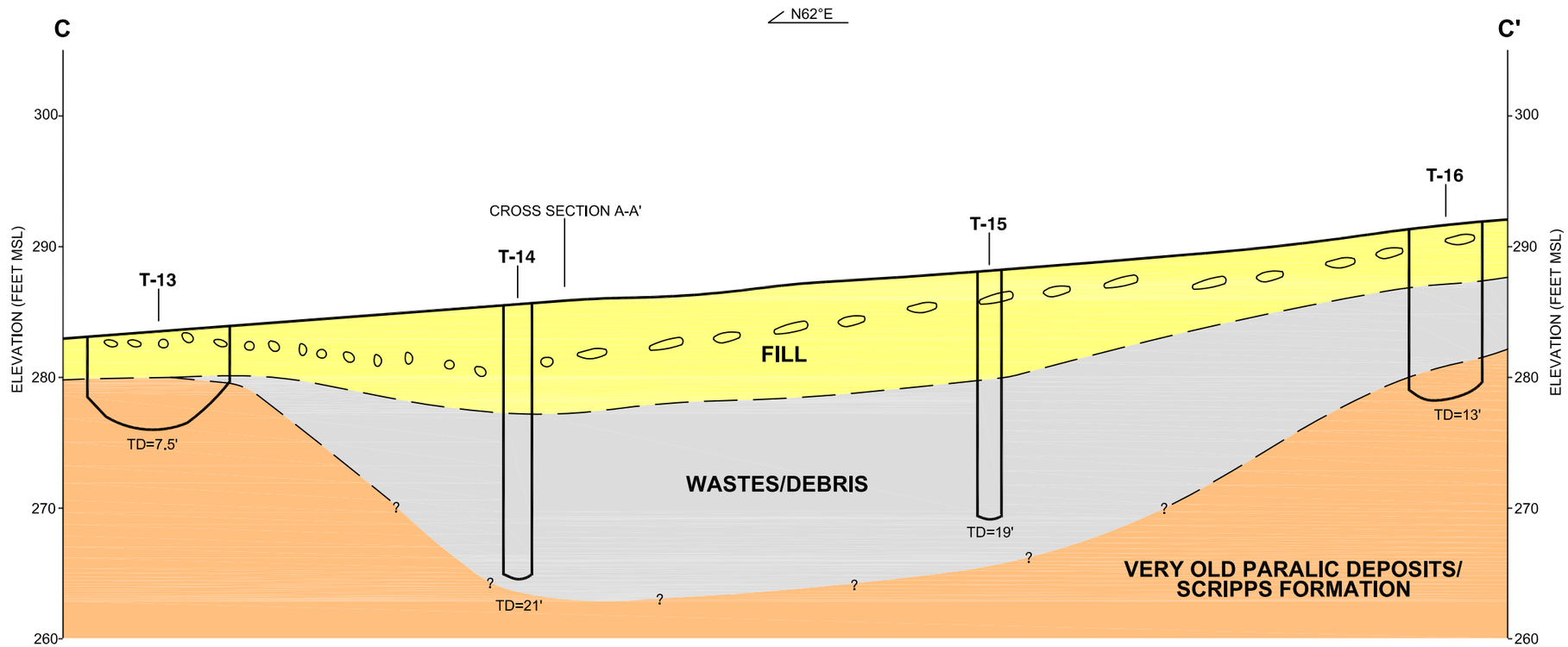
LEGEND

T-23 TD=8'	EXPLORATORY TRENCH TD=TOTAL DEPTH IN FEET
—— ——?	GEOLOGIC CONTACT, QUERIED WHERE QUESTIONABLE

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE

5 105338106_cs-b-b'.dwg

Ninyo & Moore	CROSS SECTION B-B'	FIGURE
PROJECT NO. 105338106 / DATE 4/15	CLAIREMONT HIGH SCHOOL SAN DIEGO, CALIFORNIA	5



LEGEND

T-16 □ TD=13'	EXPLORATORY TRENCH TD=TOTAL DEPTH IN FEET
—— ——?	GEOLOGIC CONTACT, QUERIED WHERE QUESTIONABLE

20 0

SCALE IN FEET

10

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE

6 105338106_cs-c-c'.dwg

Ninyo & Moore	CROSS SECTION C-C'	FIGURE
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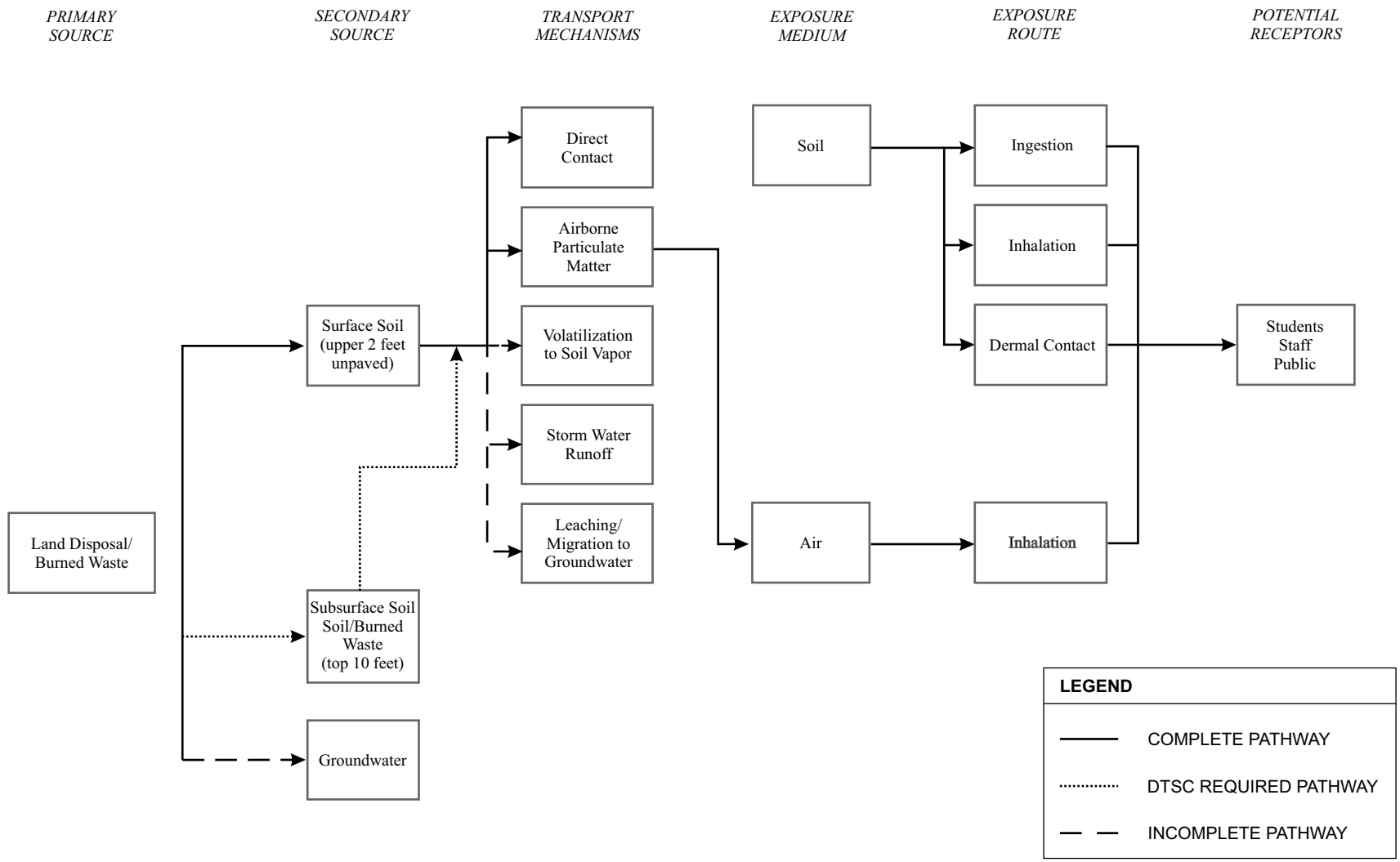

Ninyo & Moore		CONCEPTUAL SITE MODEL	FIGURE
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105338106	4/15		

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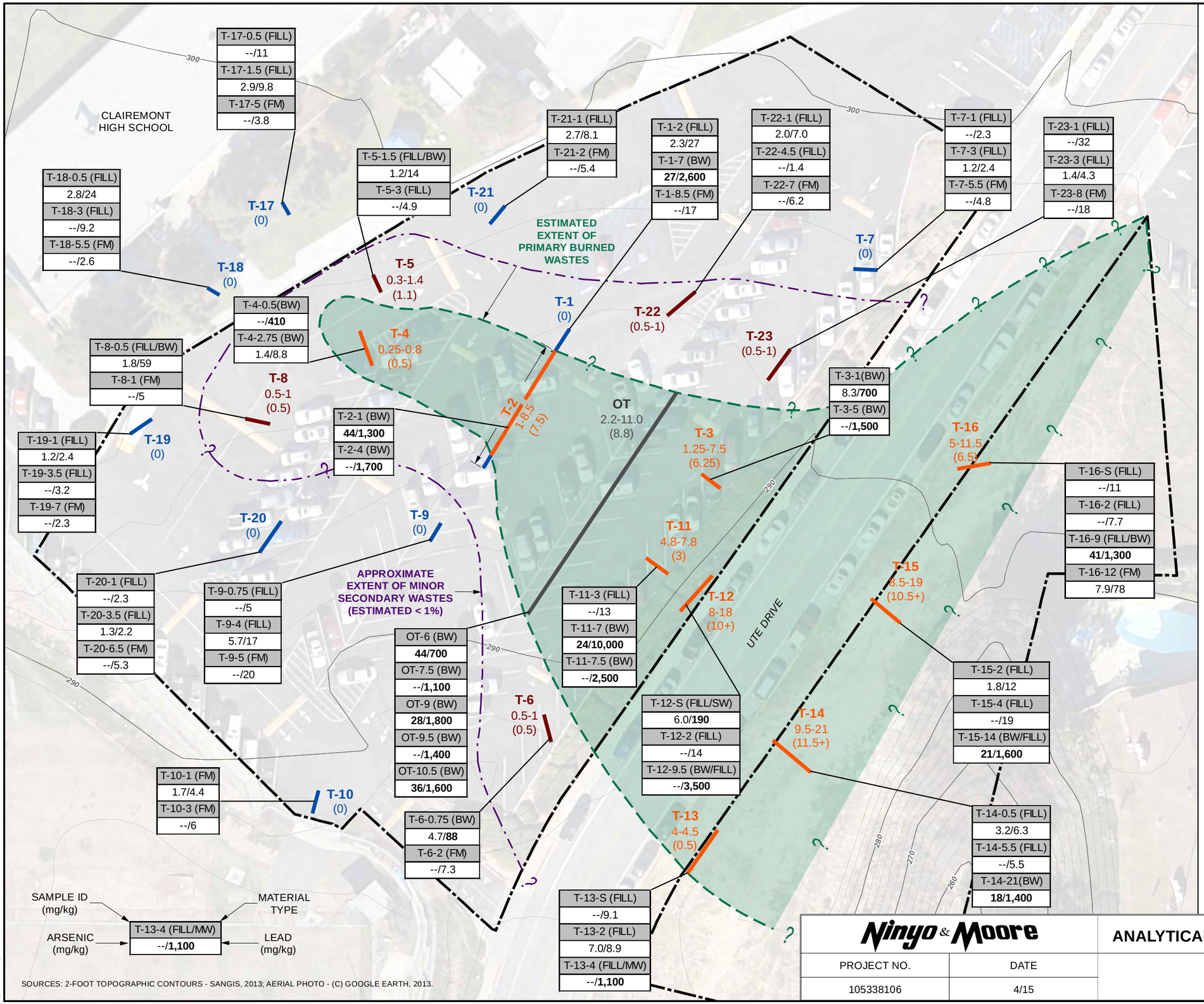

SOURCES: 2-FOOT TOPOGRAPHIC CONTOURS - SANGIS, 2013; AERIAL PHOTO - (C) GOOGLE EARTH, 2013.

LEGEND

T-23 TRENCH, NINYO & MOORE, JULY 2011, AUGUST 2013

9.5-21 (11.5+) APPROXIMATE DEPTH WASTES WERE ENCOUNTERED IN FEET BELOW GROUND SURFACE (bgs), ( ) INDICATES APPROXIMATE WASTE THICKNESS IN FEET

ORANGE INDICATES PRESENCE OF PRIMARY BURNED WASTES

MAROON INDICATES PRESENCE OF MINOR SECONDARY WASTE DEBRIS ESTIMATED <1%

BLUE INDICATES ABSENSE OF BURNED WASTES

OT LOCATION OF UTILITY TRENCH, AUGUST 2011

AREA OF CONCERN

CLAIREMONT HIGH SCHOOL BURN SITE FOOTPRINT, QUERIED WHERE INFERRED

NOTES:
-- - not analyzed
BW - burned waste
FILL - fill material
FM - formational/native material
Bold values indicate concentration exceeded the DTSC screening level.
SW - surficial waste
MW - minor wastes

N

SCALE IN FEET
0 40 80

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

ANALYTICAL RESULTS - ARSENIC AND LEAD

PROJECT NO.	DATE		FIGURE
105338106	4/15	CLAIREMONT HIGH SCHOOL 4150 UTE DRIVE SAN DIEGO, CALIFORNIA	8

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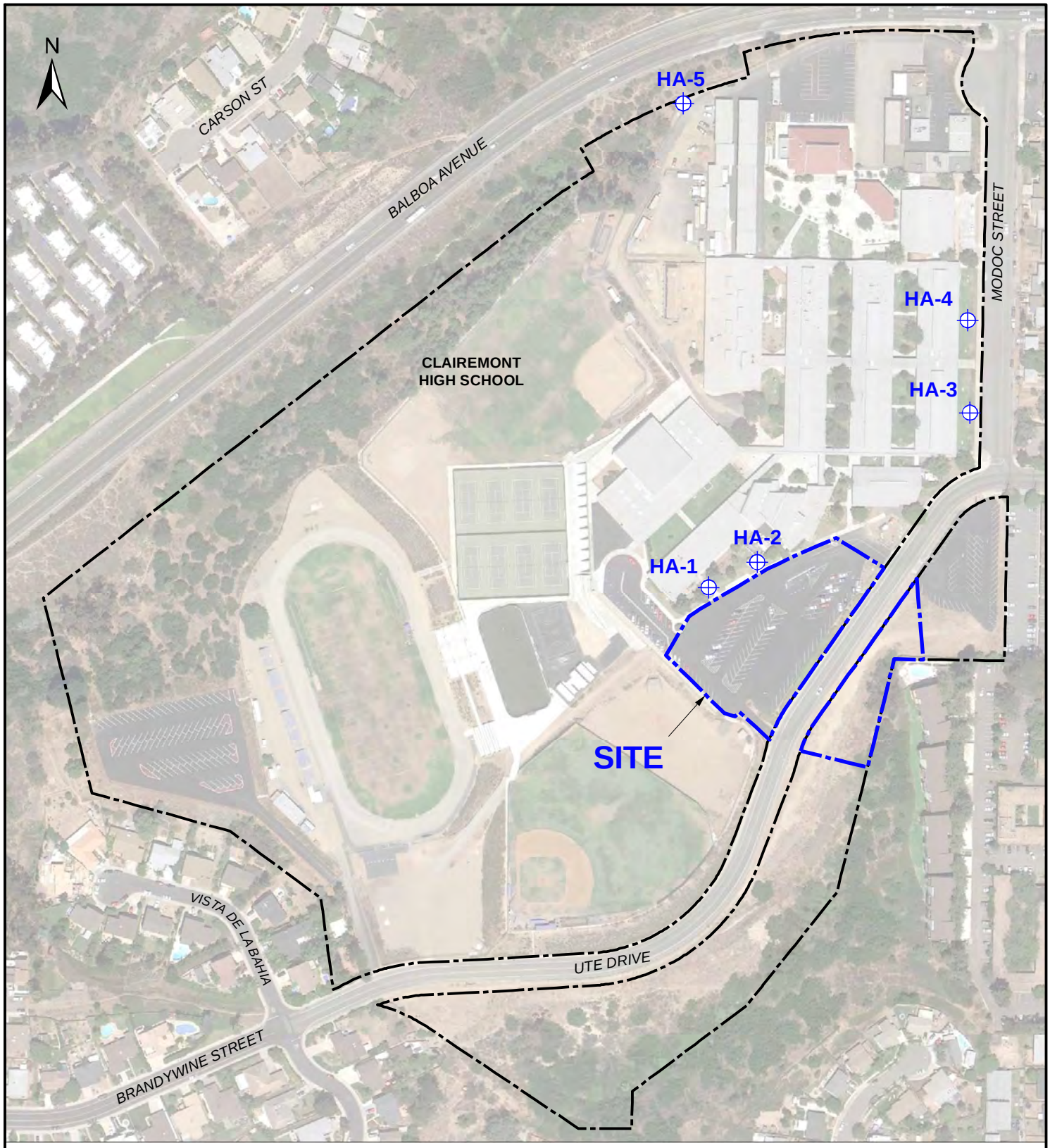


SOURCE: PARCELS - SANGIS, 2014.; GOOGLE EARTH, 2011

LEGEND

HA-5 BACKGROUND SOIL SAMPLE

PARCEL BOUNDARY

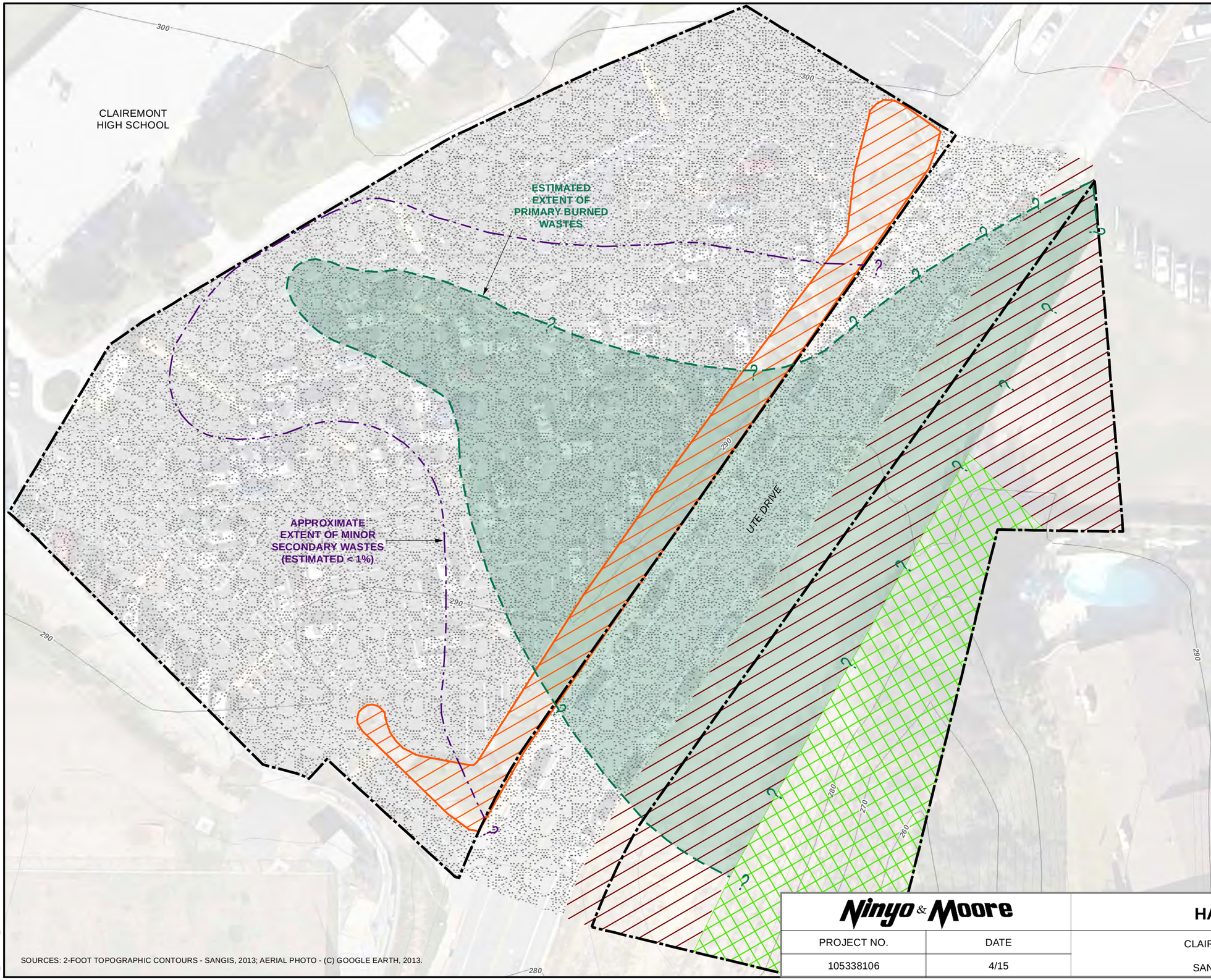
SCALE IN FEET

0 250 500

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore	OFF-SITE BACKGROUND SOIL SAMPLE LOCATIONS	FIGURE
PROJECT NO. / DATE	CLAIREMONT HIGH SCHOOL 4150 UTE DRIVE SAN DIEGO, CALIFORNIA	9
105338106 / 4/15		

9_105338106_OS_BSMP.mxd 4/28/2015 5:58:12 PM JDL



LEGEND

- SITE BOUNDARY
- CLAIREMONT HIGH SCHOOL BURN SITE FOOTPRINT, QUERIED WHERE INFERRED
- CANYON SLOPE (NATIVE/NON-NATIVE VEGETATION)
- DISTURBED NON-VEGETATED
- LANDSCAPE/SHRUBBERY
- ASPHALT/CONCRETE PAVEMENT

N

SCALE IN FEET

0 40 80

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

SOURCES: 2-FOOT TOPOGRAPHIC CONTOURS - SANGIS, 2013; AERIAL PHOTO - (C) GOOGLE EARTH, 2013.

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Ninyo & Moore		HABITAT PLAN	FIGURE
PROJECT NO.	DATE	CLAIREMONT HIGH SCHOOL 4150 UTE DRIVE SAN DIEGO, CALIFORNIA	10
105338106	4/15		

Table 1 – Previous Analytical Results - July 2011

Sample ID	Date Collected	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Chromium WET (mg/l)	Chromium TCLP (mg/l)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Lead WET (mg/l)	Lead TCLP (mg/l)	Mercury (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Zinc WET (mg/l)
Background Concentration		<2.0	12*	139	4*	12.4	--	--	4.5	23	80*	--	--	<0.10	<1.0	6.6	27.7	144.7	--
RSL		3.1	12*	1,500	790+/4*	12,000	--	--	370	310	80	--	--	1	39	150	39	2,300	--
T1	7/21/2011	**2.7**	5.7	**460**	**6.3**	**13**	--	--	3.4	**130**	**310**	--	0.36	<0.10	<1.0	**9.2**	9.3	**900**	--
T2	7/21/2011	**12**	11	**130**	3.5	**17**	--	--	**4.7**	**150**	**1,000**	--	0.85	<0.10	**3.4**	**24**	13	**230**	--
SP1	7/21/2011	**9.5**	**19**	**700**	**10**	**120**	<1.0	<0.050	**8.5**	**460**	**980**	--	0.34	**0.26**	**3.5**	**84**	26	**2,800**	--
SP2	7/21/2011	**10**	**21**	**860**	**12**	**50**	--	--	**11**	**550**	**1,600**	42	0.20	**0.30**	**3.5**	**41**	23	**2,800**	200

Notes:

mg/kg – milligrams per kilogram
mg/l – milligrams per liter
bgs – below ground surface
Bold indicates the sample result exceeded background concentrations or the DTSC screening/ambient level.

RSL – US Environmental Protection Agency Regional Screening Level (November 2013)
TCLP – toxicity characteristic leaching procedure
WET – waste extraction test

< – analyte not detected at a concentration above the listed practical quantitation limit
-- – not analyzed/not applicable
*DTSC Screening Level or Ambient Level (DTSC, 2009 and 2013)
+Carcinogenic RSL

Table 2 – Analytical Results - Detected Metals

Sample ID	Date Collected	Depth (feet bgs)	Material Type	Antimony (mg/kg)	Arsenic (mg/kg)	Arsenic WET (mg/l)	Barium (mg/kg)	Barium WET (mg/l)	Cadmium (mg/kg)	Cadmium WET	Cadmium TCLP	Chromiu (mg/kg)	Chromium WET (mg/l)	Cobalt (mg/kg)	Copper (mg/kg)	Copper WET	Lead (mg/kg)	Lead WET	Lead TCLP (mg/l)	Mercury (mg/kg)	Mercury WET	Mercury TCLP	Molybdenu (mg/kg)	Nickel (mg/kg)	Silver (mg/kg)	Vanadiu (mg/kg)	Zinc (mg/kg)	Zinc WET
Background Concentration				<2.0	12*	--	139	--	4*	--	--	12.4	--	4.5	23	--	80*	--	--	<0.10	--	--	<1.0	6.6	<1.0	27.7	144.7	--
RSL				3.1	12*	--	1,500	--	790+/4*	--	--	12,000	--	420*/2.3	310	--	80*	--	--	0.94	--	--	39	15,000*/150	39	39	2,300	--
September 2011																												
OT-6	9/1/2011	6	BW	**19 J**	**44**	<0.80	**780**	--	**11 J**	--	--	**43**	--	**10**	**370 J**	--	**3,700 J**	18	0.70	**1.0**	--	--	**2.8**	**41**	<1.0	21	**2,500**	140
OT-7.5	9/1/2011	7.5	BW	--	--	--	--	--	--	--	--	--	--	--	--	--	**1,100 J**	--	--	--	--	--	--	--	--	--	--	--
OT-9	9/1/2011	9	BW	**15 J**	**28**	--	**800**	--	**16 J**	--	--	**47**	--	**9.3**	**650 J**	--	**1,800 J**	--	--	**0.74**	--	--	**6.5**	**65**	<1.0	21	**2,400**	--
OT-9.5	9/1/2011	9.5	BW	--	--	--	--	--	--	--	--	--	--	--	--	--	**1,400**	--	--	--	--	--	--	--	--	--	--	--
OT-10.5	9/1/2011	10.5	BW	**14 J**	**36**		**880**	--	**12 J**	--	--	**53**	--	**13**	**2,500 J**	--	**1,600 J**	--	--	**0.39**	--	--	**1.3**	**120**	<1.0	14	**3,200**	--
T-1-2	9/1/2011	2	FILL	<2.0	2.3	--	56 J	--	<1.0	--	--	9.7	--	3.6	23	--	27	--	--	<0.10	--	--	<1.0	5.1	<1.0	**28**	63	--
T-2-1	9/1/2011	1	BW	**16**	**44**	--	**1,500 J**	11	**15**	--	--	**71**	<0.20	**12**	**8,500**	75	**1,300**	44	--	**0.62**	--	--	**4.6**	**44**	<1.0	18	**4,600**	220
T-2-4	9/1/2011	4	BW	--	--	--	--	--	--	--	--	--	--	--	--	--	**1,700**	--	--	--	--	--	--	--	--	--	--	--
T-2-7	9/1/2011	7	BW	**23**	**27**	--	**1,100 J**	--	**9.0**	--	--	**56**	--	**39**	**690**	--	**2,600**	--	--	**15**	0.0058	0.0015	**5.2**	**86**	<1.0	17	**4,100**	--
T-2-8.5	9/1/2011	8.5	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	17	--	--	--	--	--	--	--	--	--	--	--
T-2-9.5	9/1/2011	9.5	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	11	--	--	--	--	--	--	--	--	--	--	--
T-3-1	9/1/2011	1	BW	**6.0**	8.3	--	120 J	--	3.3	--	--	**13**	--	2.3	**190**	--	**700**	--	--	<0.10	--	--	<1.0	**20**	<1.0	7.2	320	--
T-3-5	9/1/2011	5	BW	--	--	--	--	--	--	--	--	--	--	--	--	--	**1,500**	--	--	--	--	--	--	--	--	--	--	--
T-3-7.5	9/1/2011	7.5	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	53	--	--	--	--	--	--	--	--	--	--	--
T-4-0.5	9/1/2011	0.5	BW	--	--	--	--	--	--	--	--	--	--	--	--	--	**410**	--	--	--	--	--	--	--	--	--	--	--
T-4-1	9/1/2011	1	FILL/BW	<2.0	1.6	--	67 J	--	<1.0	--	--	9.3	--	2.2	5.5	--	17	--	--	<0.10	--	--	<1.0	3.1	<1.0	19	25	--
T-4-2.75	9/1/2011	2.75	FM	<2.0	1.4	--	83 J	--	<1.0	--	--	8.7	--	3.6	5.6	--	8.8	--	--	<0.10	--	--	<1.0	3.0	<1.0	19	28	--
T-5-1.5	9/1/2011	1.5	FILL/BW	<2.0	1.2	--	29 J	--	<1.0	--	--	7.1	--	3.3	15	--	17	--	--	<0.10	--	--	<1.0	2.8	<1.0	19	43	--
T-5-3.0	9/1/2011	3	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	4.9	--	--	--	--	--	--	--	--	--	--	--
T-6-0.75	9/1/2011	0.75	FILL/BW	<2.0	4.7	--	91 J	--	<1.0	--	--	12	--	3.9	**38**	--	**88**	--	--	<0.10	--	--	<1.0	**6.7**	<1.0	**29**	**190**	--
T-6-2.0	9/1/2011	2	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	7.3	--	--	--	--	--	--	--	--	--	--	--
T-7-1.0	9/1/2011	1	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	2.3	--	--	--	--	--	--	--	--	--	--	--
T-7-3	9/1/2011	3	FILL	<2.0	1.2	--	21 J	--	<1.0	--	--	9.8	--	1.6	4.3	--	2.4	--	--	<0.10	--	--	<1.0	2.2	<1.0	21	13	--
T-7-5.5	9/1/2011	5.5	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	4.8	--	--	--	--	--	--	--	--	--	--	--
T-8-0.5	9/1/2011	0.5	FILL/BW	<2.0 UJ	1.8	--	77	--	<1.0 UJ	--	--	9.6	--	2.5	**32 J**	--	59 J	--	--	<0.10	--	--	<1.0	5.7	<1.0	19	130	--
T-8-1.0	9/1/2011	1	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	5.0	--	--	--	--	--	--	--	--	--	--	--
T-9-0.75	9/1/2011	0.75	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	5.0 J	--	--	--	--	--	--	--	--	--	--	--
T-9-4	9/1/2011	4	FILL	<2.0 UJ	5.7	--	36	--	<1.0 UJ	--	--	8.7	--	3.0	8.5 J	--	17 J	--	--	<0.10	--	--	<1.0	4.0	<1.0	**38**	26	--
T-9-5	9/1/2011	5	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	20 J	--	--	--	--	--	--	--	--	--	--	--
T-10-1	9/1/2011	1	FM	<2.0 UJ	1.7	--	38	--	<1.0 UJ	--	--	12	--	3.3	14 J	--	4.4 J	--	--	<0.10	--	--	<1.0 UJ	4.5	<1.0 UJ	17	27	--
T-10-3	9/1/2011	3	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	6.0 J	--	--	--	--	--	--	--	--	--	--	--
T-11-3	9/1/2011	3	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	13 J	--	--	--	--	--	--	--	--	--	--	--
T-11-7	9/1/2011	7	BW	**14 J**	**24**	--	**1,100**	--	**19 J**	<1.0	<0.050	**64**	<1.0	**9.0**	**1,000 J**	24	**10,000 J**	36	0.13	**0.43**	--	--	**6.2**	**54**	<1.0	26	**3,500**	170
T-11-7.5	9/1/2011	7.5	BW	--	--	--	--	--	--	--	--	--	--	--	--	--	**2,500 J**	--	--	--	--	--	--	--	--	--	--	--
August 2013																												
T-12-S	8/20/2013	0	FILL/BW	**3.9 J**	6.0	--	**220 J**	--	2.1	--	--	12	--	3.6	**81 J**	--	**190 J**	--	--	<0.10	--	--	**2.7**	**11**	<1.0	20	**330 J**	--
T-12-2	8/20/2013	2	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	14 J	--	--	--	--	--	--	--	--	--	--	--
T-12-9.5	8/20/2013	9.5	BW	--	--	--	--	--	--	--	--	--	--	--	--	--	**3,500 J**	<1.0	--	--	--	--	--	--	--	--	--	--
T-13-S	8/20/2013	0	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	9.1 J	--	--	--	--	--	--	--	--	--	--	--
T-13-2	8/20/2013	2	FILL	<2.0 UJ	7.0	--	28 J	--	<1.0	--	--	7.0	--	2.0	8.8 J	--	8.9 J	--	--	<0.10	--	--	<1.0	4.2	<1.0	21	28 J	--
T-13-4	8/20/2013	4	FILL/BW	--	--	--	--	--	--	--	--	--	--	--	--	--	**1,100 J**	--	--	--	--	--	--	--	--	--	--	--
T-14-0.5	8/20/2013	0.5	FILL	<2.0 UJ	3.2	--	36 J	--	<1.0	--	--	9.6	--	2.3	5.9 J	--	6.3 J	--	--	<0.10	--	--	<1.0	3.0	<1.0	26	17 J	--
T-14-5.5	8/20/2013	5.5	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	5.5 J	--	--	--	--	--	--	--	--	--	--	--
T-14-21	8/20/2013	21	FILL/BW	**6.6 J**	**18**	--	**860 J**	--	**17**	--	--	**60**	--	**7.1**	**640 J**	--	**1,400 J**	<1.0	--	**43**	--	--	**8.5**	**56**	**9.3**	21	**3,200 J**	--
T-15-2	8/21/2013	2	FILL	<2.0 UJ	1.8	--	42 J	--	<1.0	--	--	6.9	--	2.4	9.9 J	--	12 J	--	--	<0.10	--	--	<1.0	3.0	<1.0	16	42 J	--
T-15-4	8/21/2013	4	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	19 J	--	--	--	--	--	--	--	--	--	--	--
T-15-14	8/21/2013	14	FILL/BW	**30 J**	**21**	--	**770 J**	--	**11**	--	--	**45**	--	**6.4**	**690 J**	--	**1,600 J**	<1.0	--	**0.63**	--	--	**7.3**	**43**	**6.5**	19	**3,500 J**	--
T-16-S	8/21/2013	0.0	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	11 J	--	--	--	--	--	--	--	--	--	--	--
T-16-2	8/21/2013	2	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	7.7 J	--	--	--	--	--	--	--	--	--	--	--
T-16-9	8/21/2013	9.0	FILL/BW	**9.3 J**	**41**	--	**350 J**	--	2.4	--	--	**32**	--	**6.1**	**600 J**	--	**1,300 J**	<1.0	--	<0.10	--	--	**6.0**	**39**	**2.6**	6.2	**940 J**	--
T-16-12	8/21/2013	12.0	FM	<4.0 UJ	7.9	--	69 J	--	<2.0	--	--	10	--	**7.2**	**30 J**	--	78 J	--	--	<0.10	--	--	<2.0	**10**	<2.0	19	100 J	--
T-17-0.5	8/22/2013	0.5	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	11	--	--	--	--	--	--	--	--	--	--	--
T-17-1.5	8/22/2013	1	FILL	<2.0	2.9	--	50	--	<1.0	--	--	8.6	--	3.1	7.0	--	9.8	--	--	<0.10	--	--	<1.0	3.3	<1.0	23	22	--
T-17-5	8/22/2013	5	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	3.8	--	--	--	--	--	--	--	--	--	--	--
T-18-0.5	8/22/2013	0.5	FILL	<2.0	2.8	--	36	--	<1.0	--	--	**13**	--	2.5	21	--	24	--	--	<0.10	--	--	<1.0	3.3	<1.0	19	36	--
T-18-3	8/22/2013	3	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	9.2	--	--	--	--	--	--	--	--	--	--	--
T-18-5.5	8/22/2013	5.5	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	2.6	--	--	--	--	--	--	--	--	--	--	--
T-19-1	8/22/2013	1	FILL	<2.0	1.2	--	2	--	<1.0	--	--	11.0	--	2.5	5	--	2.4	--	--	<0.10	--	--	<1.0	3.2	<1.0	16	19	--
T-19-3.5	8/22/2013	3.5	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	3.2	--	--	--	--	--	--	--	--	--	--	--
T-19-7	8/22/2013	7	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	2.3	--	--	--	--	--	--	--	--	--	--	--
T-20-1	8/22/2013	1	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	2.3	--	--	--	--	--	--	--	--	--	--	--

Table 2 – Analytical Results - Detected Metals

Sample ID	Date Collected	Depth (feet bgs)	Material Type	Antimony (mg/kg)	Arsenic (mg/kg)	Arsenic WET (mg/l)	Barium (mg/kg)	Barium WET (mg/l)	Cadmium (mg/kg)	Cadmium WET	Cadmium TCLP	Chromiu (mg/kg)	Chromium WET (mg/l)	Cobalt (mg/kg)	Copper (mg/kg)	Copper WET	Lead (mg/kg)	Lead WET	Lead TCLP (mg/l)	Mercury (mg/kg)	Mercury WET	Mercury TCLP	Molybdenu (mg/kg)	Nickel (mg/kg)	Silver (mg/kg)	Vanadiu (mg/kg)	Zinc (mg/kg)	Zinc WET
Background Concentration				<2.0	12*	--	139	--	4*	--	--	12.4	--	4.5	23	--	80*	--	--	<0.10	--	--	<1.0	6.6	<1.0	27.7	144.7	--
RSL				3.1	12*	--	1,500	--	790+/4*	--	--	12,000	--	420*/2.3	310	--	80*	--	--	0.94	--	--	39	15,000*/150	39	39	2,300	--
T-20-3.5	8/22/2013	3.5	FILL	<2.0	1.3	--	28	--	<1.0	--	--	8.1	--	1.7	5.6	--	2.2	--	--	<0.10	--	--	<1.0	2.8	<1.0	16	14	--
T-20-6.5	8/22/2013	6.5	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	5.3	--	--	--	--	--	--	--	--	--	--	--
T-21-1	8/22/2013	1	FILL	<2.0	2.7	--	45	--	<1.0	--	--	8.0	--	2.4	7.0	--	8.1	--	--	<0.10	--	--	<1.0	3.1	<1.0	22	20	--
T-21-2	8/22/2013	2	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	5.4	--	--	--	--	--	--	--	--	--	--	--
T-22-1	8/22/2013	1	FILL	<2.0	2.0	--	26.0	--	<1.0	--	--	12	--	2	7.7	--	7.0	--	--	<0.10	--	--	<1.0	3.2	<1.0	23	26	--
T-22-4.5	8/22/2013	4.5	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	1.4	--	--	--	--	--	--	--	--	--	--	--
T-22-7	8/22/2013	7	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	6.2	--	--	--	--	--	--	--	--	--	--	--
T-23-1	8/22/2013	1	FILL	--	--	--	--	--	--	--	--	--	--	--	--	--	32	--	--	--	--	--	--	--	--	--	--	--
T-23-3	8/22/2013	3	FILL	<2.0	1.4	--	17.0	--	<1.0	--	--	9.6	--	1.4	5.0	--	4.3	--	--	<0.10	--	--	<1.0	2.5	<1.0	22	15	--
T-23-8	8/22/2013	8	FM	--	--	--	--	--	--	--	--	--	--	--	--	--	18	--	--	--	--	--	--	--	--	--	--	--
Maximum Detected				30	44	--	1,500	11	19	--	--	71	--	39	8,500	75	**10,000**	44	0.70	43	0.0058	0.0015	8.5	120	9.3	38	4,600	220

Notes:

mg/kg – milligrams per kilogram
mg/l – milligrams per liter
-- – not analyzed
bgs – below ground surface

BW – burned waste
FILL – fill material
FM – formational/native material
J – Estimated Value as assigned by Laboratory Data Consultants

RSL – US Environmental Protection Agency Regional Screening Level (November 2013)
TCLP – toxicity characteristic leaching procedure
UJ – the sample detection limit is an estimated value as assigned by Laboratory Data Consultants
WET – waste extraction test

< – analyte not detected at a concentration above the listed practical quantitation limit
*DTSC Screening Level or Ambient Level (DTSC, 2009 and 2013)
Bold indicates the sample result exceeded background concentrations or the DTSC action level.

Table 3 – Analytical Results - Total Petroleum Hydrocarbons, Pesticides, Polychlorinated Biphenyls, Polynuclear Aromatic Hydrocarbons, and Dioxins

Sample ID	Date Collected	Depth (feet bgs)	Material Type	TPH C8-C40 (mg/kg)	4,4'-DDD (ug/kg)	4,4'-DDD WET (mg/l)	4,4'-DDE (ug/kg)	4,4'-DDE WET (mg/l)	4,4'-DDT (ug/kg)	4,4'-DDT WET (mg/l)	PCBs (ug/kg)	PAHs (ug/kg)	Dioxins (ng/kg)
Regional Screening Level				N/A**	2,200*	--	1,600*	--	1,900*/3,600	--	N/A**	N/A**	4.9*/5.1
September 2011													
OT-6	9/1/2011	6	BW	94	<2.0	--	<2.0	--	<2.0	--	<5.0 UJ	ND UJ	ND
OT-7.5	9/1/2011	7.5	BW	<10	--	--	--	--	--	--	--	--	--
OT-9	9/1/2011	9.0	BW	<10	<2.0	--	<2.0	--	<2.0	--	<5.0	ND UJ	--
OT-9.5	9/1/2011	9.5	BW	--	--		--		--		--	ND	--
OT-10.5	9/1/2011	10.5	BW	--	--	--	--	--	--	--	--	ND UJ	--
T-1-2	9/1/2011	2	FILL	--	--	--	--	--	--	--	--	ND	--
T-2-1	9/1/2011	1	BW	<10	11	0.00058 J	740	0.03 J	940	0.055 J	<5.0	Phenanthrene - 0.128J	--
T-2-4	9/1/2011	4	BW	--	<2.0	--	<2.0	--	<2.0	--	--	Acenaphthylene - 15	--
T-2-7	9/1/2011	7	BW	--	<2.0	--	<2.0	--	<2.0	--	<5.0	ND UJ	--
T-2-8.5	9/1/2011	8.5	FM	--	--	--	--	--	--	--	--	--	--
T-2-9.5	9/1/2011	9.5	FM	--	--	--	--	--	--	--	--	--	--
T-3-1	9/1/2011	1	BW	--	<2.0	--	<2.0	--	<2.0	--	<5.0	ND UJ	--
T-3-5	9/1/2011	5	BW	<10	<2.0	--	<2.0	--	<2.0	--	--	ND	--
T-3-7.5	9/1/2011	7.5	FM	--	--	--	--	--	--	--	--	--	--
T-4-0.5	9/1/2011	0.5	BW	--	--	--	--	--	--	--	--	--	--
T-4-1	9/1/2011	1	FILL/BW	--	<2.0	--	<2.0	--	<2.0	--	<5.0	ND UJ	--
T-4-2.75	9/1/2011	2.75	FM	--	--	--	--	--	--	--	--	--	--
T-5-1.5	9/1/2011	1.5	FILL/BW	--	<2.0	--	<2.0	--	<2.0	--	<5.0	ND UJ	--
T-5-3.0	9/1/2011	3	FILL	<10	--	--	--	--	--	--	--	--	--
T-6-0.75	9/1/2011	0.75	FILL/BW	--	<2.0	--	<2.0	--	<2.0	--	--	ND	--
T-6-2.0	9/1/2011	2	FM	--	--	--	--	--	--	--	--	--	--
T-7-1.0	9/1/2011	1	FILL	--	--	--	--	--	--	--	--	--	--
T-7-3	9/1/2011	3	FILL	--	--	--	--	--	--	--	--	--	--
T-7-5.5	9/1/2011	5.5	FM	--	--	--	--	--	--	--	--	ND	--
T-8-0.5	9/1/2011	1	FILL/BW	--	--	--	--	--	--	--	--	ND	--
T-8-1.0	9/1/2011	1	FM	--	--	--	--	--	--	--	--	--	--
T-9-0.75	9/1/2011	0.75	FILL	--	--	--	--	--	--	--	--	--	--
T-9-4	9/1/2011	4	FILL	--	--	--	--	--	--	--	--	--	--
T-9-5	9/1/2011	5	FM	--	<2.0	--	<2.0	--	<2.0	--	--	ND	--
T-10-1	9/1/2011	1	FM	--	--	--	--	--	--	--	--	--	--
T-10-3	9/1/2011	3	FM	--	--	--	--	--	--	--	--	ND	--
T-11-3	9/1/2011	3	FILL	--	--	--	--	--	--	--	--	--	--
T-11-7	9/1/2011	7	BW	<10	<2.0	--	9.4	--	6.2	--	<5.0	ND UJ	ND
T-11-7.5	9/1/2011	7.5	BW	--	--	--	--	--	--	--	--	--	--
August 2013													
T-12-S	8/20/2013	0	FILL/BW	230	<2.0	--	<2.0	--	<2.0 UJ	--	--	ND	--
T-12-2	8/20/2013	2	FILL	--	--	--	--	--	--	--	--	--	--
T-12-9.5	8/20/2013	9.5	BW	<10	<2.0	--	<2.0	--	<2.0 UJ	--	--	ND	14
T-13-S	8/20/2013	0	FILL	--	--	--	--	--	--	--	--	--	--
T-13-2	8/20/2013	2	FILL	--	--	--	--	--	--	--	--	--	--
T-13-4	8/20/2013	4	FILL/BW	18	<2.0	--	8.1	--	<2.0 UJ	--	--	--	--
T-14-0.5	8/20/2013	0.5	FILL	--	--	--	--	--	--	--	--	--	--
T-14-5.5	8/20/2013	5.5	FILL	--	--	--	--	--	--	--	--	--	--

Table 3 – Analytical Results - Total Petroleum Hydrocarbons, Pesticides, Polychlorinated Biphenyls, Polynuclear Aromatic Hydrocarbons, and Dioxins

Sample ID	Date Collected	Depth (feet bgs)	Material Type	TPH C8-C40 (mg/kg)	4,4'-DDD (ug/kg)	4,4'-DDD WET (mg/l)	4,4'-DDE (ug/kg)	4,4'-DDE WET (mg/l)	4,4'-DDT (ug/kg)	4,4'-DDT WET (mg/l)	PCBs (ug/kg)	PAHs (ug/kg)	Dioxins (ng/kg)
Regional Screening Level				N/A**	2,200*	--	1,600*	--	1,900*/3,600	--	N/A**	N/A**	4.9*/5.1
T-14-21	8/20/2013	21	BW/FILL	<10	<2.0	--	20	--	<2.0 UJ	--	--	ND	--
T-15-2	8/21/2013	2	FILL	--	--	--	--	--	--	--	--	--	--
T-15-4	8/21/2013	4	FILL	--	--	--	--	--	--	--	--	--	--
T-15-14	8/21/2013	14	BW/FILL	<10	<2.0	--	3.3	--	<2.0 UJ	--	--	ND	120
T-16-S	8/21/2013	0	FILL	--	--	--	--	--	--	--	--	--	--
T-16-2	8/21/2013	2	FILL	--	--	--	--	--	--	--	--	--	--
T-16-9	8/21/2013	9	FILL/BW	<10	<2.0	--	<2.0	--	<2.0 UJ	--	--	ND	--
T-16-12	8/21/2013	12	FM	<10	<2.0	--	<2.0	--	<2.0 UJ	--	--	ND	--
T-17-0.5	8/22/2013	0.5	FILL	--	--	--	--	--	--	--	--	--	--
T-17-1.5	8/22/2013	1	FILL	--	--	--	--	--	--	--	--	--	--
T-17-5	8/22/2013	5	FM	--	--	--	--	--	--	--	--	--	--
T-18-0.5	8/22/2013	0.5	FILL	--	--	--	--	--	--	--	--	--	--
T-18-3	8/22/2013	3	FILL	--	--	--	--	--	--	--	--	--	--
T-18-5.5	8/22/2013	5.5	FM	--	--	--	--	--	--	--	--	--	--
T-19-1	8/22/2013	1	FILL	--	--	--	--	--	--	--	--	--	--
T-19-3.5	8/22/2013	3.5	FILL	--	--	--	--	--	--	--	--	--	--
T-19-7	8/22/2013	7	FM	--	--	--	--	--	--	--	--	--	--
T-20-1	8/22/2013	1	FILL	--	--	--	--	--	--	--	--	--	--
T-20-3.5	8/22/2013	3.5	FILL	--	--	--	--	--	--	--	--	--	--
T-20-6.5	8/22/2013	6.5	FM	--	--	--	--	--	--	--	--	--	--
T-21-1	8/22/2013	1	FILL	--	--	--	--	--	--	--	--	--	--
T-21-2	8/22/2013	2	FM	--	--	--	--	--	--	--	--	--	--
T-22-1	8/22/2013	1	FILL	<10	<2.0	--	<2.0	--	<2.0 UJ	--	--	ND UJ†	--
T-22-4.5	8/22/2013	4.5	FILL	--	--	--	--	--	--	--	--	--	--
T-22-7	8/22/2013	7	FM	--	--	--	--	--	--	--	--	--	--
T-23-1	8/22/2013	1	FILL	--	--	--	--	--	--	--	--	--	--
T-23-3	8/22/2013	3	FILL	<10	<2.0	--	<2.0	--	<2.0	--	--	ND UJ†	--
T-23-8	8/22/2013	8	FM	--	--	--	--	--	--	--	--	--	--

Notes:

mg/kg – Milligrams per kilogram
-- – not analyzed
bgs – below ground surface
BW – burned waste
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane
FM – formational/native material

J – Estimated Value (assigned by Laboratory Data Consultants)
N/A – not applicable
ND – analyte not detected. See lab report for detection limits
PAHs – polynuclear aromatic hydrocarbons
PCBs – polychlorinated biphenyls
RSL – US Environmental Protection Agency Regional Screening Level (November 2013)
UJ – the sample detection limit is an estimated value (assigned by LDC)
quantitation limit

† The UJ qualifier applies only to naphthalene, 2-methylnapthalene, and bezno(a)anthracene.
+RSL are not applicable per the Human and Ecological Risk Office. See Table I-2 of Appendix I for values utilized.
* carcinogenic RSL
** analyte not detected or RSL not established for detected analytes

Table 4 – Background Soil Sample Analytical Results

Sample ID	Date Collected	Depth (feet bgs)	Antimony (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Chromiu (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Mercury (mg/kg)	Molybdenum (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Thalliu (mg/kg)	Vanadiu (mg/kg)	Zinc (mg/kg)
RSL			3.1	1,500	16*/1,600	12,000	420*/2.3	310	0.94	39	15,000*/150	39	39	0.078	39	2,300
HA-1-0.75'	9/20/2011	0.75	<2.0	32	<1.0	6.0	1.9	24	<0.10	<1.0	2.5	<1.0	<1.0	<1.0	14	51
HA-2-0.75'	9/20/2011	0.75	<2.0	47	<1.0	13	2.7	6.4	<0.10	<1.0	5.5	<1.0	<1.0	<1.0	20	19
HA-3-0.5'	9/20/2011	0.5	<2.0	250	<1.0	15	1.8	<2.0	<0.10	<1.0	7.0	<1.0	<1.0	<1.0	35	9.7
HA-4-0.75'	9/20/2011	0.75	<2.0	15	<1.0	10	1.9	<2.0	<0.10	<1.0	3.4	<1.0	<1.0	<1.0	32	18
HA-5-0.5'	9/20/2011	0.5	<2.0	48	<1.0	9.5	2.9	6.3	<0.10	<1.0	3.8	<1.0	<1.0	<1.0	20	250
T-4-2.75	9/1/2011	2.75	<2.0	83	<1.0	8.7	3.6	5.6	<0.10	<1.0	3.0	<1.0	<1.0	<1.0	19	28
T-10-1	9/1/2011	1	<2.0 UJ	38	<1.0	12	3.3	14	<0.10	<1.0 UJ	4.5	<1.0 UJ	<1.0 UJ	<1.0 UJ	17	27
T-16-12	8/21/2013	12	<4.0	69	<2.0	10	7.2	30	<0.10	<2.0	10	<2.0	<2.0	<2.0	19	100
Maximum			--	250	--	15.0	7.2	30.0	--	--	10.0	--	--	--	35.0	250.0
Mean			--	72.8	--	10.5	3.2	14.4	--	--	5.0	--	--	--	22.0	62.8
95% UCL			--	139	--	12.4	4.5	23.0	--	--	6.6	--	--	--	27.7	144.7

Notes:

mg/kg – milligrams per kilogram

-- – not applicable

bgs – below ground surface

RSL – US Environmental Protection Agency Regional Screening Level (November 2013)

UCL – upper confidence limit

UJ – the sample detection limit is an estimated value (assigned by Laboratory Data Consultants)

< - analyte not detected at a concentration above the listed practical quantitation limit

Table 5 – Summary Statistics - Top 10 Feet

Detected COC	Number of Samples Collected	Number of Detections	Unit	Maximum Detected Concentration	Minimum Detected Concentration	95% UCL	Screening Level	Screening Level Source
Antimony	27	10	mg/kg	23	2.7	**7.88**	3.1	RSL
Arsenic	27	27	mg/kg	44	1.2	**22.19**	12	DTSC Action Level
Barium	27	27	mg/kg	1,500	2.0	615.1	1,500	RSL
Cadmium	27	10	mg/kg	19	2.1	**5.672**	790*/4	HHRA Note 3
Chromium	27	27	mg/kg	71	6.9	33.45	12,000	RSL
Cobalt	27	27	mg/kg	39	1.4	**11.43**	420*/2.3	RSL
Copper	27	27	mg/kg	8,500	4.3	**2,422**	310	RSL
Lead	62	62	mg/kg	10,000	1.4	**1,773**	80	HHRA Note 3 and 4
Mercury	27	5	mg/kg	15	0.43	**1.833**	0.94	RSL
Molybdenum	27	8	mg/kg	6.5	2.7	2.739	39	RSL
Nickel	27	27	mg/kg	86	2.2	35.93	15,000*/150	RSL
Silver	29	1	mg/kg	2.6	2.6	--	39	RSL
Vanadium	27	27	mg/kg	38	6.2	21.80	39	RSL
Zinc	27	27	mg/kg	4,600	13	**2,404**	2,300	RSL
TPH C8-C40	13	3	mg/kg	230	18	70.8	See Table I-3	HERO
4,4'-DDD	18	1	ug/kg	11	11	--	2,200*	RSL
4,4'-DDE	18	2	ug/kg	740	8.1	603.8	1,600*	RSL
4,4'-DDT	18	2	ug/kg	940	6.2	766.8	1,900*/3,600	RSL
Phenanthrene	22	1	ug/kg	0.128	0.128	--	N/A	N/A
Acenaphthylene	22	1	ug/kg	15	15	--	N/A	N/A
Dioxins	3	1	ng/kg	**14**	14	--	4.9*/5.1	RSL

Notes:

-- - not enough sample detections to run statistics

COC - contaminant of concern

DDD – dichlorodiphenyldichloroethane

DDE – dichlorodiphenyldichloroethylene

DDT – dichlorodiphenyltrichloroethane

DTSC - California Department of Toxic Substances Control

HERO - Human and Ecological Risk Department

HHRA - Human Health Risk Assessment

J – estimated Value (assigned by Laboratory Data Consultants)

N/A - not applicable because human health screening levels have not been established fro this COC

RSL - US Environmental Protection Agency Regional Screening Level (Non-carcinogenic unless noted with an asterisk) (November 2013)

TPH - total petroleum hydrocarbons

UCL - Upper Confidence Limit

*Carcinogenic RSL

Bold results indicate the 95% UCL exceeds the screening level or, if a 95% UCL was not calculated, the maximum detected concentration exceeds the screening level.

Table 6 – Summary Statistics - Top 2 Feet Unpaved

Detected COC	Number of Samples Collected	Number of Detections	Unit	Maximum Detected Concentration	Minimum Detected Concentration	95% UCL	Screening Level	Screening Level Source
Antimony	4	1	mg/kg	**3.9**	3.9	--	3.1	RSL
Arsenic	4	4	mg/kg	7.0	1.8	--	12	DTSC Action Level
Barium	4	4	mg/kg	220	28	190.4	1,500	RSL
Cadmium	4	1	mg/kg	2.1	2.1	--	790*/4	HHRA Note 3
Chromium	4	4	mg/kg	12	6.9	11.73	12,000	RSL
Cobalt	4	4	mg/kg	3.6	2.0	**3.404**	420*/2.3	RSL
Copper	4	4	mg/kg	81	5.9	69.28	310	RSL
Lead	8	8	mg/kg	**190**	6.3	--	80	HHRA Note 3 and 4
Mercury	4	0	mg/kg	--	--	--	0.94	RSL
Molybdenum	4	1	mg/kg	2.7	2.7	--	39	RSL
Nickel	4	4	mg/kg	11.0	3.0	9.812	15,000*/150	RSL
Silver	4	0	mg/kg	--	--	--	39	RSL
Vanadium	4	4	mg/kg	26	16	25.59	39	RSL
Zinc	4	4	mg/kg	330	17	281.7	2,300	RSL
TPH C8-C40	1	2	mg/kg	230	230	--	See Table I-3	HERO
4,4'-DDD	1	0	ug/kg	--	--	--	2,200*	RSL
4,4'-DDE	1	1	ug/kg	--	--	--	1,600*	RSL
4,4'-DDT	1	0	ug/kg	--	--	--	1,900*/3,600	RSL
PCBs	0	0	ug/kg	--	--	--	N/A	N/A
PAHs	1	0	ug/kg	--	--	--	N/A	N/A
Dioxins	0	0	ng/kg	--	--	--	4.9*/5.1	RSL

Notes:

-- - not enough sample detections to run statistics

COC - contaminant of concern

DDD – dichlorodiphenyldichloroethane

DDE – dichlorodiphenyldichloroethylene

DDT – dichlorodiphenyltrichloroethane

DTSC - California Department of Toxic Substances Control

HERO - Human and Ecological Risk Department

HHRA - Human Health Risk Assessment

J – estimated Value (assigned by Laboratory Data Consultants)

N/A - not applicable because human health screening levels have not been established fro this COC

RSL - US Environmental Protection Agency Regional Screening Level (Non-carcinogenic unless noted with an asterisk) (November 2013)

TPH - total petroleum hydrocarbons

UCL - Upper Confidence Limit

*Carcinogenic RSL

Bold results indicate the 95% UCL exceeds the screening level or, if a 95% UCL was not calculated, the maximum detected concentration exceeds the screening level.

Table 7 – Risk Calculation Summary - Top 10 Feet

Detected COC	95%UCL or Maximum Detected Concentration	Screening Level	Excess Cancer Risk	Non-Cancer Hazard Index
Antimony	7.88	3.1	--	2.54
Barium	615.1	1,500	--	0.41
Chromium	33.45	12,000	--	0.0028
Cobalt	11.43	420*/2.3	2.72E-08	4.9696
Copper	2,422	310	--	7.81
Mercury	2	0.94	--	1.95
Molybdenum	2.7	39	--	0.07
Nickel	36	15,000*/150	6.13E-10	0.24
Silver	3	39	--	0.07
Zinc	2,404	2,300	--	1.05
DDD	11	2,200*	5.00E-09	--
DDE	740	1,600*	4.63E-07	--
DDT	940	1,900*/3,600	4.95E-07	0.26
Dioxin	14	4.9*/5.1	2.86E-06	2.75
TPH C8-C40	230	See Table I-3	--	0.3140
Total Risk			**3.85E-06**	**22.43**
Action Level			1.00E-06	1.0

Notes:

COC - contaminant of concern

TPH - total petroleum hydrocarbons

Table 8 – Risk Calculation Summary - Top 2 Feet in Unpaved Areas

Detected COC	95%UCL or Maximum Detected Concentration	Screening Level	Excess Cancer Risk		Non-Cancer Hazard Index	
			Whole Site	Excluding Planter	Whole Site	Excluding Planter
Antimony	3.9	3.1	--	--	1.26	--
Barium	190.4	1,500	--	--	0.13	--
Copper	69.28	310	--	--	0.2235	--
Molybdenum	2.7	39	--	--	0.07	--
Nickel	9.812	15,000*/150	6.53E-10	--	0.07	--
Zinc	281.7	2,300	--	--	0.12	--
TPH C8-C40		See Table I-3	--	--	0.236	--
Total Risk			**6.53E-10**	**0.00E+00**	**2.10**	**0.0**
Action Level			1.00E-06	1.00E-06	1.0	1.0

Notes:

COC - contaminant of concern

TPH - total petroleum hydrocarbons

APPENDIX A

ASSESSOR'S PARCEL MAP

08

425-80

1" = 200'

BALBOA AVE

BALBOA TERR ST

SHT 2

MODOC ST

DR

UTE

MT LAURENCE DR

POR 3

POR 4

800

82

83

85

81

84

76

418/34

CHANGES

BLK	OLD	NEW	YR	CUT
800		1-3	78	80-09

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO WARRANTY IS GIVEN FOR CORRECTNESS OF THE DATA SHOWN. PARCELS PROBABLY MAY NOT COMPLY WITH LOCAL SUBDIVISION OR BUILDING ORDINANCES

MH 361DCB340 - PUEBLO LANDS

APPENDIX B

TRENCH LOGS

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338071	11/11

DATE EXCAVATED 09/01/11 TRENCH NO. OT
GROUND ELEVATION ~290' ± MSL LOGGED BY BAB
METHOD OF EXCAVATION Backhoe
LOCATION Central Parking Lot Area

DESCRIPTION/INTERPRETATION

BURNED WASTES AND MINOR FILL:

① Mottled black to brown burned wastes with light gray ashy layers and pockets; estimated approximately 85 to 95 percent burned wastes and ash consisting primarily of glass bottles, glass jars, broken glass, large chunks of fused metal and glass, ceramics, battery core, dishware; with minor fill soil.

SCRIPPS FORMATION(?):

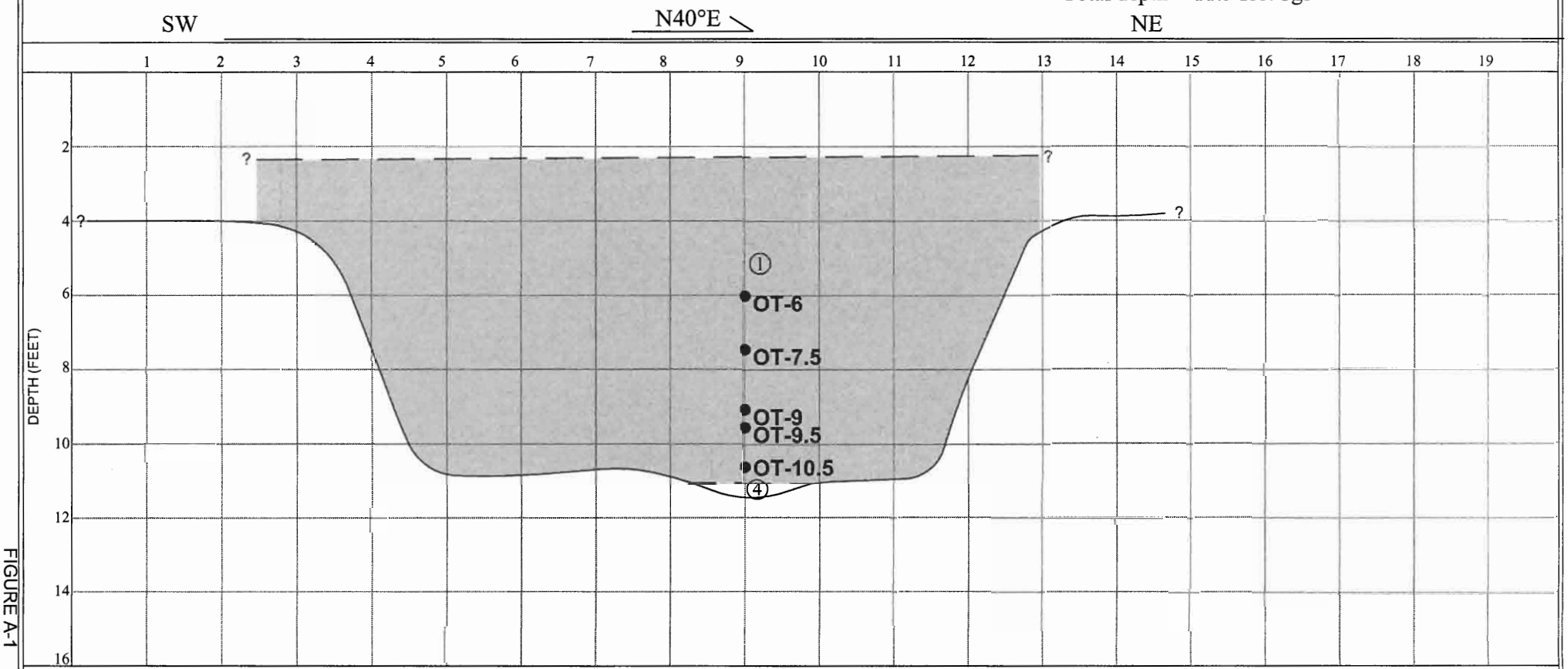
④ Light brownish yellow silty SANDSTONE.

NOTES

Location of previously excavated utility trench, asphalt concrete pavement and approximately 2.5 feet of materials were removed by others. Removed one metal plate covering the trench to obtain the depth of burned wastes.

Could not obtain a sample of underlying formation due to caving of the excavation; however, observed formation (Scripps Formation(?)) on the teeth of the excavator bucket.

Total depth = 11.5 feet bgs



SCALE = Horiz=1 in./2 ft., Vert=1 in./4 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338071	11/11

DATE EXCAVATED 09/01/11 TRENCH NO. T-1 & T-2

GROUND ELEVATION ~290' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Central Parking Lot Area

DESCRIPTION/INTERPRETATION

FILL:

① Light gray, silty SAND (decomposed granite); temporarily placed in the saw cut utility trench.

② Brownish yellowish red, clayey, very silty SAND/sandy SILT; with abundant well-rounded gravels and cobbles; typically 1/4 to 10 inches in diameter.

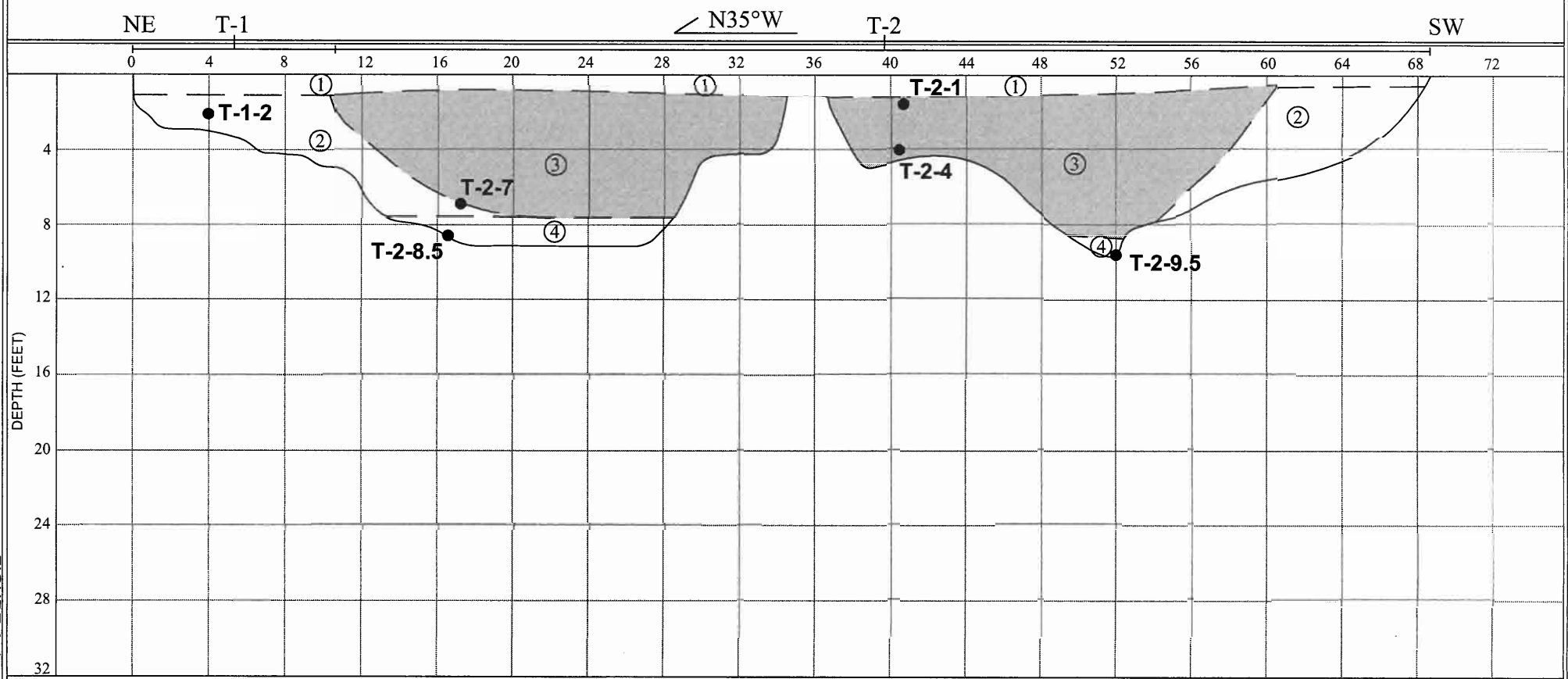
③ BURNED WASTES AND FILL:
Black to black brown burned wastes and light grey ashy burned wastes, dense, estimated approximately 75 to 90 percent, consisting primarily of broken glass, fused glass, bottles, porcelain, metal debris, dishware, some charred wood, chunks of densely fused metal and glass debris; and minor fill soils.

④ VERY OLD PARALIC DEPOSITS(?):
Brownish yellowish red, damp to slightly moist, silty clayey SAND.

NOTES

Trench locations/orientation correspond to an existing saw cut utility trench where asphalt pavement was removed and decomposed granite was placed as a temporary surface and backfill material was placed on the northeast and southwest. In alignment with and northeast of trench T-9.

Total Depth = 9.5 feet.



SCALE = 1 in./8 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338071	11/11

DATE EXCAVATED 09/01/11 TRENCH NO. T-3

GROUND ELEVATION ~290' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Southeastern Parking Lot Area

DESCRIPTION/INTERPRETATION

ASPHALT CONCRETE/BASE

FILL:

① Light brownish reddish-yellow, damp, silty clayey SAND; with abundant well-rounded gravels and cobbles, approximately 1/4 to 15 inches diameter.

BURNED WASTES AND MINOR FILL:

② Mottled brown black burned wastes, dense and gray-white ash, estimated approximately 80 to 90 percent primarily consisting of bottles, broken glass, fused glass and large chunks of fused metal and glass, with minor fill soil.

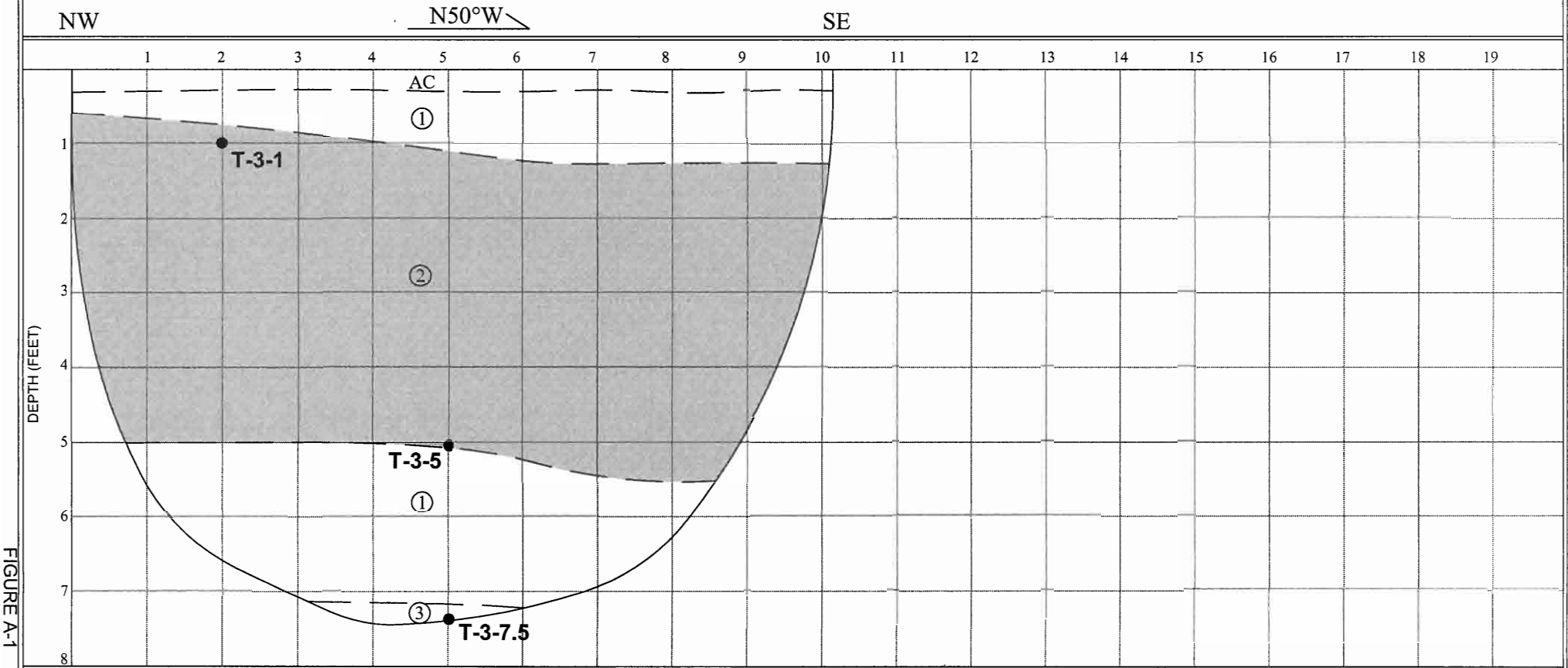
SCRIPPS FORMATION (?):

③ Brownish yellowish red, damp, hard clayey SILTSTONE and friable SANDSTONE.

NOTES

Burned wastes are similar in appearance to those observed in trench T-11, both contain abundant ash.

Total depth = 7.5 feet bgs



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338071	11/11

DATE EXCAVATED 09/01/11 TRENCH NO. T-4

GROUND ELEVATION ~290' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Northern Parking Lot Area

DESCRIPTION/INTERPRETATION

ASPHALT CONCRETE/BASE
FILL AND BURNED WASTES:

① Brown, brown-black, mottled, silty clayey SAND; with well rounded cobbles and burned wastes; estimated approximately 10 to 25 percent consisting primarily of broken glass fragments.

FILL (?):

② Gray, moist, clayey SILT.

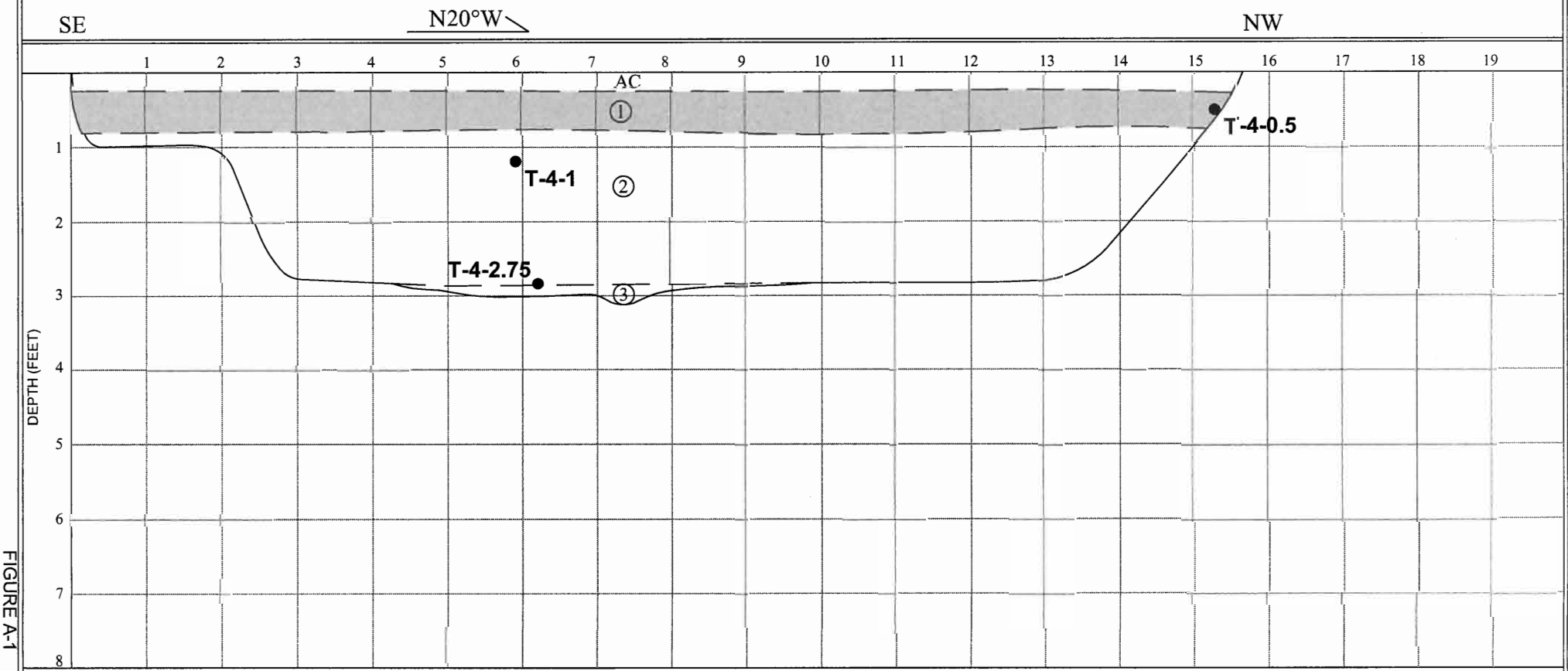
VERY OLD PARALIC DEPOSITS (?):

③ Light grayish yellow, cemented SANDSTONE (?).

NOTES

Trench excavating stopped on a hard layer, possibly cemented or concretionary layer of sandstone; same hard surface encountered at trench T-5.

Total depth = 2.75 feet bgs
Trench terminated on hard surface.



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338071	11/11

DATE EXCAVATED 09/01/11 TRENCH NO. T-5

GROUND ELEVATION ~290' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Northern Parking Lot Area

DESCRIPTION/INTERPRETATION

ASPHALT CONCRETE/BASE

FILL AND MINOR BURNED WASTES:

① Dark to light brown, damp, very clay silty SAND/sandy CLAY, with cobbles; with minor wastes estimated at approximately <1 percent, consisting primarily of broken glass.

FILL (?):

② Gray to gray brown, moist, hard very silty CLAY.

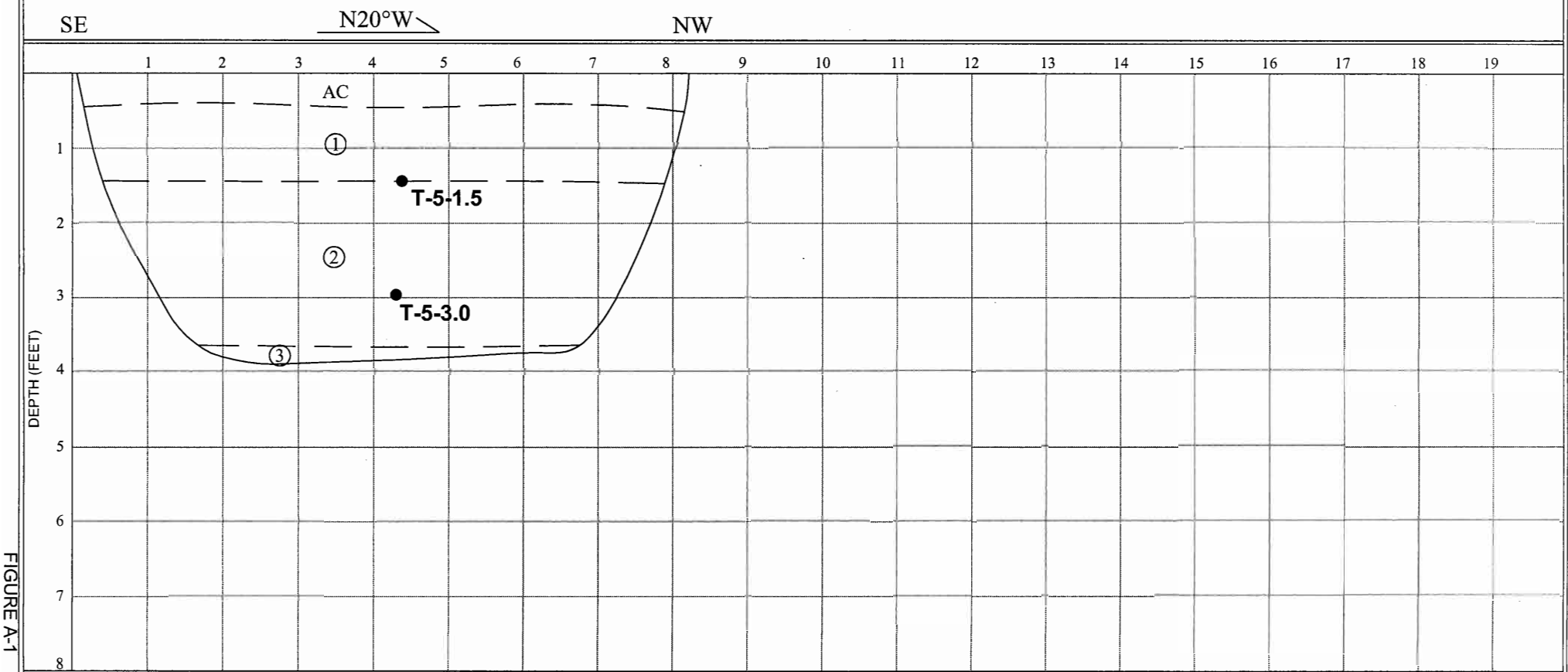
VERY OLD PARALIC DEPOSITS (?):

③ Light brownish yellowish-gray, cemented SANDSTONE.

NOTES

Trench excavating stopped on a hard layer, possibly cemented or concretionary layer of sandstone; same hard surface encountered at trench T-4.

Total depth = 3.75 feet bgs
Trench terminated on hard surface.



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338071	11/11

DATE EXCAVATED 09/01/11 TRENCH NO. T-6

GROUND ELEVATION ~290' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Southern Parking Lot Area

DESCRIPTION/INTERPRETATION

NOTES

Total depth = 3.5 feet bgs

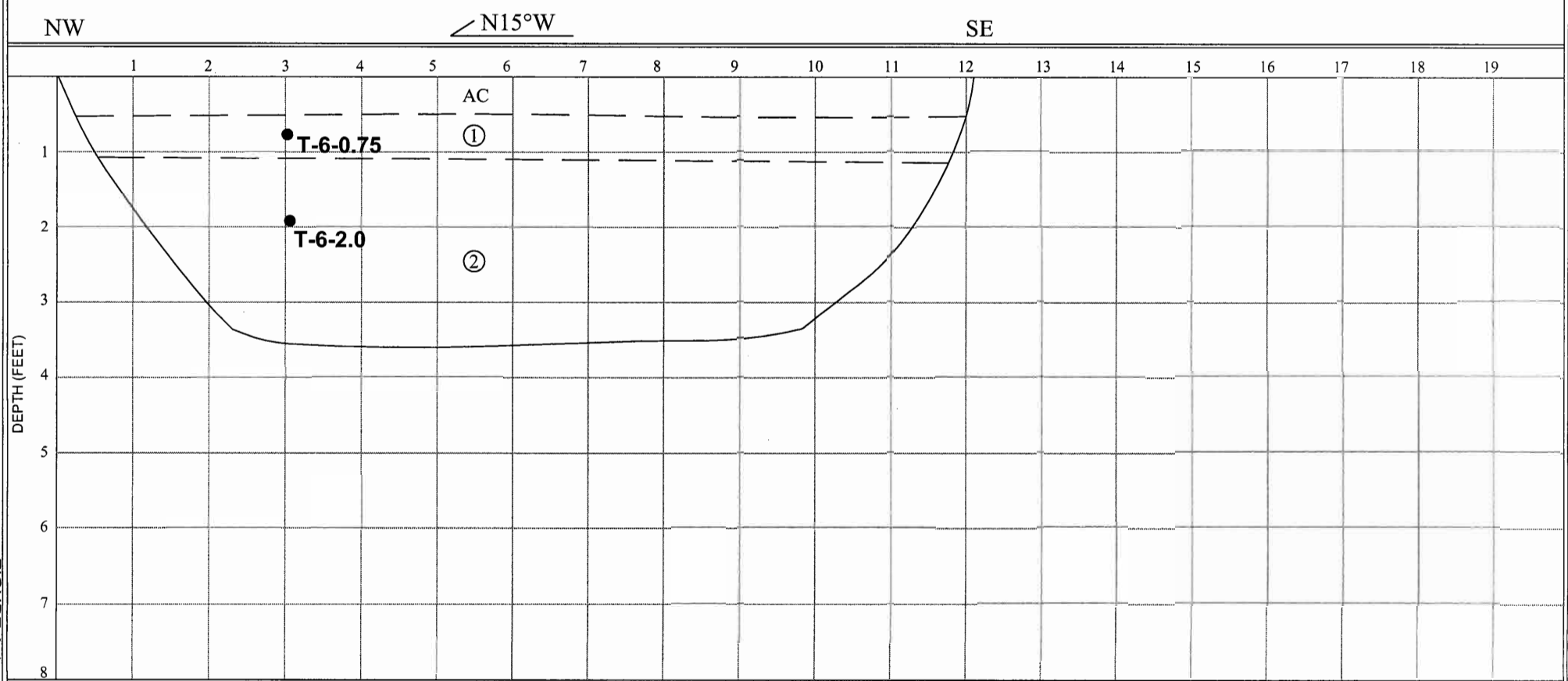
ASPHALT CONCRETE/BASE
Appears to be two layers of asphalt pavement.

FILL AND MINOR WASTES:

① Light to medium brown, damp, silty clayey SAND with cobbles; with minor burned wastes estimated at approximately 1 percent consisting primarily of broken glass.

SCRIPPS FORMATION (?):

② Light brownish yellow, damp, indurated clayey SILTSONE and CLAYSTONE; with interbedded SANDSTONE.



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338071	11/11

DATE EXCAVATED 09/01/11 TRENCH NO. T-7

GROUND ELEVATION ~290' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Northeast Parking Lot Area

DESCRIPTION/INTERPRETATION

NOTES

Total depth = 6.0 feet bgs

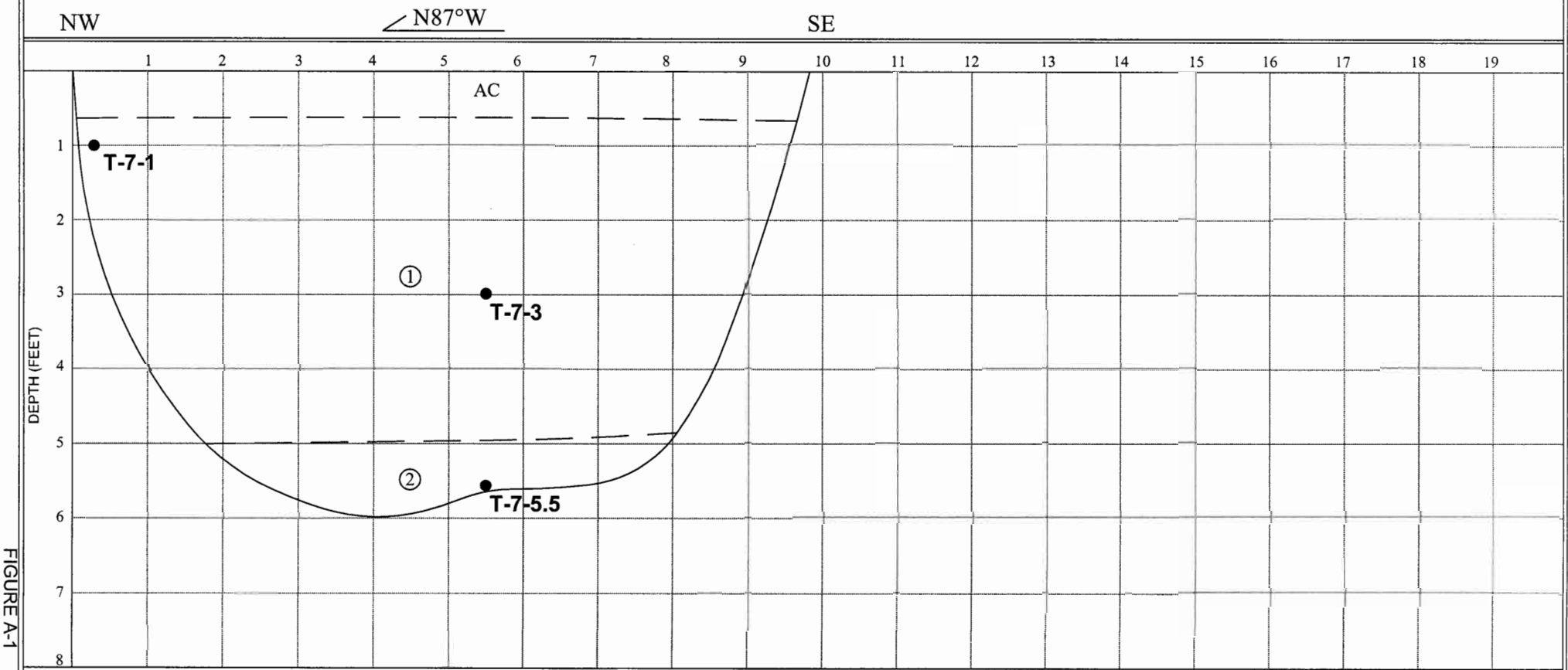
ASPHALT CONCRETE/BASE
Appears to be two layers of asphalt pavement.

FILL (?):

① Brownish yellowish red, damp, silty clayey SAND; with abundant well rounded gravels and cobbles generally approximately 1/4 to 12 inches in diameter.

SCRIPPS FORMATION (?):

② Gray-brownish yellowish red, damp, indurated, interbedded SILTSTONE and CLAYSTONE with some SANDSTONE.



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338071	11/11

DATE EXCAVATED 09/01/11 TRENCH NO. T-8

GROUND ELEVATION ~290' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Northwest Parking Lot Area

DESCRIPTION/INTERPRETATION

NOTES

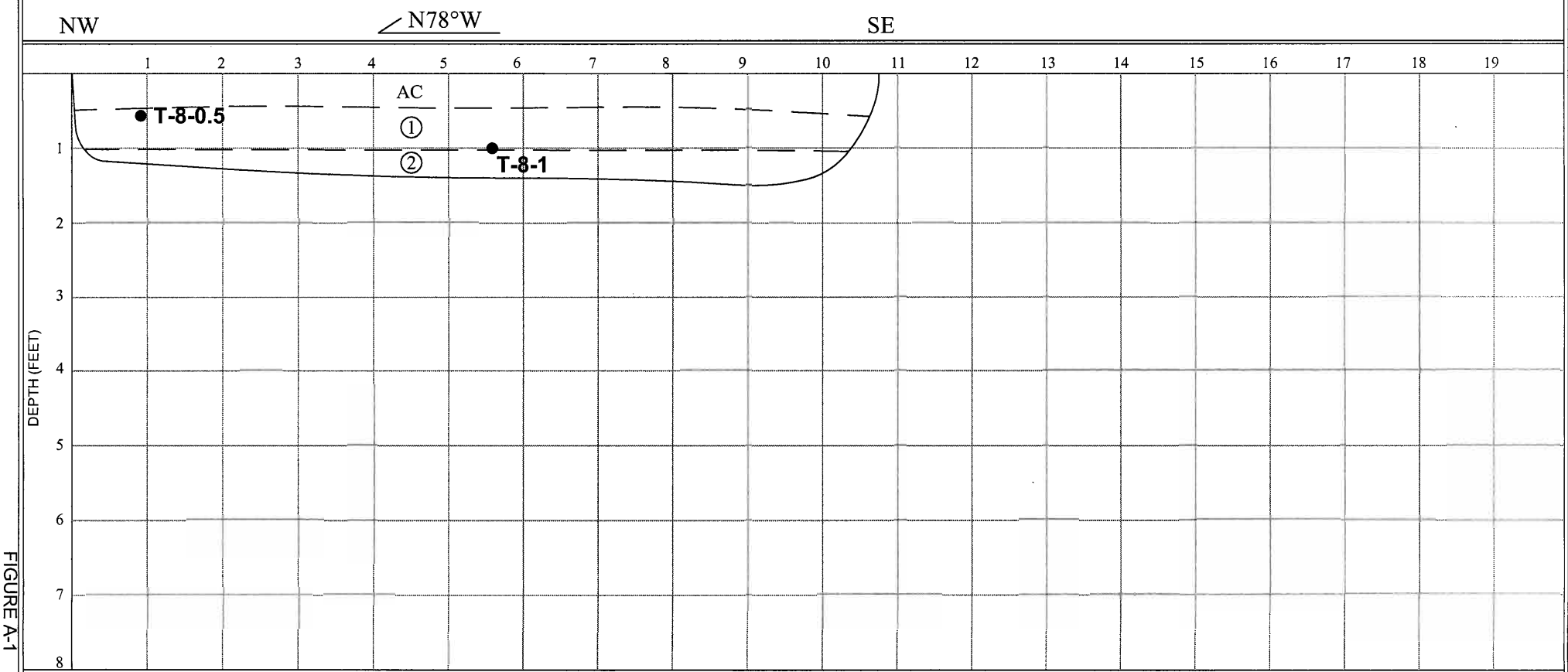
Total depth = 1.5 feet bgs

ASPHALT CONCRETE/BASE
FILL AND MINOR BURNED WASTES:

① Brownish yellow-red, damp, CLAY with well rounded gravels and cobbles, approximately 1/2 to 12 inches in diameter; and burned wastes estimated approximately <1 percent consisting primarily of broken glass; with very minor, scattered burned wastes.

SCRIPPS FORMATION (?):

② Brown yellow-red, interbedded, cemented SANDSTONE and indurated SILTSTONE.



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338071	11/11

DATE EXCAVATED 09/01/11 TRENCH NO. T-9

GROUND ELEVATION ~290' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Central Parking Lot Area

DESCRIPTION/INTERPRETATION

FILL:

① Light gray, silty SAND (decomposed granite); temporarily placed in the saw cut utility trench.

② Brown yellow red, damp, clayey sandy SILT, with well rounded gravels and cobbles generally 1/4 inches to 1.5 feet in diameter.

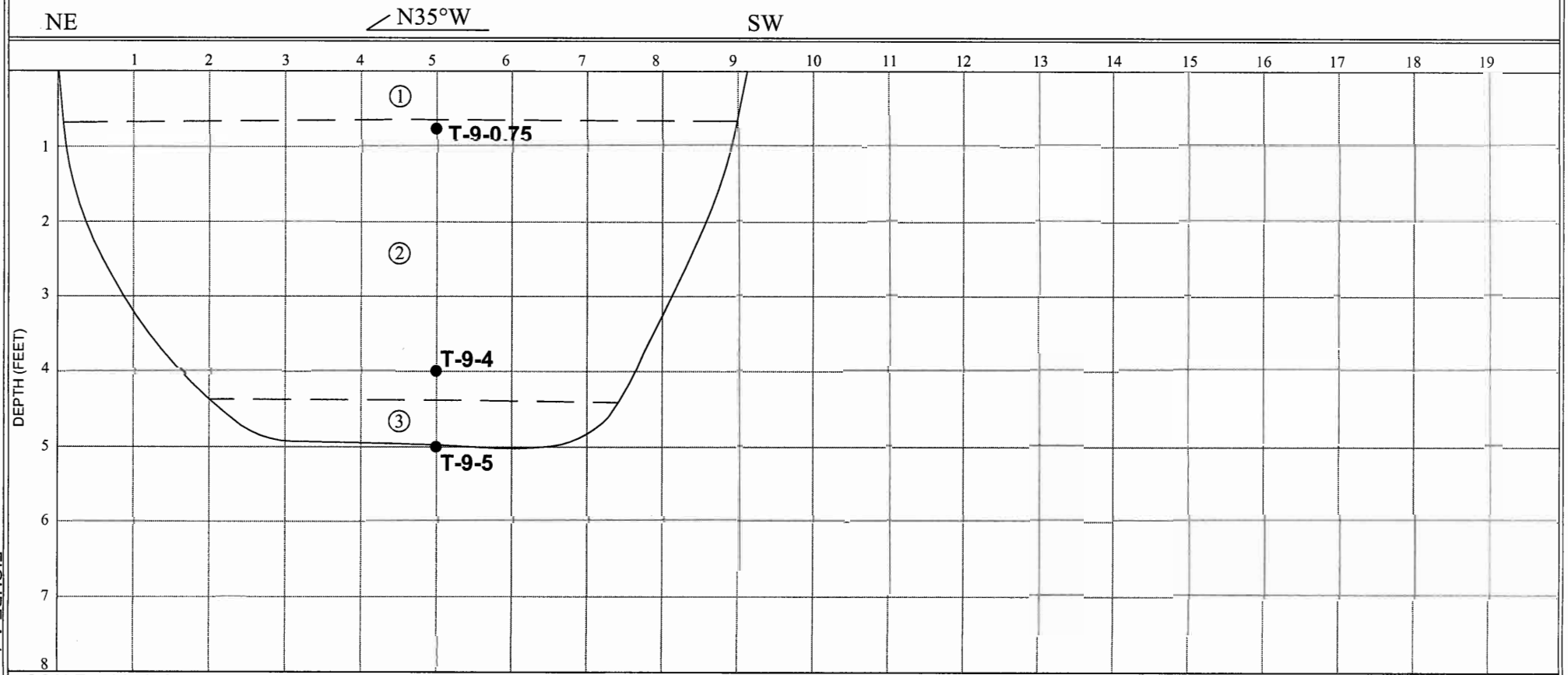
SCRIPPS FORMATION(?):

③ Gray to brown yellowish red, indurated clayey SILTSTONE, with some interbedded very silty fine-grained SANDSTONE.

NOTES

Trench location/orientation correspond to an existing saw cut utility trench where asphalt pavement was removed and decomposed granite was placed as a temporary surface. In alignment and southwest of trenches T-1 and T-2, southwest end of saw cut trench.

Total depth = 5.0 feet bgs



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338071	11/11

DATE EXCAVATED 09/01/11 TRENCH NO. T-10

GROUND ELEVATION ~290' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Southern portion of parking lot, near entrance to athletic fields

DESCRIPTION/INTERPRETATION

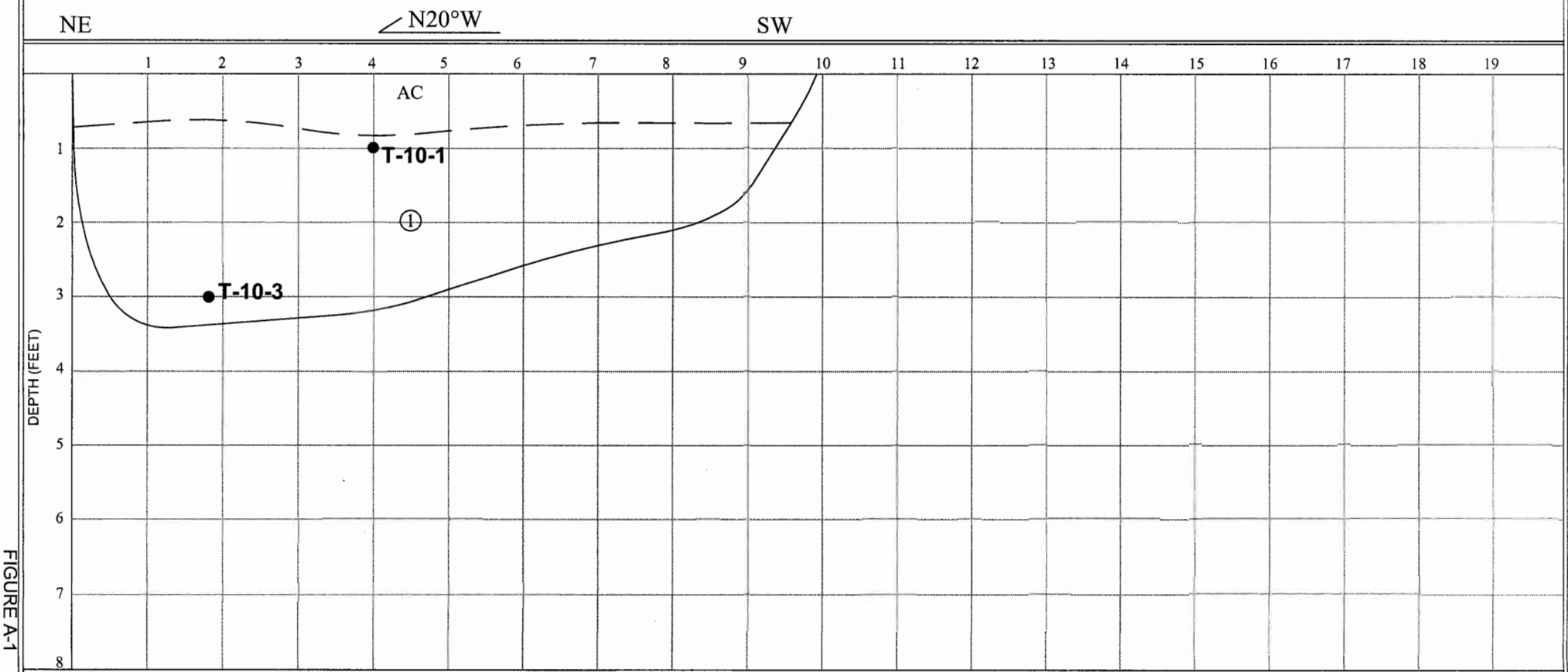
ASPHALT CONCRETE/BASE/MINOR SOIL

SCRIPPS FORMATION (?):

① Light gray and mottled brownish yellowish red, well indurated, clayey SILTSTONE.

NOTES

Total depth = 3.2 feet bgs



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338071	11/11

DATE EXCAVATED 09/01/11 TRENCH NO. T-11

GROUND ELEVATION ~290' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Southeastern Parking Lot Area

DESCRIPTION/INTERPRETATION

ASPHALT CONCRETE/BASE

FILL:

① Brownish reddish yellow, slightly clayey silty SAND; with gravels.

BURNED WASTES AND MINOR FILL:

② Light gray to black gray, burned wastes dense, with abundant gray-white ash, estimated approximately 75 to 90 percent burned wastes consisting primarily of broken glass, glass bottles, glass jars, milk glass, dishware; with minor fill soil, some cobbles.

SCRIPPS FORMATION (?):

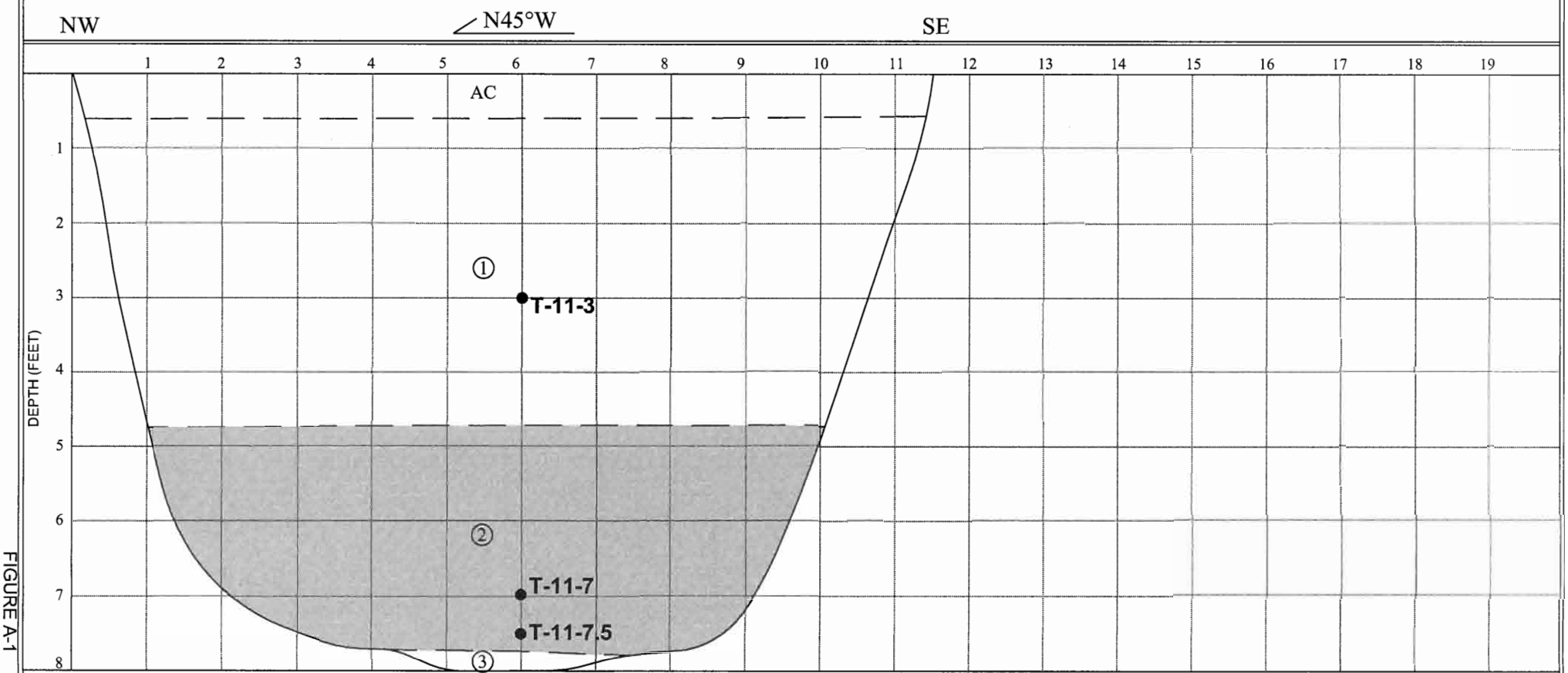
③ Light brownish yellow, damp, medium-grained SANDSTONE.

NOTES

Burned wastes are similar in appearance to those observed in trench T-3, both contain abundant ash.

Could not obtain a sample of underlying formation due to caving of the excavation; however, observed formation (Scripps Formation(?)) on the teeth of the excavator bucket.

Total depth = 8.0 feet bgs



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338088	10/13

DATE EXCAVATED 08/20/13 TRENCH NO. T-12

GROUND ELEVATION ~287' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Landscape Area, Adjacent to Pedestrian Sidewalk, Northwest of Ute Drive

DESCRIPTION/INTERPRETATION

① FILL+SURFICIAL WASTES:
Medium brown to gray, dry to damp, clayey silty SAND; with few gravels; surface to near surface wastes consisting primarily of broken and melted/fused glass; minor metal, glass bottles.

② FILL:
Yellow brown, damp, silty fine SAND.

@ 3.5': with rounded gravels and cobbles up to approximately 10 inches in size.

③ BURNED WASTES+FILL:
Mottled black brown to reddish-orange, damp, burned wastes; with minor fill and ashy layer; with an estimated approximately 50 to 80 percent wastes/debris consisting primarily of broken glass, debris fused glass and metal, glass bottles, dishware, milk glass, lesser bricks, plastic wrapper.

@ 9': increased wastes.

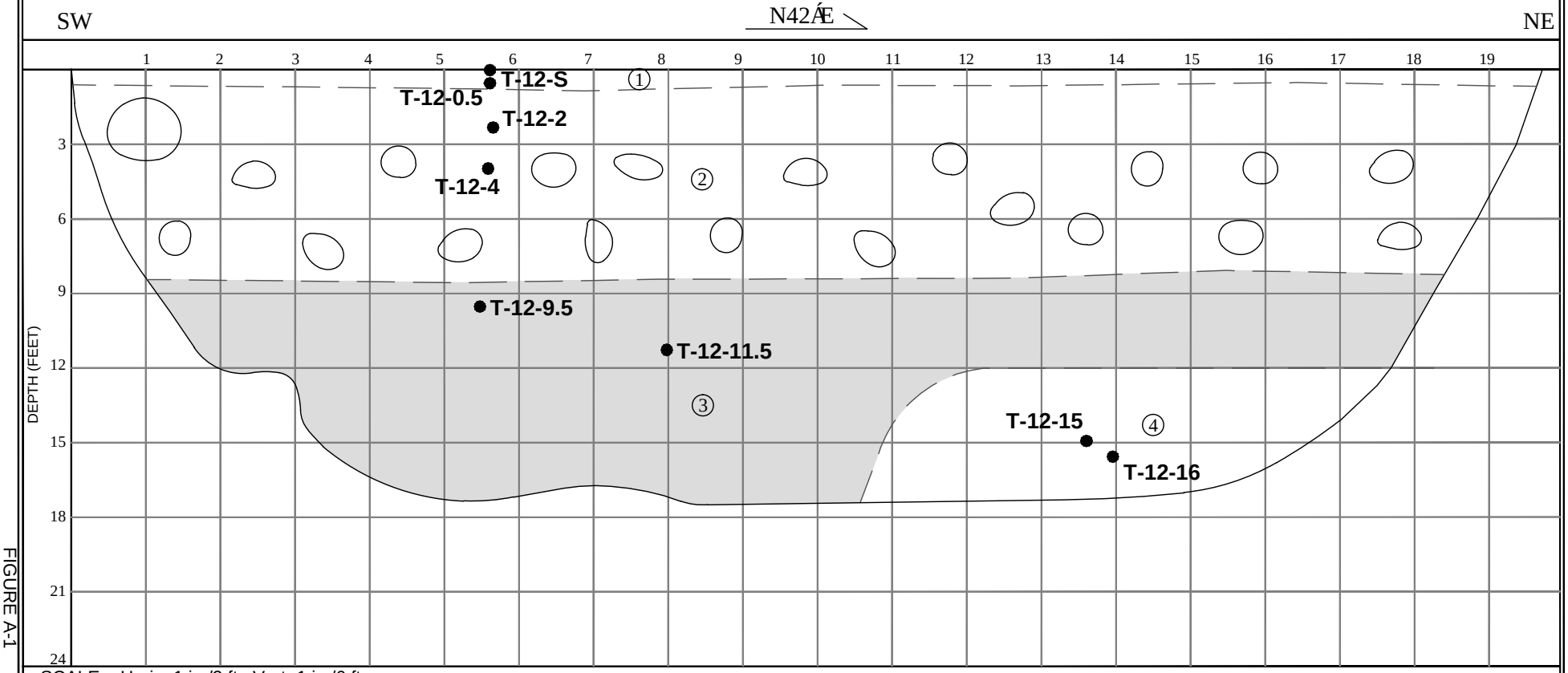
④ Area of light gray-brown, damp, loose pocket of fine SAND; easterly trench excavation wall.

NOTES

Total Depth = 17.5 feet bgs
Groundwater not encountered during excavation
Excavation backfilled on 08/20/13

NOTES:
1. pocket of sand at approximately 12 feet bgs extends beyond northeasterly trench wall

2. excavation terminated in wastes due to severe and continued caving of sidewalls; the loose sand prevented deepening the excavation



SCALE = Horiz=1 in./2 ft., Vert=1 in./6 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338088	10/13

DATE EXCAVATED 08/20/13 TRENCH NO. T-13

GROUND ELEVATION ~284' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Southeast of Ute Drive

DESCRIPTION/INTERPRETATION

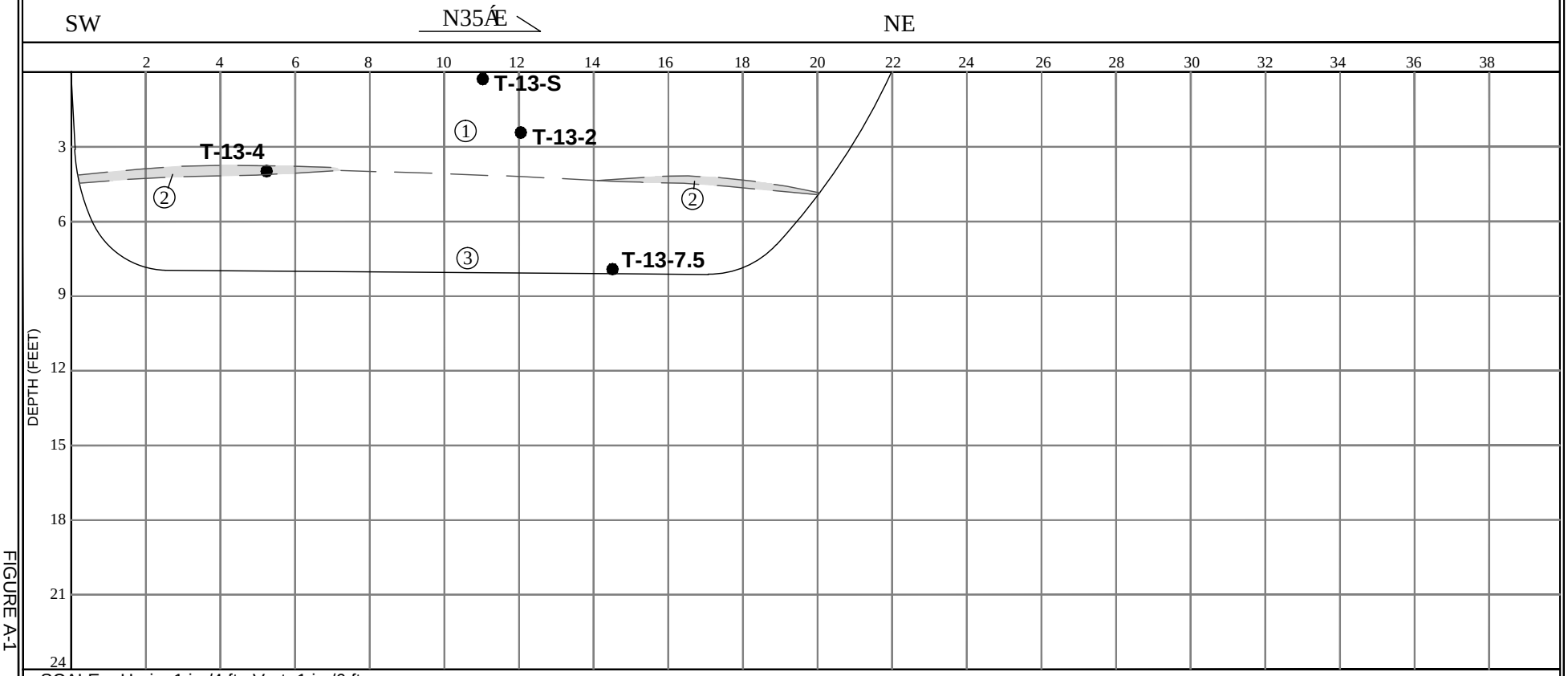
① FILL:
Light brownish yellow, dry to damp, silty, very fine SAND; with gravels and cobbles up to approximately 10 inches in size.

② FILL+ MINOR WASTES:
Black, damp, 2 to 6 inches thick lenses of burned wastes/ashy layer; discontinuous; irregular; with some broken glass debris.

③ SCRIPPS FORMATION(?):
Gray to brown, hard, clayey SILTSTONE and some silty CLAYSTONE.

NOTES

Total Depth = 7.5 feet bgs
Groundwater not encountered during excavation
Excavation backfilled on 08/20/13



SCALE = Horiz=1 in./4 ft., Vert=1 in./6 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338088	10/13

DATE EXCAVATED 08/20/13 TRENCH NO. T-14

GROUND ELEVATION ~286' ± MSL LOGGED BY BMC/BAB

METHOD OF EXCAVATION Backhoe

LOCATION Southeast of Ute Drive

DESCRIPTION/INTERPRETATION

① FILL:
Reddish brown and gray, dry, silty medium to coarse SAND; with gravel and cobbles up to approximately 18 inches in diameter.

② BURNED WASTES+FILL:
@ 9.5': Reddish brown clayey SAND; with minor wastes consisting primarily of white milk glass and few scattered pieces of glass; cobbles up to approximately 5 to 6 inches in diameter.

Reddish brown and black to dark brown, clayey SAND; with burned wastes and debris estimated at approximately 50 percent, consisting primarily of broken glass, fused glass, glass bottles and containers, some metal and copper oxide staining.

@ 13': approximately 30 to 35 percent burned wastes and debris, also with wire, fire hose, and panty hose (not burned).

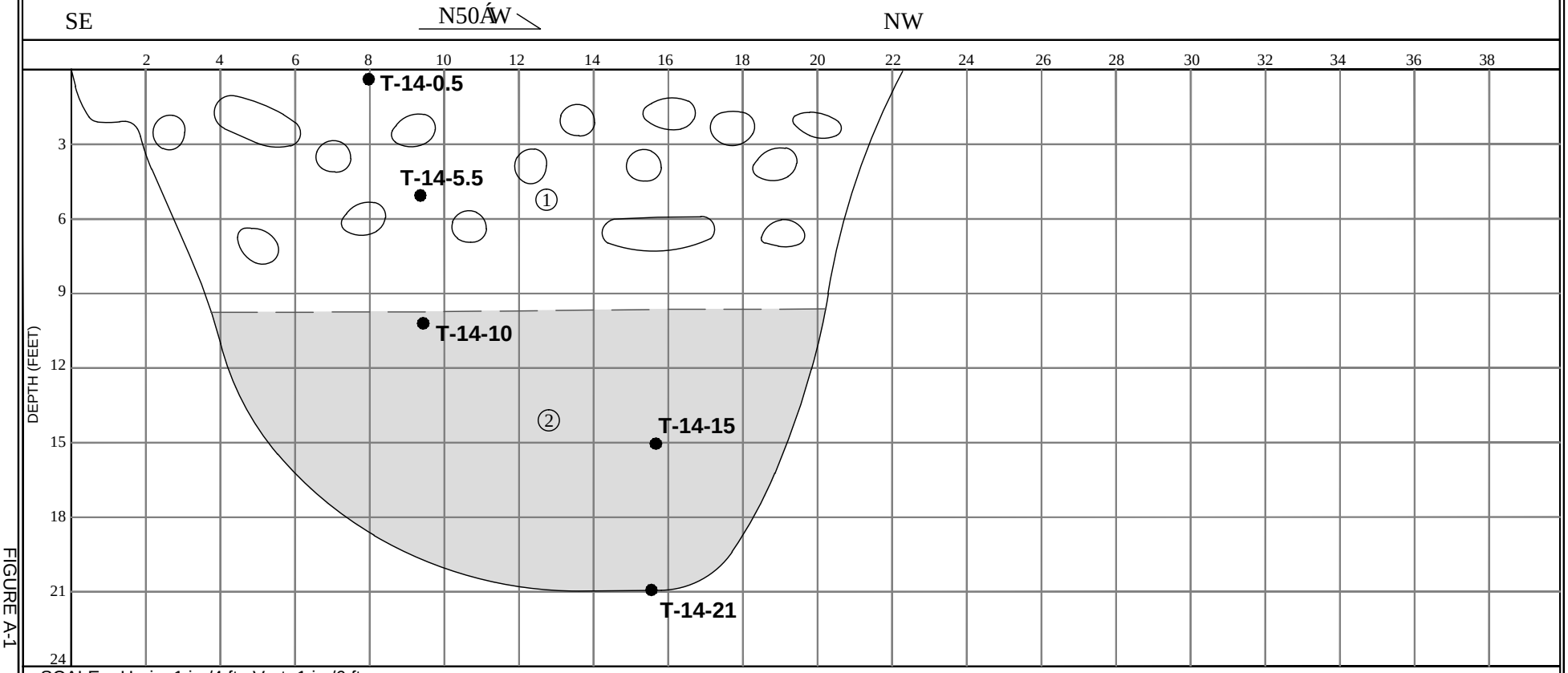
@ 18': fused glass.

NOTES

Total Depth = 21 feet bgs
Groundwater not encountered during excavation
Excavation backfilled on 08/20/13

NOTES:
1. copper wire crosses trench

2. due to the maximum depth the equipment could excavate, the excavation was terminated in the wastes



SCALE = Horiz=1 in./4 ft., Vert=1 in./6 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338088	10/13

DATE EXCAVATED 08/21/13 TRENCH NO. T-15

GROUND ELEVATION ~288' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Southeast of Ute Drive, ~12 feet from Curb

DESCRIPTION/INTERPRETATION

① FILL:
Light brown, dry to damp, slightly clayey, silty SAND; with few gravels and cobbles up to approximately 10 inches in diameter; concrete slab approximately 4 x 4 feet x 6 inches; asphalt debris.

@ 2': Brownish red, damp, silty, medium to coarse SAND; with gravel/sand cobbles up to approximately 10 inches in size.

② BURNED WASTES+FILL:
Black to black gray, damp; burned wastes consisting primarily of very broken glass and lesser fused glass, with ashy soil layer, approximately 3-inch thick.

@ 8.5': Black and black gray and lesser reddish brown; damp; burned wastes and minor fill; consisting primarily of very broken and melted glass, fused masses of glass and metal, bricks, spoon, milk glass, ceramics, with ashy layers, piece of damp newspaper.

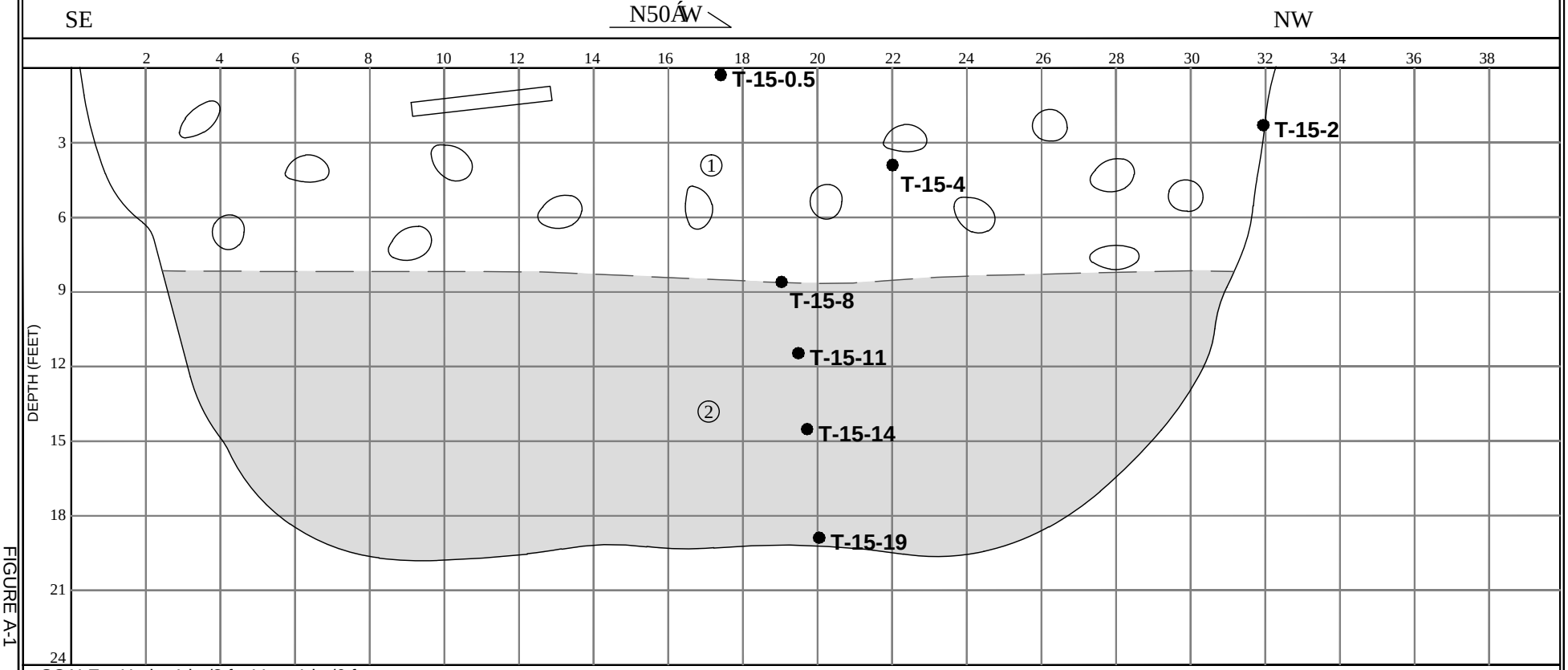
NOTES

Total Depth = 19 feet bgs
Groundwater not encountered during excavation
Excavation backfilled on 08/21/13

NOTES:
1. newspaper dated November 4, 1951

2. severe caving of excavation at approximately 16 feet bgs

3. due to the depth and extreme caving, the excavation was terminated in wastes



SCALE = Horiz=1 in./? ft., Vert=1 in./6 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338088	10/13

DATE EXCAVATED 08/21/13 TRENCH NO. T-16

GROUND ELEVATION ~291' ± MSL LOGGED BY BMC/BAB

METHOD OF EXCAVATION Backhoe

LOCATION Southeast of Ute Drive, ~12 feet from Curb

DESCRIPTION/INTERPRETATION

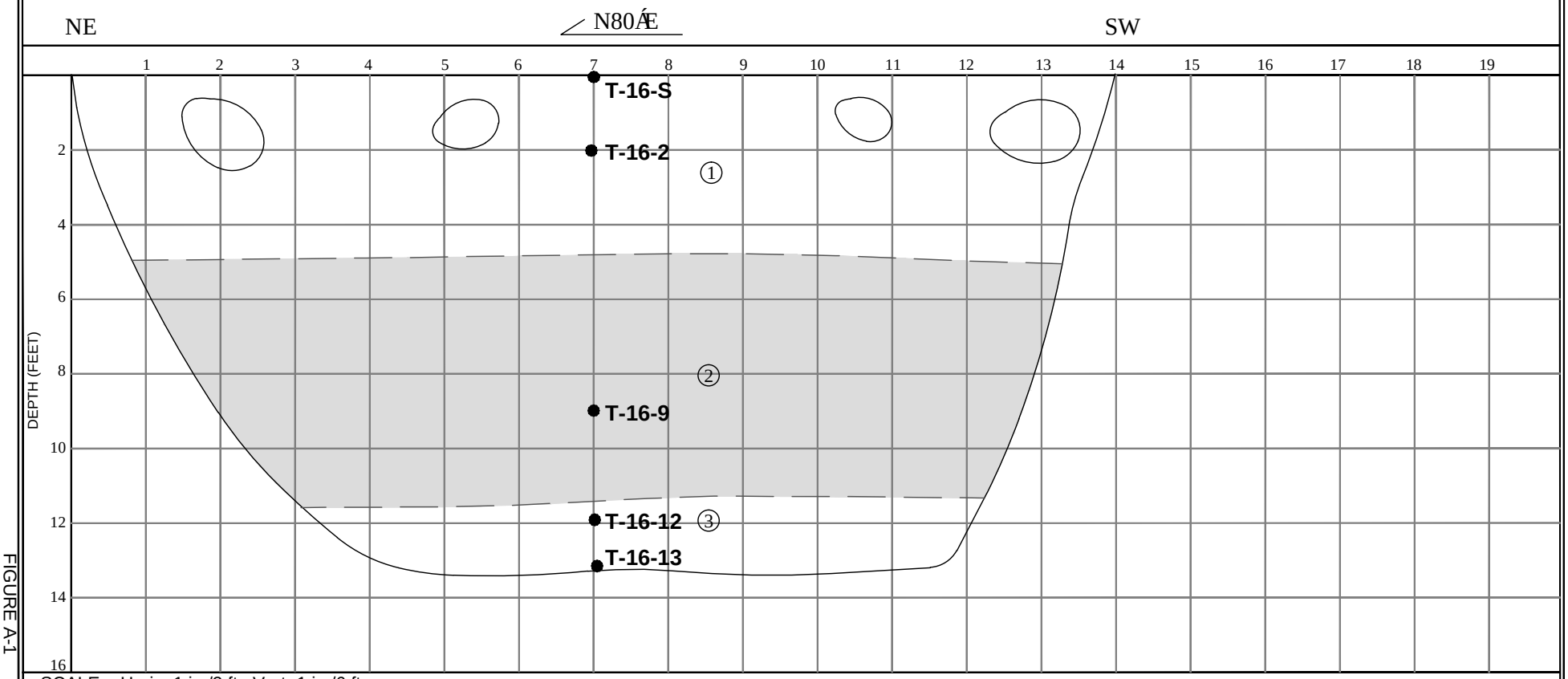
① FILL:
Brown to yellowish brown, fine to coarse SAND; with gravels and cobbles up to approximately 18 inches in diameter.

② FILL + BURNED WASTES:
Dark brown to gray, damp clayey SAND and burned wastes and debris; estimated approximately 30 percent consisting primarily of broken glass, fused and melted glass, oxidized copper staining.

③ SCRIPPS FORMATION(?):
Yellow brown, damp, clayey SILTSTONE.

NOTES

Total Depth = 13 feet bgs
Groundwater not encountered during excavation
Excavation backfilled on 08/21/13



SCALE = Horiz=1 in./2 ft., Vert=1 in./6 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338088	10/13

DATE EXCAVATED 08/21/13 TRENCH NO. T-17

GROUND ELEVATION ~299' ± MSL LOGGED BY BMC/BAB

METHOD OF EXCAVATION Backhoe

LOCATION Grass Area, North of Parking Lot

DESCRIPTION/INTERPRETATION

① FILL:
Brown to reddish-brown, damp to moist, silty SAND; some gravel.

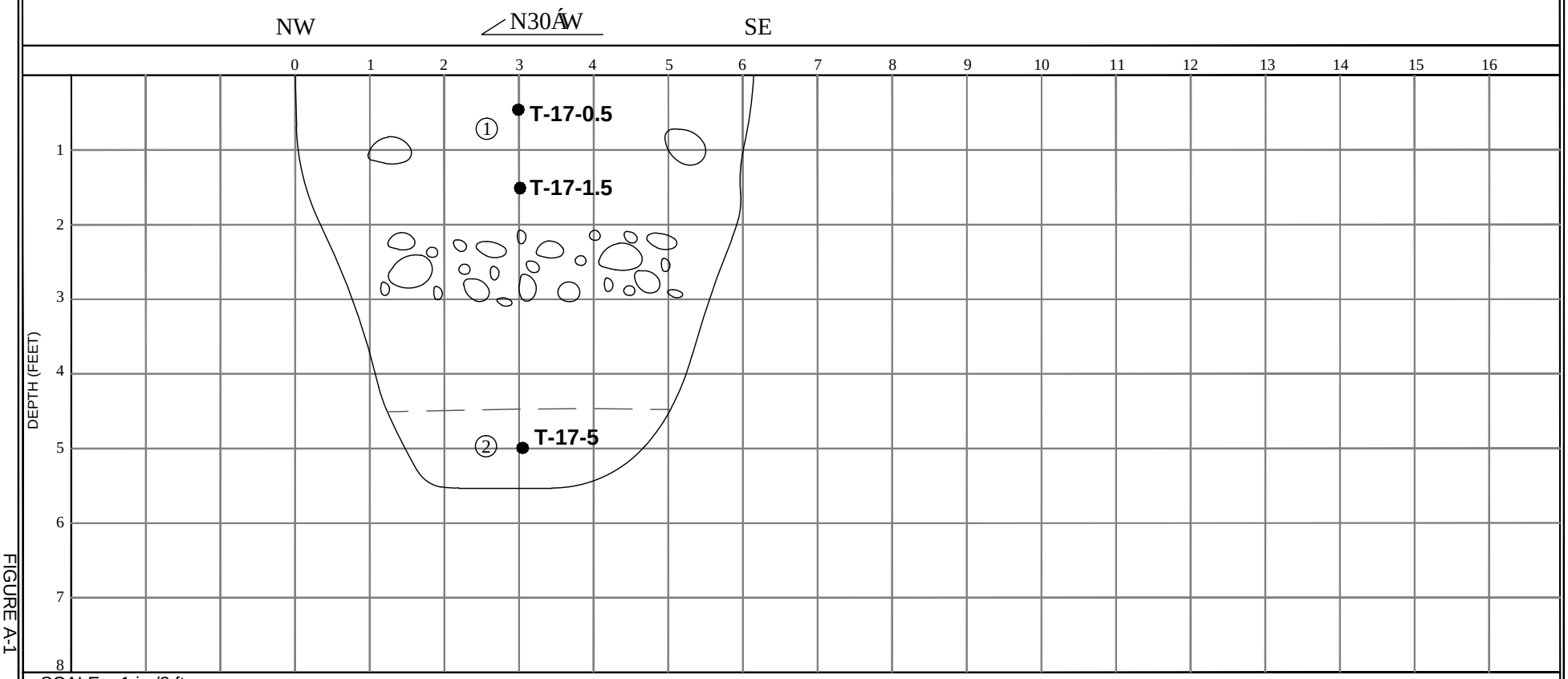
@ 1': Brown-black and mottled brown and yellow brown, moist, clayey SILT and silty SAND; with gravel and cobbles up to approximately 8 inches in size; brown-black coloration appears to be caused by organic material; organic odor.

@ 2.5': Abundant cobbles up to approximately 10 inches in size.

② VERY OLD PARALIC DEPOSITS (?):
Yellow brown, moist, silty fine to coarse SANDSTONE; some clay.

NOTES

Total Depth = 5.5 feet bgs
Wastes not observed in excavation
Groundwater not encountered during excavation
Excavation backfilled on 08/21/13



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338088	10/13

DATE EXCAVATED 08/21/13 TRENCH NO. T-18

GROUND ELEVATION ~298' ± MSL LOGGED BY BMC/BAB

METHOD OF EXCAVATION Backhoe

LOCATION Grass Area, North of Parking Lot

DESCRIPTION/INTERPRETATION

① FILL:

Dark brown, moist, silty, medium to coarse SAND; with roots and rootlets.

@ 1': Mottled medium brown and black, gray green, silty, clayey SAND and clayey SILT; with abundant gravels and cobbles up to approximately 15 inches in size.

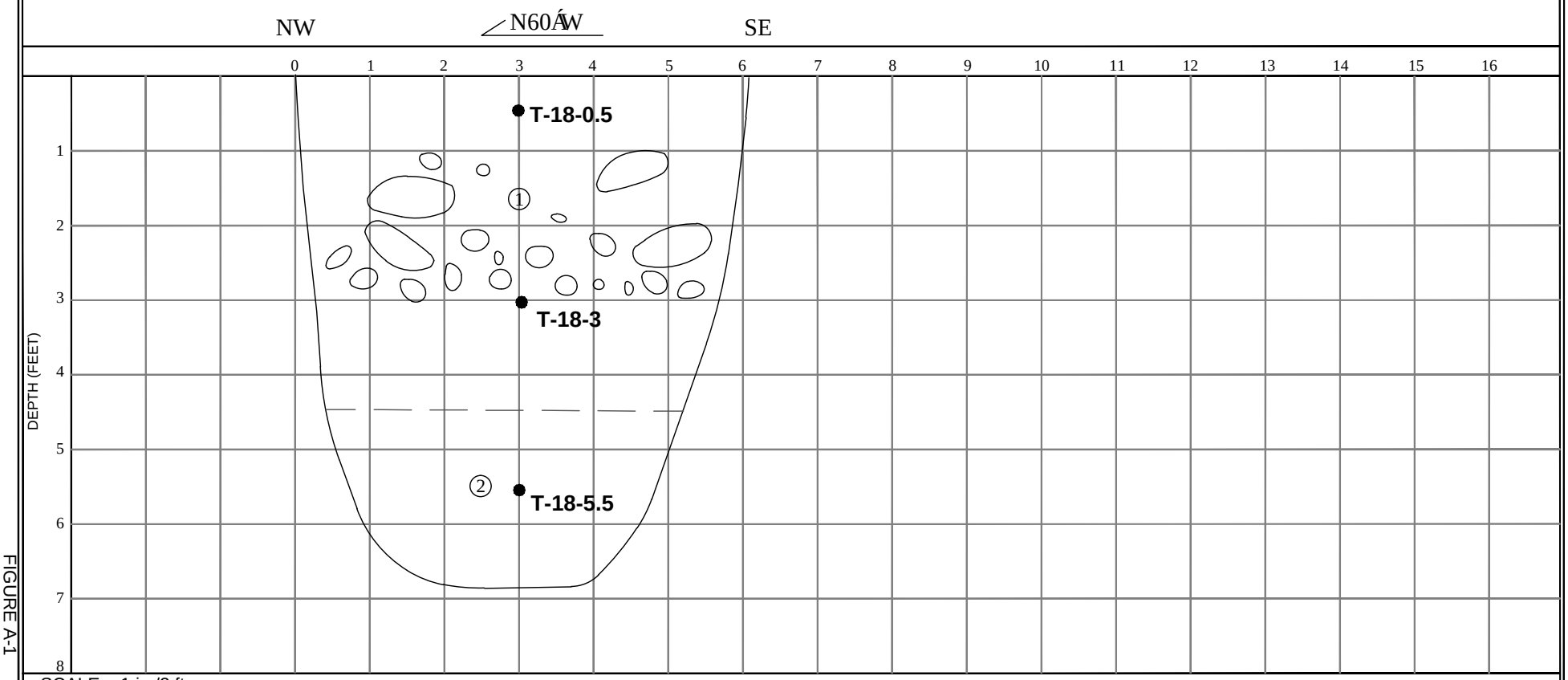
@ 3': Green gray brown; moist; CLAY.

② VERY OLD PARALIC DEPOSITS (?):

Yellowish brown, moist, silty, fine to medium SANDSTONE and some CONGLOMERATE.

NOTES

Total Depth = 6.7 feet bgs
Wastes not observed in excavation
Groundwater not encountered during excavation
Excavation backfilled on 08/21/13



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338088	10/13

DATE EXCAVATED 08/22/13 TRENCH NO. T-19

GROUND ELEVATION ~298' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Parking Lot

DESCRIPTION/INTERPRETATION

ASPHALT CONCRETE/BASE:
Approximately 8 to 9 inches thick.

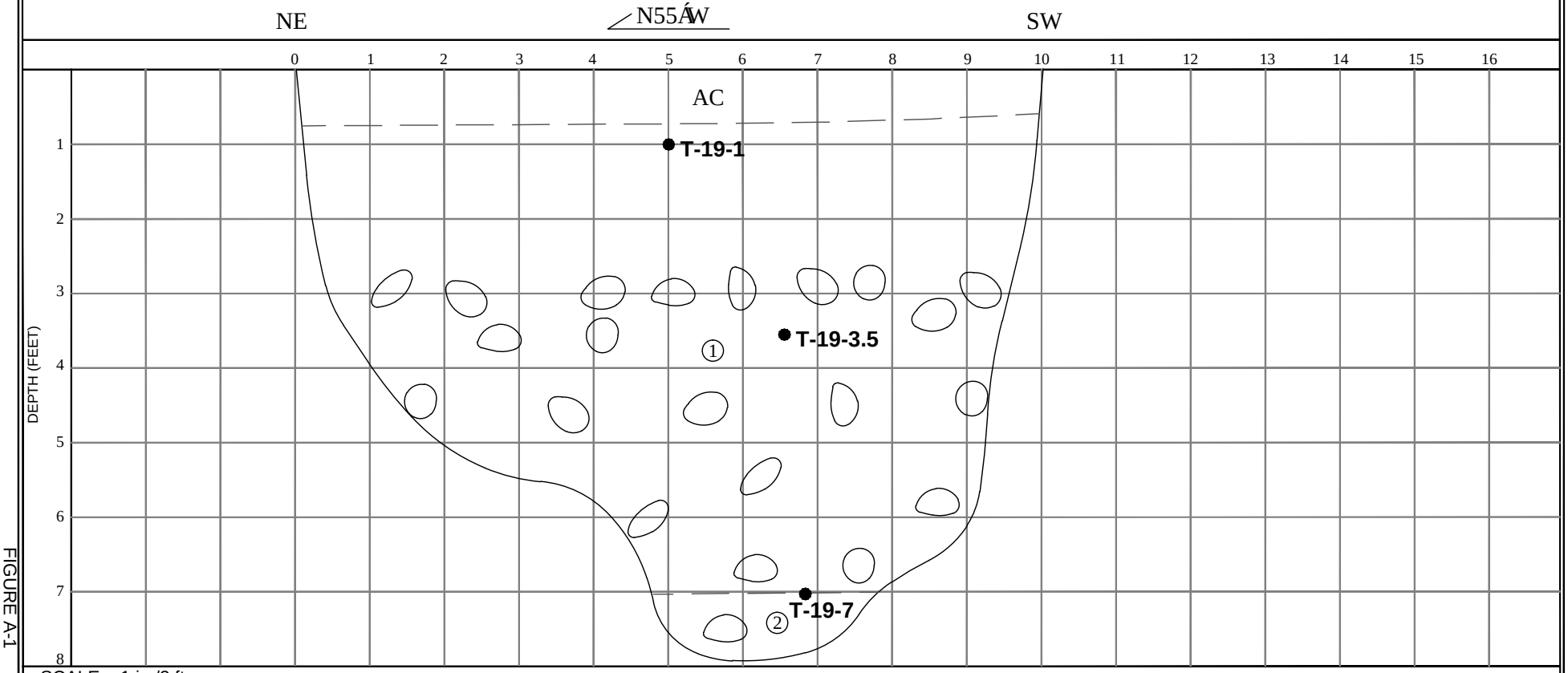
① FILL:
Yellowish brown, moist, slightly clayey silty SAND; with gravels and cobbles, mostly rounded up to approximately 12 inches in size.

② VERY OLD PARALIC DEPOSITS (?):
Yellowish brown, moist, silty SANDSTONE and CONGLOMERATE.

NOTES

Total Depth = 7.8 feet bgs
Wastes not observed in excavation
Groundwater not encountered during excavation
Excavation backfilled on 08/22/13

NOTES:
1. extremely difficult to excavate due to large cobbles
2. not clear if at approximately 7 feet bgs into formation
3. backfilled using whacker to better compact
4. excess cobbles stockpiled at the southern parking lot boundary



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338088	10/13

DATE EXCAVATED 08/22/13 TRENCH NO. T-20

GROUND ELEVATION ~294' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Parking Lot

DESCRIPTION/INTERPRETATION

ASPHALT PAVEMENT/BASE:
Approximately 6 inches thick.

① FILL (?):
Yellowish brown, moist, slightly clayey, silty SAND; with abundant gravels; cobbles.

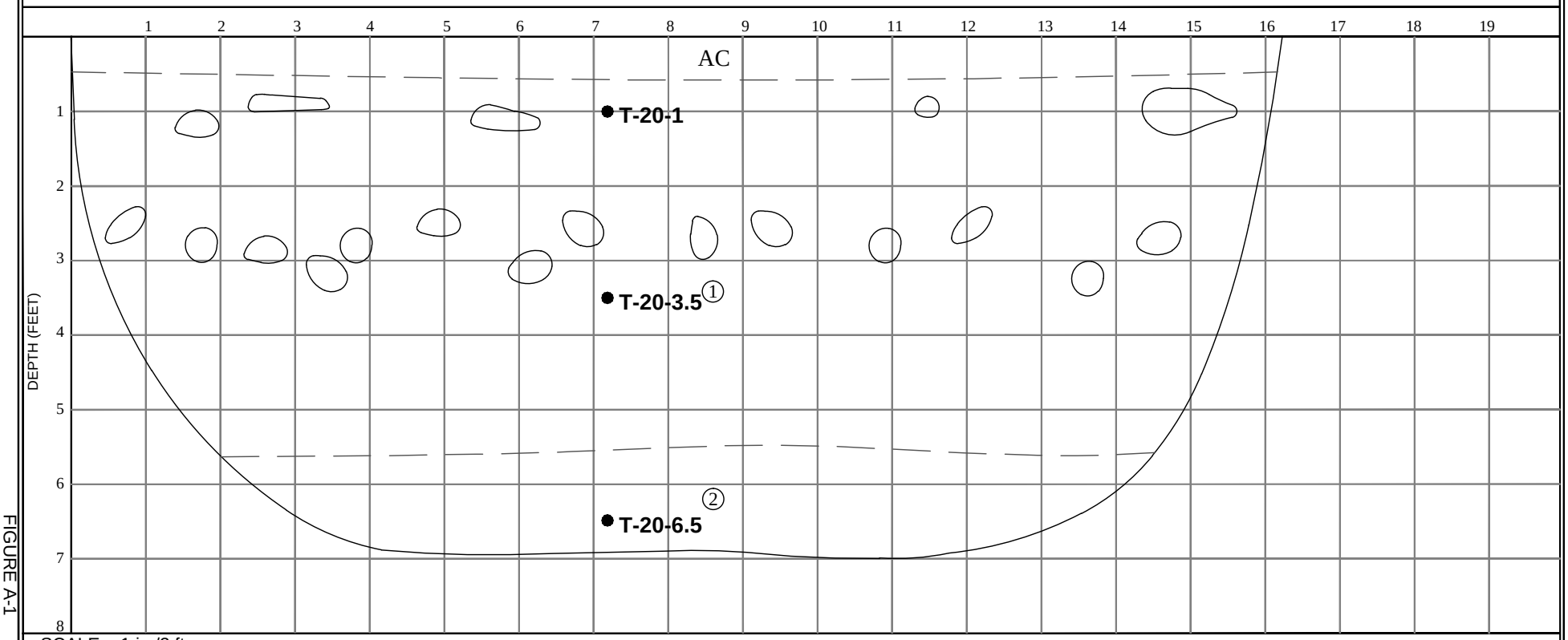
@ 2': Coarse sand; abundant gravels and cobbles up to approximately 10 inches in diameter.

② VERY OLD PARALIC DEPOSITS (?):
Brownish yellow and grayish brown, moist, silty SANDSTONE; cemented; becomes clayey.

NOTES

Total Depth = 7 feet bgs
Wastes not observed in excavation (with exception of Ponds face cream container)
Groundwater not encountered during excavation
Excavation backfilled on 08/22/13

NOTES:
1. extremely difficult to excavate due to abundant large cobbles
2. milk glass container (Ponds face cream)
3. excavation backfilled using a whacker to better compact
4. excess cobbles stockpiled at the southern parking lot boundary



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338088	10/13

DATE EXCAVATED 08/22/13 TRENCH NO. T-21

GROUND ELEVATION ~290' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Parking Lot

DESCRIPTION/INTERPRETATION

ASPHALT PAVEMENT:
Approximately 6 inches thick

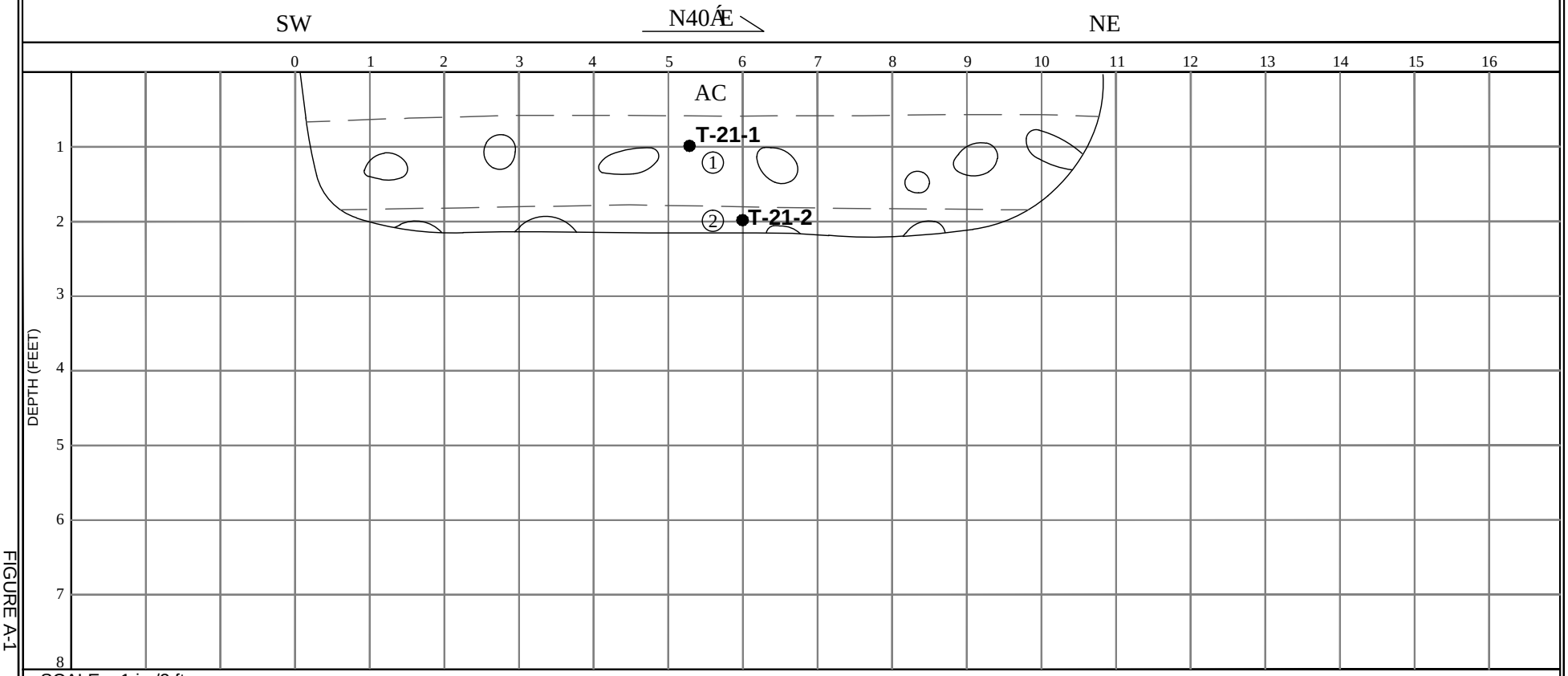
① FILL:
Reddish brown, moist, clayey SAND; with gravels and cobbles up to approximately 15 inches in size; coarse sand.

② VERY OLD PARALIC DEPOSITS (?):
Green gray to brown, moist, very clayey CONGLOMERATE; cobbles up to approximately 16 inches in size.

NOTES

Total Depth = 2 feet bgs, refusal on hard clayey conglomerate
Wastes not observed in excavation
Groundwater not encountered during excavation
Excavation backfilled on 08/22/13

NOTE:
1. excavation could not be advanced beyond approximately 2 feet bgs without using a breaker



SCALE = 1 in./2 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338088	10/13

DATE EXCAVATED 08/22/13 TRENCH NO. T-22

GROUND ELEVATION ~296' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Parking Lot

DESCRIPTION/INTERPRETATION

ASPHALT PAVEMENT/BASE:
Approximately 6 inches thick

① FILL:
Yellowish brown, moist, clayey silty SAND; abundant gravels and cobbles rounded, up to approximately 15 inches in size; with some zones of lesser cobbles; coarse sandier zones; cobbles thin to the west; a few pieces of broken glass; approximately < 1 percent.

② VERY OLD PARALIC DEPOSITS (?):
Light gray to brown, moist, silty medium- to coarse-grained SANDSTONE.

@ 7': Gray to green, hard, clayey SILTSTONE.

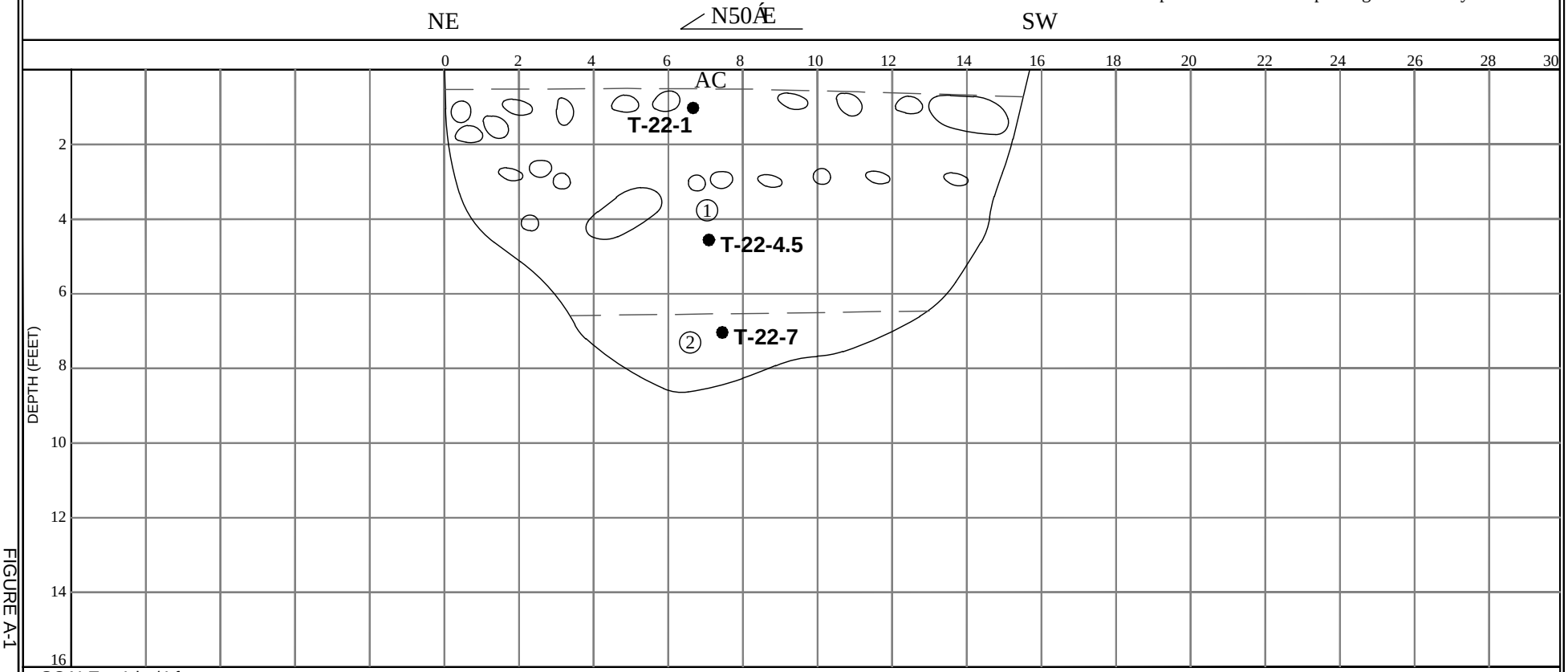
NOTES

Total Depth = 8.5 feet bgs
Wastes not observed in the excavation (with the exception of a few pieces of broken glass)
Groundwater not encountered during excavation
Excavation backfilled on 08/22/13

NOTES:
1. occasional piece of waste debris consisting of melted milk glass face cream container, broken flat glass, broken brown glass in upper 6 inches of the fill underlying the asphalt pavement

2. at approximately 3 feet bgs, switched to 1-foot wide bucket due to difficult excavating with large cobbles

3. excess cobbles stockpiled at the southern parking lot boundary



SCALE = 1 in./4 ft.

FIGURE A-1

Ninyo & Moore

TRENCH LOG

CLAIREMONT HIGH SCHOOL
SAN DIEGO, CALIFORNIA

PROJECT NO.	DATE
105338088	10/13

DATE EXCAVATED 08/22/13 TRENCH NO. T-23

GROUND ELEVATION ~296' ± MSL LOGGED BY BAB

METHOD OF EXCAVATION Backhoe

LOCATION Parking Lot

DESCRIPTION/INTERPRETATION

ASPHALT PAVEMENT/BASE:
Approximately 6 inches thick

① FILL:
Reddish brown, moist, clayey silty SAND; minor pieces of broken glass.

@ 1': Yellow to brown, moist, silty fine SAND; occasional gravels and cobbles up to approximately 10 inches in diameter.

② VERY OLD PARALIC DEPOSITS (?):
Gray to green brown, damp, hard, clayey SILTSTONE.

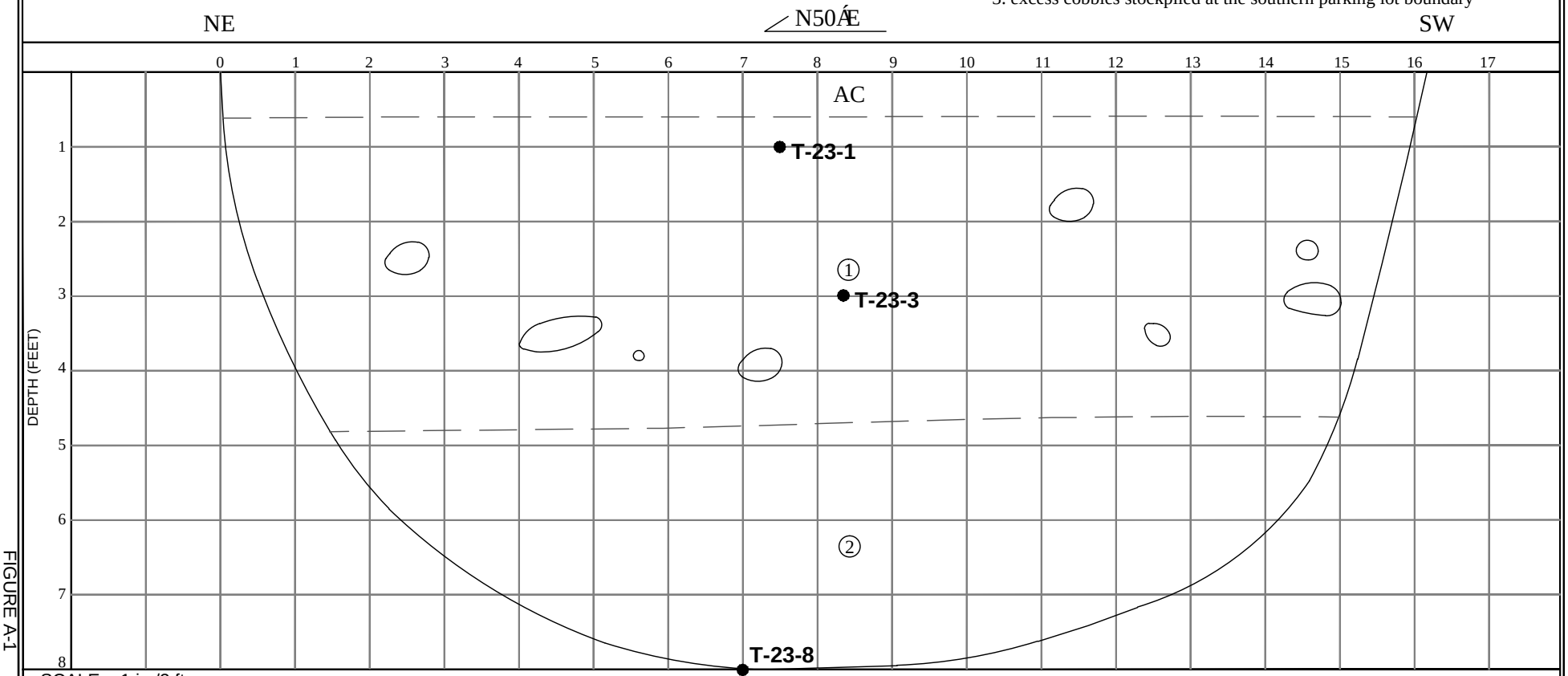
NOTES

Total Depth = 8 feet bgs
Wastes not observed in excavation (with the exception of a few pieces of broken glass)
Groundwater not encountered during excavation
Excavation backfilled on 08/22/13

NOTES:
1. occasional pieces of broken glass in upper 6 inches of the fill underlying the asphalt pavement

2. excavation backfilled using compact, excess cobbles stockpiled at southern parking lot boundary

3. excess cobbles stockpiled at the southern parking lot boundary

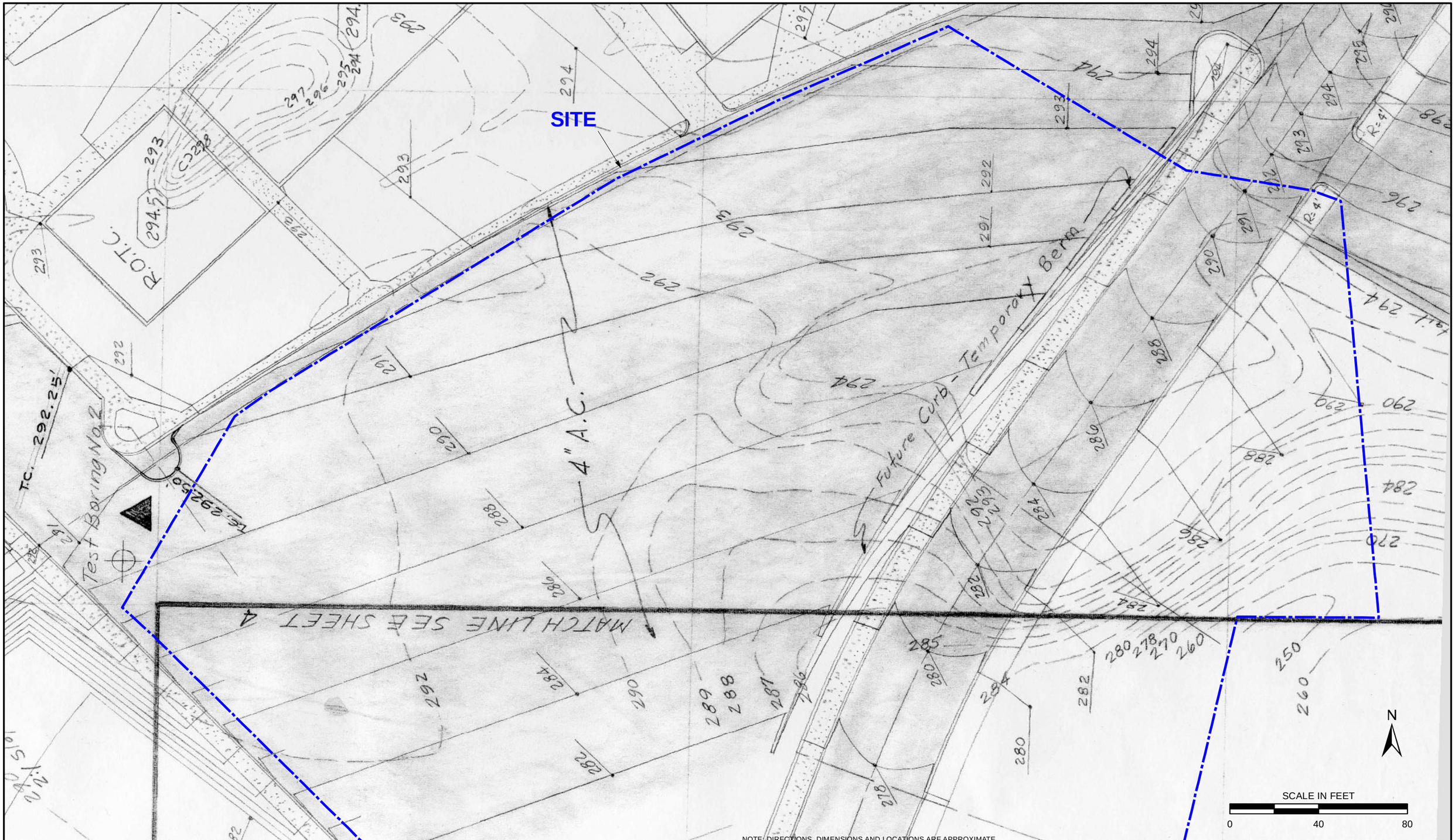


SCALE = 1 in./2 ft.

FIGURE A-1

APPENDIX C

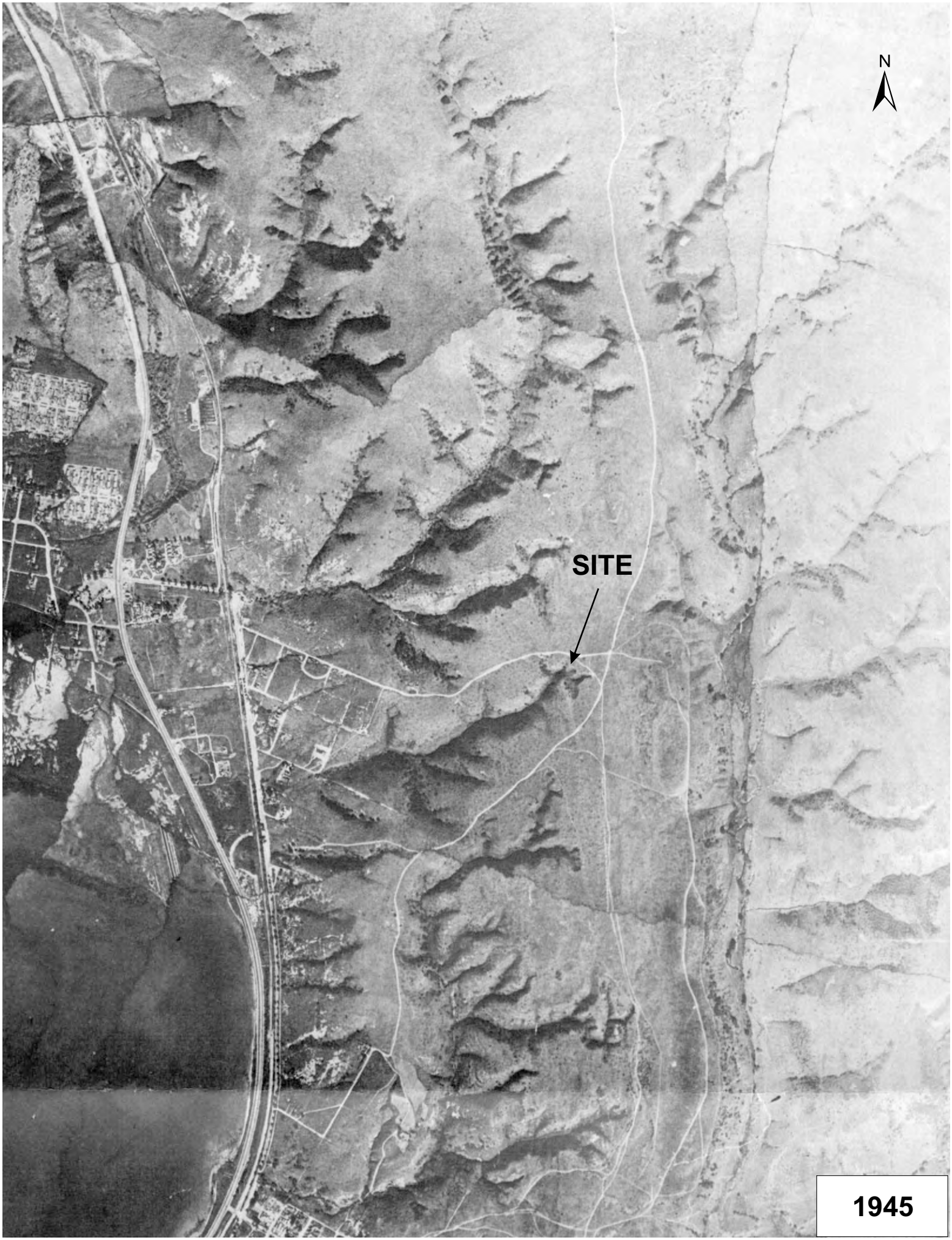
AS-BUILT GRADING PLAN AND HISTORICAL AERIAL PHOTOGRAPHS



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore		AS-BUILT GRADING PLAN 6-5-1957	FIGURE
PROJECT NO.	DATE	CLAIREMONT HIGH SCHOOL 4150 UTE DRIVE SAN DIEGO, CALIFORNIA	C-1
105338088	2/14		

C:_105338088_57TOPO.mxd 2/24/2014 JDL


N
SITE
1945

1F-84
N
SITE
1949

N
SITE
1953

SITE
N
1955

N
SITE
1957

N
SITE
1957

N
SITE
1957

N
SITE
1958

N
SITE
1959

APPENDIX D

RECORDS REVIEW DOCUMENTATION

CLOSED, ILLEGAL and ABANDONED SITES
SITE IDENTIFICATION FORM

GENERAL INFORMATION

County: SAN DIEGO Priority: 1 2 3 4 5 Date of Visit: 11-4-92

Facility Name: CLAIREMONT HIGH SCHOOL Burnsite SWIS #: ___-___-___

Address: BRANDYWINE ST (CLAIREMONT)
City: SAN DIEGO State: CA Zip: 92117
Map Index #: TB 52E3 USGS Quadrangle Name: ___
Section: ___ 1/4 Section: ___ Township: ___ Range: ___
Base & Meridian: ___ Latitude: ___ Longitude: ___

Operator Data
Mr./Ms: ___ First: ___ Last: ___
Title: ___ Phone: (___) ___
Company: ___
Address: ___
City: ___ State: ___ Zip: ___

Land Owner Data
Mr./Ms: ___ First: ___ Last: ___
Title: ___ Phone: (___) ___
Company: ___
Address: ___
City: ___ State: ___ Zip: ___

FACILITY CHARACTERISTICS

Permit Status: 1) Permitted (2) Unpermitted 3) Exempt

Operational Status: (1) Closed 2) Illegal (active) 3) Abandoned
Permitted Date: ___ Closure Date: ___

Size of Fill Area: ___ ac.

Excavation of Fill: Yes (No)

Fill Method: (1) Canyon 2) Area 3) Trench 4) Sump 5) Other ___

Environmental Setting:
Topography: 1) Mountainous 2) Flat (3) Rolling 4) Other ___
Land Use: RESIDENTIAL / SCHOOL Zoning: RESIDENTIAL
Distance to Nearest Structure: On Site ON SITE ft. Off Site ___ ft.
Number of On Site Structures: ___

Waste Types:
(1) Mixed Municipal 2) Construction Demo 3) Industrial 4) Sludge/Septage
5) Agriculture 6) Fluids 7) Wood Mill 8) Tires 9) Dead Animals
10) Other ___
11) Hazardous ___

Tons/Day Received (if active): ___

CONTROL MEASURES

Identify (circle) problem areas and address each problem under comments.

17658/17767 - Site Security
17682/17773 - Cover
17704/17781 - Leachate Control
17705/17783 - Gas Control
17708/17778 - Drainage Control
17708/17779 - Erosion Control
17710/17776 - Grading
17777 - Final Site Face
17782 - Ground Water Monitoring
17787 - Recording

PLOT PLAN

Neatly sketch on an 8.5"x11" sheet of paper the following:
1) Property Boundaries 2) Landfill Boundaries 3) On site Structures
4) Surface Impoundments 5) Surface Drainage 6) Fences 7) Utilities
8) Monitoring Well Locations 9) Drinking Well Locations
10) Surface Water 11) North Arrow

USGS QUAD MAPS

Identify the site on a 7.5 minute USGS Quad map, trim to 8.5"x11" sheet of paper and attach it to this form. Be sure to identify the Township, Range, Section, 1/4 Section, Base & Meridian, and Quadrangle map name.

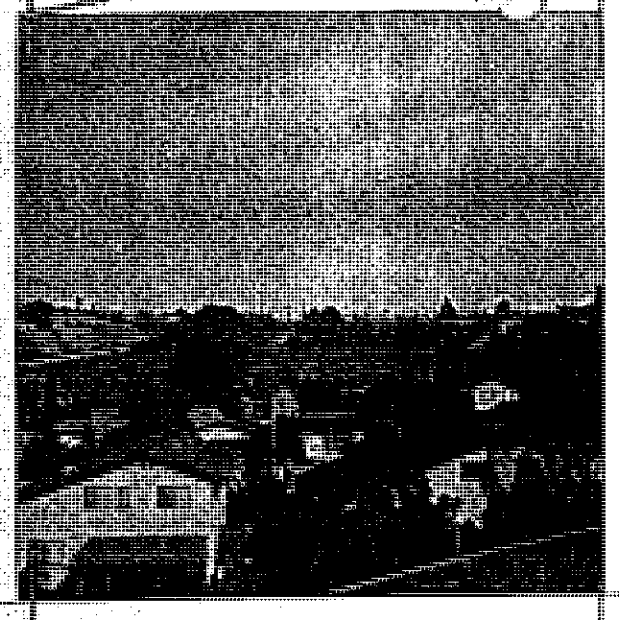
AAA MAPS

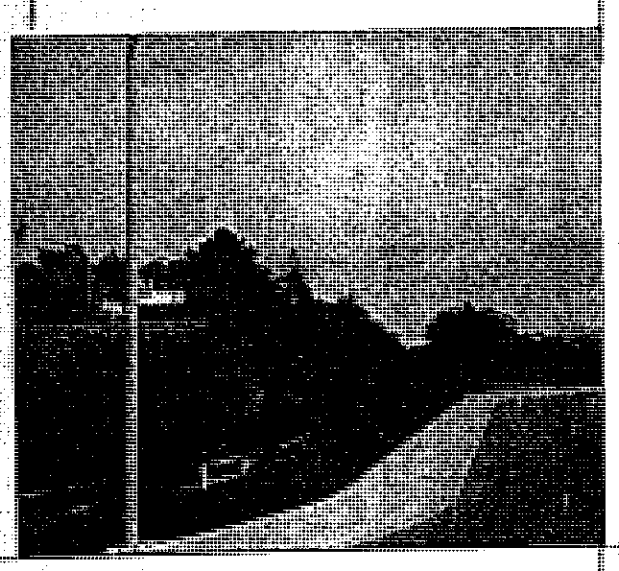
Location of the site must also be plotted on a AAA County Road Map and placed in both the County Working File and LEA General Facility File.

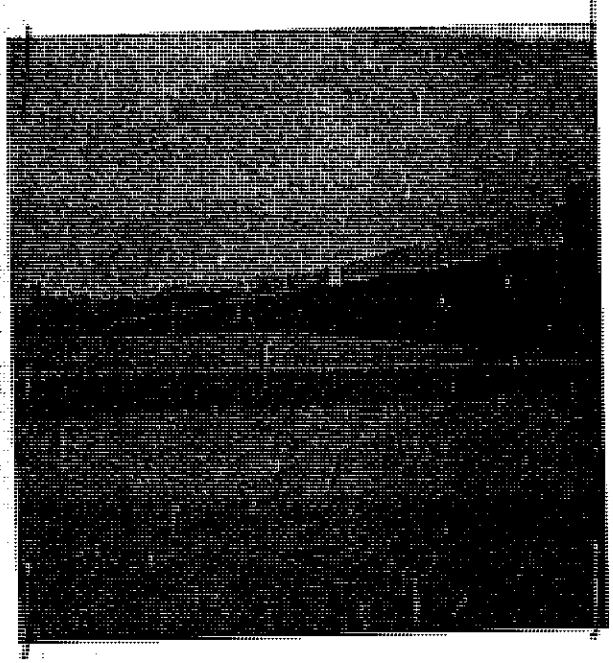
Comments:

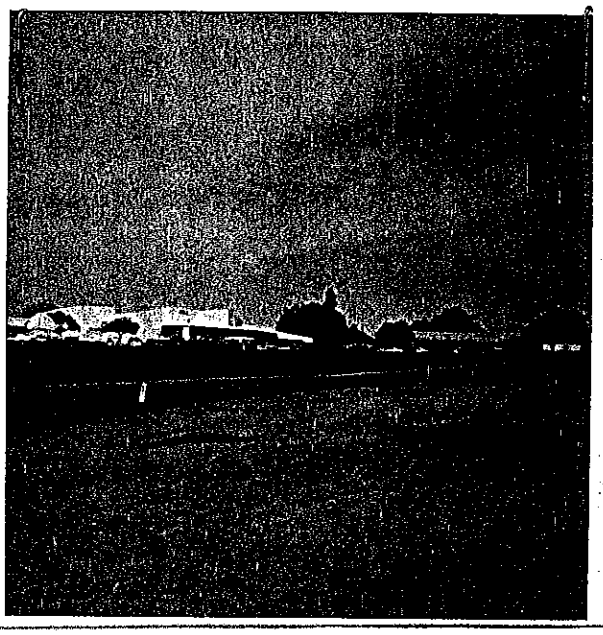
~~REPORTED THAT~~
RECORDS INDICATE THIS SITE LIES UNDERNEATH CLAIREMONT HIGH SCHOOL. NO VISIBLE SIGNS OF LANDFILL AROUND SCHOOL.

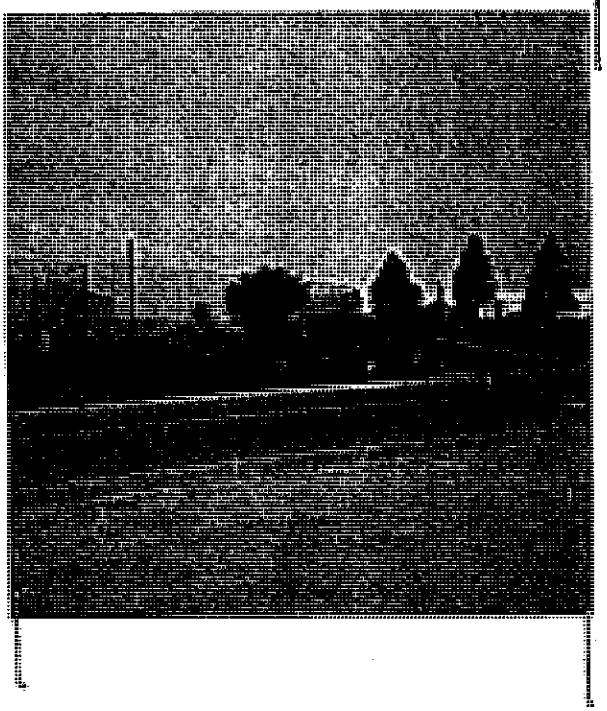
D Caudwell 11-4-92











- BRANDYWINE BURNSITE
- REPORTED TO BE UNDER CLAIREMONT HIGH SCHOOL

D Cammall

11-4-92

Clairemont High School Burnsite
June 19, 1995

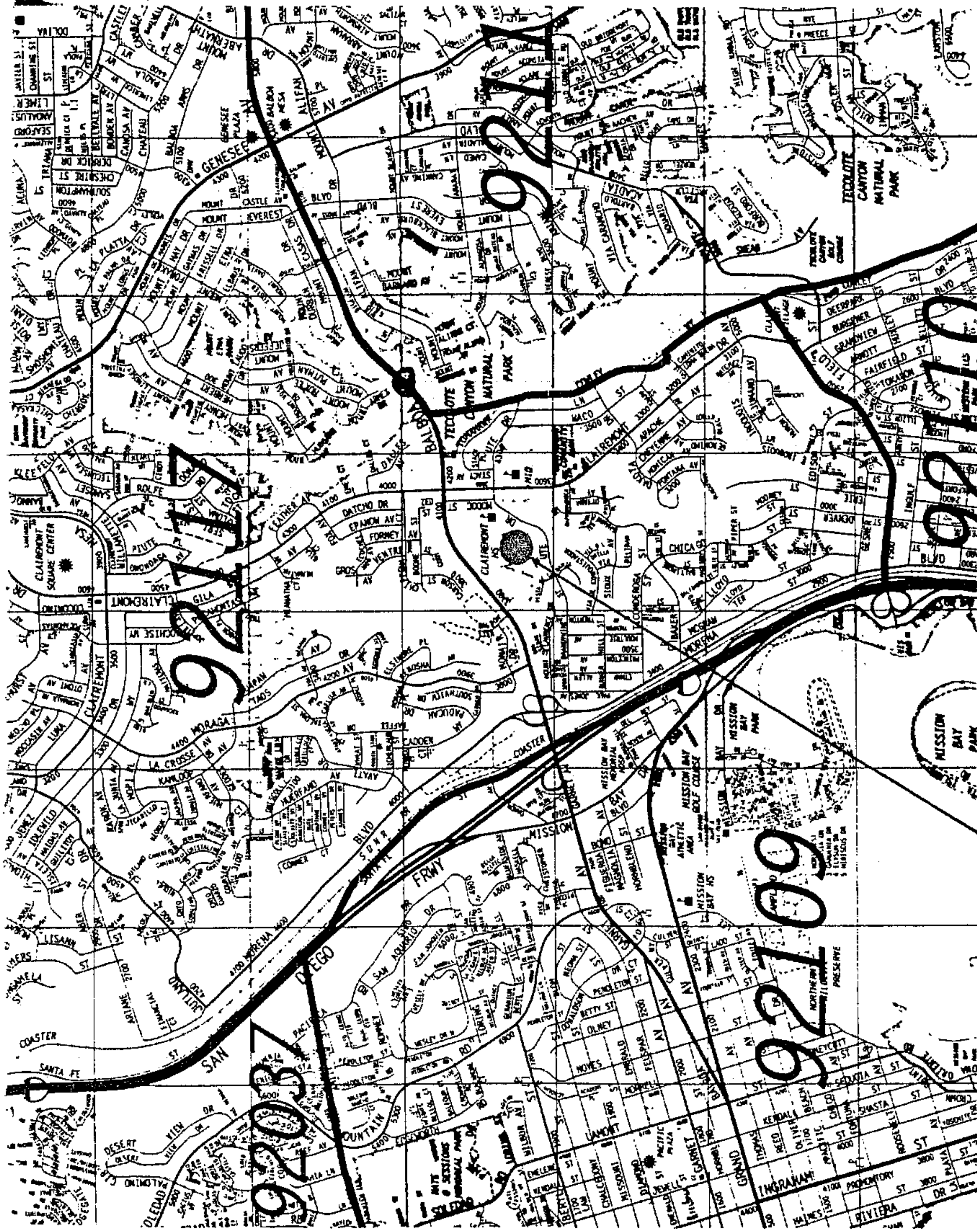
I went to the Clairemont High School Burnsite located at Clairemont High on Brandywine Street to inspect the site. I parked in front of the school next to the athletic fields and walked around the school looking for evidence of burn ash. I did not see any burn ash. There is a good chance that the burnsite has been paved or built over.

Mark G. McCabe
June 20, 1995

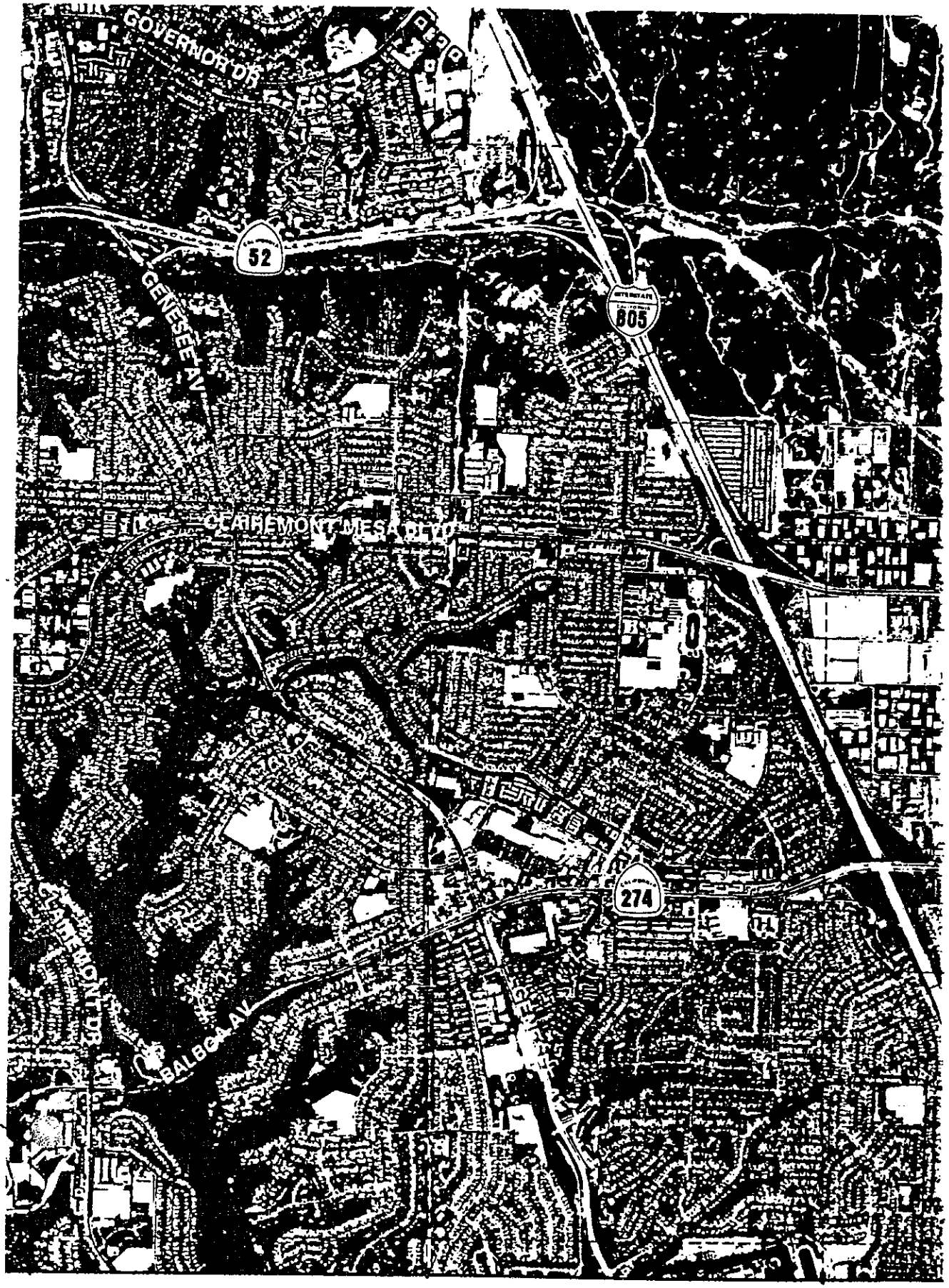
(1990) TB. PG. # 1248-E4

(86-87) ACRIAL FTO PG. # 13E-D5

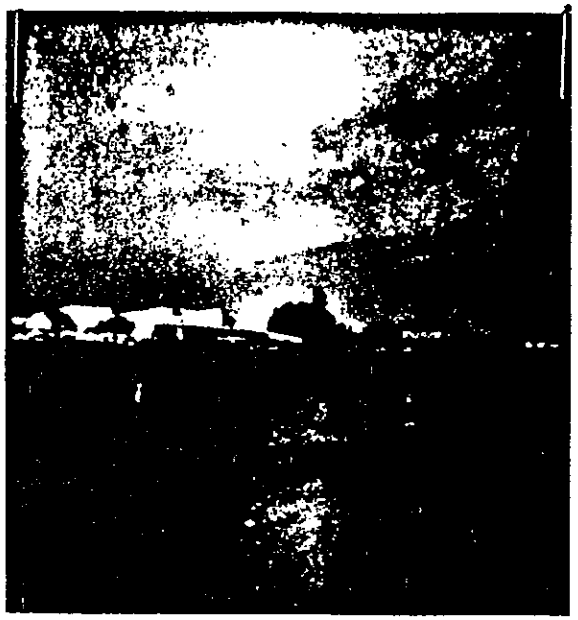
SITE VISIT
6/19/97
- No Sign of ASH @ the Site
- PE. Cl [illegible] NEW
- Looks like [illegible] - No Visible Ash
- Remove from Inspection Schedule

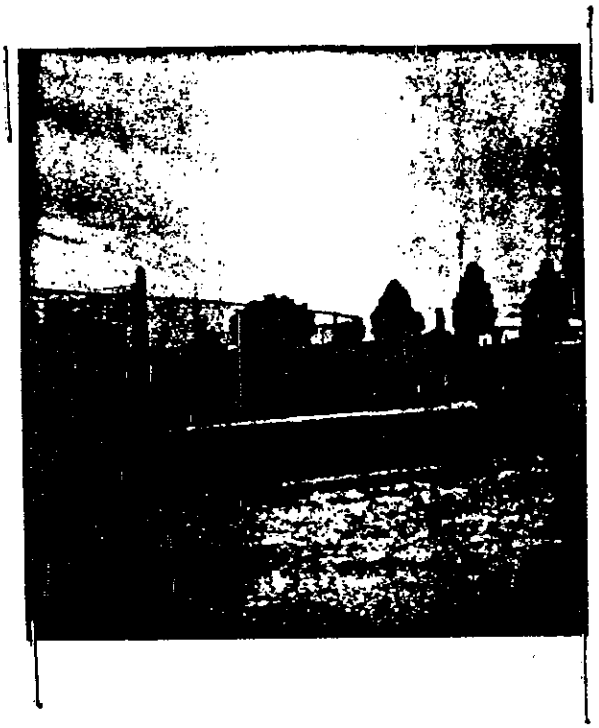


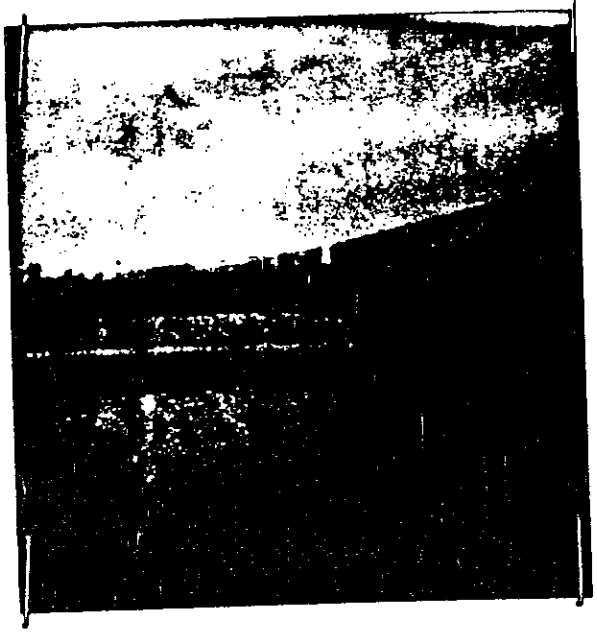
APPROXIMATE LOCATION



CLAIREMONT HIGH SCHOOL BOUNDARIES







CLAIREMONT HIGH SCHOOL
PARKING LOT

County of San Diego

DANIEL J. AVERA
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LOCAL ENFORCEMENT AGENCY
P.O. BOX 85261, SAN DIEGO, CA 92186-5261
(619) 338-2253 FAX (619) 338-2317

June 23, 1997

John Clinkenbeard
California Integrated Waste Management Board
8800 Cal Center Drive
Sacramento, CA 95826

Dear Mr. ~~Clinkenbeard~~ JOHN:

Attached please find Site Investigation Process and descriptions for **Clairemont High School Burnsite, Jacumba I and Jacumba II Burnsites**. The LEA will indicate the inspection frequencies for these site in our EPP.

Please review the attached material at your convenience and let us know if you have any comments and/or concerns. Please call me at (619) 338-2389 if you have any questions or if I can provide you with additional information.

Sincerely,

G. S. Yekta

GINO YEKTA
Local Enforcement Agency
Department of Environmental Health

cc: Clairemont High School Burnsite file
Jacumba I file
Jacumba II file

CLAIREMONT HIGH SCHOOL BURN SITE
LOCATED ON UTE DRIVE (BRANDYWINE STREET)
SAN DIEGO, CA 92117
SWIS# 37-CR-0015

The inactive, closed Clairemont Burnsite also known as Brandywine Burnsite is located in the community of Clairemont in the City of San Diego. The exact volume , location and waste type are not clear from the information obtained from the files. From the topography of the site, it appears that canyon fill method was used to dispose of waste. Clairemont High School parking lot currently occupies the area thought to be the approximate location of the burnsite. It is not clear whether the burn ash was removed from the site or remained in place during the school construction activities (grading activities for the parking lot construction).

The LEA has inspected the site and has not detected any gas migration, observed any settlement or burn ash at this site as a result of previous waste filling activities. Future activities at this site by the City of San Diego, the School District or their representatives, which may involve grading or other activities exposing the burn ash should be consulted with the LEA and the CIWMB.

The LEA **recommends that the Clairemont Burnsite to be removed from the Board's SWIS list** and is of the opinion that no more inspections are needed at this site unless future activities expose the previously burn ash material.

SITE IDENTIFICATION FORM

(Attach additional description or explanation as needed.)

Initial I.D. (Y/N):	Y	Date of Field Visit:	6/17/97	Follow-up Investigation (Y/N):	N

SITE INFORMATION					
Site Name:	CLAIREMONT HIGH SCHOOL BURN SITE	AKA:	NONE		
SWIS #:	37-CR-0015	County:	SAN DIEGO	APN:	
Location:	6500 BLK. OF UTE DRIVE (BRANDYWINE STREET)				
(Include Location, Township, Range, and Section, and a Parcel Map or a Quadrangle Map w/Township, Range, and Section)					
Land Owner(s):	CITY OF SAN DIEGO				
Address:	6500 BLK. UTE DRIVE				
City:	SAN DIEGO	State:	CA	Zip: 92117	Phone:
Types of Waste:	☒ Inert ☒ Residential ☒ Commercial ☐ Industrial ☐ Hazardous ☐ Liquid				
Site Type:	☐ Illegal Disposal ☐ Landfill ☒ Burn Ash Site ☐ Treatment Unit ☐ Codisposal				
Disposal Area (Acres):	UNKNOWN	SWP Date:	NONE	WDR Number:	NONE
Site Status:	CLOSED	Dates of Operations:	UNKNOWN		
Closure Approved By:	NONE				

LAND USES	w/in 1000 ft.		w/in 1 mi.		of waste boundary
	YES	NO	YES	NO	COMMENTS
Rural:	☐	☒	☐	☒	SITE IS LOCATED IN THE CLAIREMONT AREA OF CITY OF SAN DIEGO
Agricultural:	☐	☒	☐	☒	
Residential:	☒	☐	☒	☐	AREA IS SURROUNDED BY RESIDENTIAL UNITS. (APTS. AND SFRS)
Commercial:	☒	☐	☒	☐	GAS STATIONS
Industrial:	☐	☒	☐	☒	NONE IN THE AREA
Environmentally Sensitive:	☐	☐	☐	☐	UNKNOWN WITHIN 1 MILE
Water Supply Wells:	☐	☒	☐	☒	AREA IS SUPPLIED FROM CITY WATER.
Surface Water Bodies:	☒	☐	☒	☐	TECOLOTE CREEK TO EAST AND, AND MISSION BAY TO WEST
Inhabitable Structures:	☒	☐	☒	☐	RESIDENTIAL AND COMMERCIAL PROPERTIES
Enclosed Structures:	☒	☐	☒	☐	
Planned Improvements:	☐	☒	☐	☐	

OBSERVATIONS	
Surface Condition:	APPEARED OK. NO SURFACE SETTLEMENT AND NO EXPOSED WASTE
Landfill Gas:	NONE DETECTED
Leachate:	NONE OBSERVED
Other:	SCHOOL DISTRICT PARKING LOT APPEARS TO HAVE COVERED THE AREA THOUGHT TO BE THE BURN SITE. NO ASH WAS OBSERVED.
NO GAS MIGRATION WAS DETECTED AT THE TIME OF THIS INSPECTION. NO SETTLEMENT WAS OBSERVED.	

RECOMMENDATIONS			
Emergency Response:	NO		
Other Action(s):	REQUEST THE BOARD TO DISCONTINUE INSPECTION OF THIS UNVERIFIED SITE.		
Reassess Site? (Y/N/NA):	N	No Further Action? (D Priority Y/N):	N
Priority for Site Assessment (High/Med/Low):	LOW TO NONE		
Prepared By:	GINO YEKTA	Date:	6/19/97
CIWMB Approval (C&R Branch only):		Date:	

December 7, 1999

THE CITY OF SAN DIEGO

FILE COPY

FILE COPY

Mr. Gino Yekta
California Integrated Waste Management Board
Closure Branch
8800 Cal Center Drive
Sacramento, CA 95826

SUBJECT: CLAIREMONT HIGH SCHOOL BURNSITE, FACILITY # 37-CR-0015

Dear Mr. Yekta:

The City of San Diego Solid Waste Local Enforcement Agency (LEA) has completed the Site Identification Process (SIP) form for the above-referenced site. Copies of the SIP form and supporting documentation are enclosed for your review and consideration. After careful review of the documentation in our files and field investigations, the LEA is requesting that this site be archived by the California Integrated Waste Management Board based on the following facts:

1. Field investigations have not revealed any physical evidence to confirm the existence of burn ash at the site.

2. A record search conducted at the San Diego Historical Society and San Diego Regional Water Quality Control Board did not yield any documentation verifying site existence or site location.

The LEA will continue to investigate the history and disposition of the site as time allows.

Upon approval, please return a copy of the SIP form which indicates that the California Integrated Waste Management Board, Closure and Remediation Branch has reviewed and approved the form.

Should you have any questions with any of the above, please call me at (619) 446-5005.

Sincerely,

Rebecca Lafreniere

REBECCA LAFRENIERE, REHS
Environmental Health Specialist

Enclosure

cc: Mark Alpert, RWQCB

DIVERSITY BRINGS US ALL TOGETHER

Solid Waste Local Enforcement Agency (LEA) • Development Services
1222 First Avenue, MS 501 • San Diego, CA 92101-4155
Tel (619) 533-6242 Fax (619) 533-4562

SITE IDENTIFICATION FORM

(Attach additional description or explanation as needed)

Initial I.D. (Y/N):	Yes	Date of Field Visit:	October 25, 1999	Follow-up Investigation	No

SITE INFORMATION					
Site Name:	Clairemont High School Burnsite		AKA:		
SWIS #	37-CR-0015	County:	San Diego	APN:	Unverified
Location	6500 Block of Ute Drive, San Diego, CA 92117				
Land Owner(s):	San Diego City Schools				
Address:	4100 Normal Street, San Diego, CA 92103-2682				
Type of Waste:	☐ Inert ☐ Residential ☐ Commercial ☐ Industrial ☐ Hazardous ☐ Liquid				
Site Type:	☐ Illegal Disposal ☐ Landfill ■ Burn Ash Site (Alleged) ☐ Treatment Unit ☐				
Disposal Area	To be determined	SWP Date:	not applicable	WDR	not applicable
Site Status:	closed (?)		Dates of	Unknown	
Closure	Unable to secure documentation to verify if site ever operated..				

LAND USES	w/in 1000 ft.		w/in 1 mi.		of waste boundary
	YES	NO	YES	NO	COMMENTS
Rural;	☐	☐	☐	☐	To be determined.
Agricultural:	☐	☐	☐	☐	To be determined.
Residential:	☐	☐	☐	☐	To be determined.
Commercial:	☐	☐	☐	☐	To be determined.
Industrial:	☐	☐	☐	☐	To be determined.
Environmentally	☐	☐	☐	☐	To be determined.
Water Supply Wells:	☐	☐	☐	☐	To be determined.
Surface Water Bodies:	☐	☐	☐	☐	To be determined.
Inhabitable Structures:	☐	☐	☐	☐	To be determined.
Enclosed Structures:	☐	☐	☐	☐	To be determined.
Planned Improvements:	☐	☐	☐	☐	To be determined.

OBSERVATIONS	
Surface Condition:	To be determined. The site location is unverified.
Landfill Gas:	None expected, reportedly a burn ash site.
Leachate:	None expected, reportedly a burn ash site.
Other:	We have been unable to verify the site location. Investigations at the reported address have not revealed any
	burn ash. There is some minimal subsidence on Ute Road but could not verify cause. Could not locate any
	documentation to verify site existence or its location at RWQCB-San Diego Region or the San Diego Historical Society.

RECOMMENDATIONS			
Emergency Response:	No		
Other Action(s):	Archive file. No regular inspection frequency required. Continue to investigate as time allows.		
Reassess Site? (Y/N/NA):	Yes	No Further Action? (D Priority	
Priority for Site Assessment	Low		
Prepared By:	Rebecca Lafreniere / Richard Gilb	Date:	December 7, 1999
CIWMB Approval (C&R Branch only):		Date:	

Loc. 332

CLAIREMONT HIGH

California Integrated Waste Management Board

Dan Eaton, Chairman
8800 Cal Center Drive • Sacramento California 95826 • (916) 255-2200
www.ciwmb.ca.gov

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

FILE COPY

March 1, 2000

Rebecca Lafreniere, REHS
Solid Waste Local Enforcement Agency
Development Services Department
1222 First Avenue, MS 501
San Diego, CA 92101-4155

SUBJECT: TEMPORARY STATUS OF "NO INSPECTION FREQUENCY" FOR: CLAIREMONT HIGH SCHOOL BURNSITE - SWIS# 37-CR-0015

Dear Ms. Lafreniere:

The California Integrated Waste Management Board (Board) has received your request to "archive" the above site in our Solid Wastes Information System (SWIS) database. However, based on our discussion with you and the facts that 1) The site does exist; and 2) The exact location of the entire site has not yet been verified, the Board can only consider the above site for a "No Inspection Frequency" status. However, before we can proceed, we would ask that you please complete the section titled "Land Use" and submit a revised Site Identification Form to the Board. Meanwhile, based on a review of the supporting documents included with your submittal and conducting a site visit, the Board has determined that Clairemont High School Burnsite is assigned a "No Inspection Frequency" status.

Please note that this determination is valid until such time the site location is verified. The CIWMB recommends that the LEA continue to search to locate the site and to keep the CIWMB informed of any findings that would otherwise change the determination made above.

Please call me at (916) 255-1301 or Gino Yekta of my staff at (916) 255-1301 if you have questions.

Sincerely;

Michael B. Wochnick, P.E.
Closure and Remediation Branch, South
California Integrated Waste Management Board

Cc: Paul Manasjan, City of San Diego LEA
Gino Yekta, CIWMB

THE CITY OF SAN DIEGO

FILE COPY

March 10, 2000

Mr. Michael Wochnick, P.E.
California Integrated Waste Management Board
Closure and Remediation Branch, South
8800 Cal Center Drive
Sacramento, CA 95826

SUBJECT: CLAIREMONT HIGH SCHOOL BURNSITE TEMPORARY STATUS

Dear Mr. Wochnick:

The City of San Diego Solid Waste Local Enforcement Agency (LEA) received your March 1, 2000 letter regarding a "Temporary Status Of 'No Inspection Frequency' For Clairemont High School Burnsite - SWIS# 37-CR-0015". In this letter you identified two facts supporting the conclusion of a "No Inspection Frequency" for this site. Fact 1 is *erroneous*, the LEA has *not* been able to verify the existence of the Clairemont High School Burnsite. Investigation into the identification of the site location has not yielded any conclusive information. Investigative techniques utilized included evaluations of historical photographs, file reviews conducted at the San Diego Historical Society and Regional Water Quality Control Board. There is no physical evidence observed at the site to support or confirm the existence of burn ash. Therefore, the LEA is not able to amend its December 1999 Site Identification Form since there is no basis to indicate the site's location or if it ever really existed.

As documented in the December 7, 1999 cover letter submitted with the Clairemont High School Burnsite Site Identification Form, the LEA has not clearly identified the location of this site and requests that it be *archived* by the California Integrated Waste Management Board. The LEA will, as previously mentioned in the December 7th letter, continue to investigate the history and disposition of the site as time allows.

As previously mentioned in the March 8, 2000 correspondence to you regarding the Balboa Park Landfill, the LEA currently does not recognize, nor does it budget for, a zero inspection frequency in its CIWMB approved Enforcement Program Plan (EPP). If a zero inspection frequency is now a CIWMB policy, the LEA will consider its inclusion into its annual EPP update. The LEA is awaiting a written explanation for this policy which will assist us in supporting justification for budgeting a zero inspection frequency.

Please call me at (619) 446-5005 if you have any questions regarding this letter.

Sincerely,

Rebecca Lafreniere

Rebecca Lafreniere, REHS
Hazardous Materials Specialist

Paul Manasjan, MS, REHS
LEA Manager

cc: Gino Yekta, CIWMB

DIVERSITY BRINGS US ALL TOGETHER

Solid Waste Local Enforcement Agency (LEA) • Development Services
1222 First Avenue, MS 501 • San Diego, CA 92101-4155
Tel (619) 533-6242 Fax (619) 533-4562

THE CITY OF SAN DIEGO

March 13, 2000

FILE COPY

Mr. Glenn Gundert
San Diego City Schools
Maintenance and Operations Center
Architect's Office
4860 Ruffner Street
San Diego, CA 92111

Dear Mr. Gundert:

SUBJECT: EXISTING SCHOOL SITES AND HISTORIC SOLID WASTE DISPOSAL SITES

The City of San Diego Solid Waste Local Enforcement Agency (LEA) administers the laws and regulations regarding solid waste management and disposal within the jurisdictional boundaries of the City. Among other tasks, the LEA is required to investigate and inspect closed, illegal, or abandoned disposal sites. There is historical and/or public record information indicating that solid waste disposal activities occurred at four locations which are now occupied by San Diego City Schools (SDCS). These four locations are:

1) Sessions Elementary School -	2150 Beryl Street, San Diego, CA 92109
2) Webster Elementary School -	4801 Elm Street, San Diego, CA 92102
3) La Jolla High School -	750 Nautilus Street, San Diego, CA 92037
4) Clairemont High School -	4150 Ute Drive, San Diego, CA 92117

Pursuant to Section 44100 of the Public Resources Code (PRC), we request that SDCS provide any non-privileged technical reports or information regarding the grading and development and/or operation of these four schools sites which may indicate the current location(s) and condition(s) of any solid waste materials/residuals which may have been or still are on site. Such information includes, but is not limited to: property title records; grading plans; maps; aerial photographs; underground utility installation and/or maintenance records; landscape development and maintenance records; staff or public correspondence and/or complaints related to the surface exposure of waste materials, burn ash, (melted) glass fragments, or surface settlement. We further request you provide any similar information about historic solid waste disposal activities at any other sites (not listed above) previously or presently owned by SDCS.

Enclosed is a copy of the historical information on which we base our concern for the Sessions Elementary School, Webster Elementary School, and La Jolla High School sites, namely, a 1938 report to the San Diego City Planning Commission entitled "*Report on Refuse Dumps*." The following are excerpts from the *Report*:

DIVERSITY BRINGS US ALL TOGETHER

Solid Waste Local Enforcement Agency (LEA) • Development Services
1222 First Avenue, MS 501 • San Diego, CA 92101-4155
Tel (619) 533-6242 Fax (619) 533-4562

- Page 22 describes a one acre dump at the extension of Wilbur and Noyes Streets, the present location of Sessions Elementary School;
- Page 26 describes a 7 acre dump on the east side of Fairmount Avenue, 500 ft. north of Federal Boulevard, the present location of Webster Elementary School; and
- Page 24 describes a 100 ft. X 100 ft. dump at the southwest corner of Fay Avenue and Rushville Street, the present location of La Jolla High School.

Information on the Clairemont High School site is not well documented. The California Integrated Waste Management Board (CIWMB) has listed the site on the CIWMB Solid Waste Information System Database (SWIS; www.ciwmb.ca.gov/SWIS) as the "Clairemont High School Burn Site" (SWIS#: 37-CR-0015). Our files contain no information on any solid waste disposal activities that may have occurred at the site, other than the field notes of a San Diego County inspector who inspected the site in 1992 and who noted that the disposal site lies underneath the school, the basis for this conclusion is not clear. Site investigation by LEA staff have not revealed any physical evidence to confirm the existence of burn ash at the site.

Please call me before March 21, 2000, to discuss a time frame for providing the information, if any, requested above and to schedule individual site visits. We would like to visit each site to investigate surface conditions, and make a preliminary determination of the potential for immediate risk, if any, to public health and safety and the environment. Finally, please notify the LEA of any proposed construction, development, or land use changes at any of the four sites listed above, so that we can further evaluate potential public health and safety concerns.

If you have any questions or would like to discuss the matter further, please call me at (619) 446-5006.

Sincerely,

P. Manasjan

Paul Manasjan, MS, REHS
LEA Manager

Enclosures: (1)

cc (w/out enclosures): Gino Yekta, CIWMB
Mark Alpert, Regional Water Quality Control Board

California Integrated Waste Management Board

Dan Eaton, Chairman
8800 Cal Center Drive • Sacramento California 95826 • (916) 255-2200
www.ciwmb.ca.gov

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

FILE COPY

April 5, 2000

Ms. Rebecca Lafreniere
Solid Waste Local Enforcement Agency
City of San Diego
1222 First Avenue, MS 501
San Diego, California 92101-4155

SUBJECT: SITE STATUS FOR CLAIREMONT HIGH SCHOOL BURNSITE (37-CR-0015) AND BALBOA PARK LANDFILL (37-CR-0005)

Dear Ms. Lafreniere:

Pursuant to your letters of March 8 and 10, 2000, and our telephone conversation of March 14, 2000, California Integrated Waste Management Board (Board) Remediation, Closure, and Technical Services Branch staff have re-evaluated the information submitted concerning the Clairemont High School Burnsite and the Balboa Park Landfill and have reconsidered the appropriate site status for the two closed, illegal and abandoned (CIA) sites.

Regarding the Clairemont CIA site, it is our understanding that the San Diego City Solid Waste Local Enforcement Agency (LEA) staff have not been able to verify the existence of the site and are continuing to investigate the site but no conclusive information has been forthcoming. Therefore, Board staff would consider this site to be an "Unconfirmed" CIA site that would correspond to a zero inspection frequency requirement. This determination will be documented in the Board's Solid Waste Information System (SWIS) database. Upon verification of the existence, or nonexistence, of the site, the appropriate deposition of the site and inspection frequency will be modified at that time. Until such time, the LEA will not be required to inspect the site; however, as you reported the LEA will continue to research this site.

According to the submitted information, the location of the Balboa Park CIA site is known and that the only waste disposed at the site is inert waste materials. The LEA has determined that the site does not, and will not, pose a threat, or potential threat, to public health and safety and the environment. Based on this information, Board staff concur with the LEA's request that the site be 'archived' (i.e., the file for this site will be

closed). No further action (e.g., inspections) on this site is necessary or will be required. Board staff will make the necessary changes to the SWIS database.

Should you have any questions concerning the above matter, please contact Mr. Gino Yekta of my staff at (916) 255-1301 or me at (916) 255-1302.

Sincerely,

Michael B. Wochnick, Manager
Closure and Remediation Section
California Integrated Waste Management Board

OFFICE USE ONLY: 1-Update

off Clairemont near Balboa

File Key Number 14073

2

USE AS TOP SHEET

HAZARDOUS MATERIALS MANAGEMENT
PERMIT APPLICATION

If information at left is correct, skip to item #A3.

If corrections are necessary, complete #A1 and #A2.

SECTION A

A1. ESTABLISHMENT NAME: SD CITY SCHL - CLAIREMONT (7–36)

A2. MAILING ADDRESS
STREET NUMBER: 4100 (37–44)
STREET DIRECTION (N,S,E,W,NE,SW,ETC.): (45–46)
STREET NAME OR P.O. BOX NUMBER: NORMAL ST / D ADAMS (47–66)

CITY: SAN DIEGO (67–81)
STATE: CA (82–83)
ZIP CODE: 92103 (84–88)
BLDG/PLANT NO: (93–96)

A3. ESTABLISHMENT PHONE: (97–103)

A4. CONTACT PERSON: (104–123)

A5. ESTABLISHMENT ADDRESS (IF DIFFERENT FROM MAILING ADDRESS)
STREET NUMBER: 4150 (7–14)
STREET DIRECTION (N,S,E,W,NE,SW,ETC.): (15–16)
STREET NAME: UTE DR (17–36)

CITY: SAN DIEGO (37–51)
STATE: CA (52–53)
ZIP CODE: 92117 (54–58)
BLDG/PLANT NO: (63–66)

A6. OWNER NAME: (67–86)

A7. OWNER PHONE: (87–96)

A8. NAME OF PREVIOUS OWNER: (97–116)

A9. DATE YOU STARTED OR ASSUMED BUSINESS
MO DAY YR (117–122)

A10. REASON FOR APPLICATION (7)
1 = New
2 = Re-Open
3 = Change of Owner

A11. TOTAL NUMBER OF EMPLOYEES: (8–11)

A12. DO YOU HAVE PERMITS FOR ANY OF THE FOLLOWING:

	YES	NO	FOR OFFICE USE ONLY
AIR POLLUTION CONTROL DISTRICT	☐	☐	12–16
SEWER DISTRICT (FOR INDUSTRIAL WASTES)	☐	☐	17–22
HAZARDOUS WASTE FACILITY	☐	☐	23–34
HAZARDOUS WASTE HAULER REGISTRATION	☐	☐	35–38
REGIONAL WATER QUALITY CONTROL BOARD	☐	☐	39

SEE REVERSE SIDE

OFFICE USE ONLY

SIC 1	SIC 2	CENSUS TRACT	INC CODE	BUSINESS CODE	ANNUAL FEE	EXPIRATION DATE MO DAY
(52–55)	(56–59)	910120 (68–74)		K54 (75–77)	000 (78–83)	03/31 (84–87)

STATUS	FIRE	WATER	SEWER	
1 (88)	(89)	(91)	(93)	(95)

DHS:HMD-950 (12/82)

County of San Diego
Department of Health Services

EST. # A14073
P.C. # AT#1019

HAZARDOUS MATERIALS MANAGEMENT UNIT
ABANDONED UNDERGROUND TANK REPORT

☒ YES FIRE AGENCY ☐ NO
FIRE AGENCY PERMIT # 0199
JURISDICTION
PHONE
C.G.I. Dan

OF TANKS TO BE ABANDONED 1
SITE NAME/ADDRESS Clairemont High School 150 Ute PHONE 92117 ZIP
CONTRACTOR Reynolds PHONE

	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5
1. Tank ID #					
2. U/L #					
3. Capacity (Gallons)	6000				
4. Material Stored	Bottom 1				
5. Decontamination:					
Manifest Available?	Mud - 3/30/88 - 850 ppb				
6. Tank Inerting: (CGIRDS)	Yes				
Dry Ice/Nitrogen (Qty)	No				
7. Tank Condition (Holes)	good				
8. Condition of Back Fill & Type	Yes				
9. Condition of Native Soil/Type	No				
10. Odors From Excavation?	No				
11. Ponded Product?	No				
12. Ground Water Contamination	No				
13. Tank Closure in Place					
14. Pipeline Leak Evident?					
15. Reinspection Required?					
16. Reinspection Receipt Available?					

REMARKS: Kathy Williams-Woodward Clyde present. Art Shanks-present. Don Watsman-Fire Dept. Tank 30 yrs. old. Tank looks good. Still has much gas for only outside of tank. Hole appears clear. Tank going to American Metal Recycling.

NOTICE: You are hereby notified that on 3/30/88 Judy Chant, Hazardous Materials Specialist of County Department of Health Services, conducted an inspection for the removal and/or abandonment of underground storage tanks of hazardous substances. A summary of conditions found is noted as follows:

☒ No indication of soil or groundwater contamination apparent this date. Excavation may be backfilled.

☐ The conditions noted below must be reported and corrected in accordance with Chapters 6.5 and 6.7 of the California Health and Safety Code and Chapters 9 and 10 of the San Diego County Code.

☐ Hazardous substance/waste is ponded in the excavation. Immediately take steps to remove the ponded hazardous liquid from the excavation. This liquid is a hazardous waste that shall be properly transported, under manifest, by a licensed hazardous waste hauler to a licensed recycling or disposal facility.

☐ Contaminated soil and/or contaminated groundwater is suspected in the excavation. Determining the extent and impact of this contamination and completing any required clean-up is the responsibility of the tank owner/operator. Within 5 work days, the tank owner/operator or his agent must submit a written UNAUTHORIZED RELEASE REPORT to the Department of Health Services including all of the following information that is known at the time of filing the report:

a. Describe the type, quantity and concentration of the hazardous substance released.
b. Provide the results of all investigations completed at this time to determine the extent of soil, groundwater, or surface water contamination due to the release.
c. Describe the method of cleanup implemented to date, proposed cleanup actions, and approximate costs of actions taken to date.
d. Indicate the method and location of disposal of the released hazardous substance and any contaminated soils or groundwater or surface water. (If any contaminated soil/water is hauled off-site, include copies of the hazard waste manifests).
e. Include the tank operator's name and telephone number, the name and telephone number of any consultants retained, and a projection of proposed activity schedule.

Subsequent mitigation actions will be discussed upon review of the submitted Report and consultation with other appropriate agencies.

- REFER TO REVERSE SIDE FOR ADDITIONAL INFORMATION/REQUIREMENTS -

Received by Arthur C. Shanks
Phone (619) 293-8282

Judy Chant
Hazardous Materials Specialist Signature

County of San Diego
Department of Health Services
HMMU - 1700 Pacific Highway
San Diego, CA 92101-2489
(619) 236-2222

DHS:HM-9160 (11/86)

Field Observations and Notes:

1. Type of hazardous substance released: _____

2. Is hazardous substance ponded? _____ Estimated amount _____

3. Is amount of hazardous substance release known? _____ Estimated amount _____

4. Estimated depth to groundwater _____

5. Is there an existing or potential beneficial use of the groundwater identified in the Basin Plan? _____

6. Soil conditions:

   a. Is backfill discolored? _____ Estimated amount _____
   b. Is backfill saturated? _____ Estimated amount _____
   c. Is native soil discolored? _____ Estimated amount _____
   d. Is native soil saturated? _____ Estimated amount _____
   e. Type of native soil (sandy, clay, etc.) _____

7. Description of odors from excavation _____

8. Condition of tank (holes, corrosion, deteriorated wrapping, etc.) _____

   _____

9. Pipeline leak evident? _____

10. Nearby underground vaults or utilities or basements? (Specify) _____

11. Nearby water wells or surface waters? _____

12. Other comments/observations: _____

   _____

   _____

   _____

H14073

COUNTY OF SAN DIEGO
DEPARTMENT OF HEALTH SERVICES

UNDERGROUND HAZARDOUS MATERIALS STORAGE TANK FACILITY

PERMIT APPLICATION

PART I

GENERAL PROJECT INFORMATION

FOR HMMU USE: C 2501
Plan Check # AT1019
Date Received 10/12/87
Fee Paid 150
Plan Approval 11/3/87
Estab #
Hydro Unit 6.50
Benef. Use NONE

A. SITE ADDRESS: Clairemont High School, 4150 Ute Drive (Street) San Diego (City) 92117 (Zip Code)

B. PROPERTY OWNER:
Company San Diego Unified School District Contact Charles H. Johnson
Mailing Address 4100 Normal Street City San Diego Zip 92103
Phone (619) 293-8063
24 Hr. Emergency Contact Burris E. Reaves Phone (619) 293-8282

C. TANK OPERATOR:
Company same as Owner Contact
Mailing Address City Zip
Phone ( )
24 Hr. Emergency Contact Phone ( )

D. CONTRACTOR:
Primary Contractor William Reynolds Const. Contact Fred North
Mailing Address 7959 Lemon Grove Way City Lemon Grove Zip 92045
Phone (619) 589-8500
State Contractor License No. 501952
Worker's Compensation Insurance Company Travelers Phone (619) 692-1268

Check Here if Owner/Builder: [ ]

IMPORTANT: CONTACT THE DEPT. OF HEALTH SERVICES AT 236-2222 AT LEAST TWO WORKING DAYS BEFORE STARTING CONSTRUCTION TO SCHEDULE THE FIRST REQUIRED FIELD INSPECTION.

MOV 11/3/87

E. APPLICATION SUBMITTAL, PLAN APPROVAL, PERMIT ISSUANCE, AND REQUIRED INSPECTIONS:

Submit three (3) copies of this application package, including plan drawings, with the required fee to the Department of Health Services, Hazardous Materials Management Unit, Room 311, 1700 Pacific Highway, San Diego, CA 92101. Checks should be made payable to the County of San Diego.

A permit will be issued by the Department of Health Services (DHS) upon review and approval of the application and plans. The required fees must be submitted with the application package. Information in addition to that presented in this application package may be needed in order to obtain final approval. No work is to begin on the proposed project until a permit has been issued. The required inspections cannot be scheduled until a permit has been issued.

Once the permit has been issued, it is the permittee's responsibility to notify the DHS at least two (2) working days in advance to schedule each required inspection.

Construction stages at which inspections are required are indicated in each subpart of this application form (i.e., Part II, III and IV).

F. Indicate the Company/Person you wish to have our plan check comments directed to by circling the appropriate section letter above or if different enter below.

Mr. Steven R. Irvin, Woodward-Clyde Consultants

G. PROJECT WORK TO BE COMPLETED: Check Applicable Box	COMPLETE APPLICATION PARTS	FEE CODE (TABLE H.)	CODES FOR OFFICE USE ONLY
[ ] Installation/Construction of new tank(s) only (without removing/abandoning any existing tanks.)	I & II	1	NT
[ ] Removal/Destruction of existing tanks with installation of new tanks (tank replacement).	I, II & III	1 & 2	NR
[X] Removal/Destruction of existing tank(s) with no new tank installation.	I & III	2	AT
[ ] Removal only of one tank less than 1000 gallon with no new tank installation.	I & III	4	AT
[ ] Repiping of an existing tank facility.	I & II (Sections E thru N Only)	3	NM
[ ] Interior coating of an existing tank facility.	I & IV	1	NM

H. FEES: The fees shown below cover plan review and approval and the required field inspections. Use the appropriate Fee Code as determined in Section G above.

Fee Code

[1] Base fee for one tank ($372) Fee: $ _____

Fee for additional tanks ($102 each) Fee: $ _____

[2] Fee to abandon 1 tank ($156) Fee: $ 156

Fee for additional abandoned tanks ($78 each) Fee: $ _____

[3] Fee per Facility ($312) (Repipe Only) Fee: $ _____

[4] Fee to remove only one tank less than 1000 gallons ($65) Fee: $ _____

TOTAL FEE: $ 156

CASH _____ CHECK # 15-660514

I. PERMITS REQUIRED BY OTHER AGENCIES:

Application #'s:
Fire Dept. _____ APCD _____ Bldg. Dept. _____ Cal OSHA _____ Other _____

Provide copies of approved applications from other agencies requiring permits for this project.

- END OF PART I -

County of San Diego
Department of Health Services

UNDERGROUND HAZARDOUS MATERIALS STORAGE TANK FACILITY

PART III

APPLICATION FOR PERMIT TO ABANDON

Complete all sections of Part III. If information is not known or applicable please indicate on application.

A. Total number of tanks to be abandoned 1

B. Tank Information - Complete the following information for each tank to be abandoned. Attach additional sheets as necessary.

Tank Number (Label tanks on plot plan to correspond to application)		1	2	3	4
Tank Capacity (gallons)		6,000			
Date Tank Installed		1958			
Tank Composition (Steel, Fiberglass, Fiberglass Coated Steel, Concrete, etc.)		Black Steel			
Tank Manufacturer		Not Known			
Tank Presently in Use? (Yes-No)		No			
Materials Stored in Tank	Material:	Boiler Fuel			
	dates:	1958 to present	to	to	to
	Material:				
	dates:	to	to	to	to
Has Tank System Leaked? (Yes, No, Not Known)	Tank	Not Known			
	Piping	Not Known			
	Basis of determination (Inventory records, tank system testing/monitoring, environmental monitoring)				
Is any part of the system cathodically protected? (Yes-No-Not Known)					
	Tank	No			
	Piping Lines	No			
Piping materials		Not Known			

C. PREVIOUS OWNERS AND OPERATORS OF THE TANK(S):

Dates	Owner/Operator

D. Approximate depth to groundwater: Greater than 150 feet

Basis of Determination: local topography and published reports

E. Proposed method of abandonment: [x] Removal [ ] Destruction in place

NOTE: Removal of the tank(s) is the preferred method of abandonment. Destruction of the tank in place, for example, by filling with an inert substance, will only be considered in special cases upon submittal of additional information to determine the risks and hazards of contamination. Additional information required includes recent tank testing results, soils data, special site characteristics and approval from the local Fire Department.

F. Future use/disposal site of tank: Scrap metal

G. ATTACH A PLOT PLAN ON 8-1/2" x 11" paper showing the following:

1. Property Lines, Site Address, Scale, North Arrow
2. Location of 100 year flood plain, if applicable
3. Location of all existing and proposed structures
4. Location of all existing and proposed underground storage tank facilities
5. Location of underground tank(s) to be abandoned (number tanks to correspond to application)
6. Location of underground utility lines and vaults

H. REQUIRED INSPECTION - PERMIT TO ABANDON

A representative of the Department of Health Services (DHS) must be on site at the time the tank(s) is removed from the ground to evaluate the condition of the tank and the surrounding soil and/or groundwater. Any evidence of an unauthorized release of a hazardous material from the tank will require the submittal of additional information by the permittee to the DHS.

When a permit has been issued by the DHS to destroy a tank in place, the DHS will inspect to verify that the tank has been properly emptied and purged of all hazardous materials immediately prior to filling with an approved inert substance.

I. I declare that to the best of my knowledge and belief the statements and information provided are correct and true. I understand that information in addition to that provided above may be needed in order to obtain final approval by the Department of Health Services.

I understand that tests and procedures that may be required by other departments and agencies to demonstrate adequate site safety or suitability for future development (e.g., soil compaction testing) are in addition to the requirements of the Department of Health Services.

I will notify the Department of Health Services at least two working days (48 hours) before work is to begin in order to schedule the required inspections. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of San Diego.

Signature & Title Charles H. Johnson Director Facilities Services

Print Name Charles H. Johnson

Telephone (619) 293-8063 Date Sept. 1, 1987

CITY OF SAN DIEGO
FIRE DEPARTMENT
1222 FIRST AVENUE, SAN DIEGO, CA 92101
Phone 236-6495

PERMIT/APPL. NO. 17M88-0199

FIRE SURVEY / APPLICATION / PERMIT

INSTRUCTIONS: PLEASE PRINT OR TYPE REQUESTED INFORMATION. MAKE REMITTANCE PAYABLE TO CITY TREASURER, MAIL OR BRING IN PERSON TO SAN DIEGO FIRE DEPARTMENT.

OWNER

NAME (OR NAME OF BUSINESS): [illegible]

MAILING ADDRESS (NUMBER) (STREET): 4100 [illegible]

CITY: [illegible] | ZIP: [illegible] | TELEPHONE NO.: [illegible]

JOB ADDRESS

NAME (IF NOT OWNER): Charlemagne Hospital

ADDRESS (NUMBER) (STREET): 4100 [illegible]

CITY: San [illegible] | ZIP: [illegible] | TELEPHONE NO.: (619) 273-3201

STATEMENT: I hereby acknowledge that I have read this application; that the information given is correct; and that I am the owner, or the duly authorized agent of the owner. This application does not constitute a permit until all fees have been paid and it has been approved by the Chief or his Deputy. All permits or certificates issued shall be presumed to contain the proviso that the applicant, his agents and employees shall carry out the proposed activity in compliance with all laws and regulations applicable thereto, whether specified or not, and in complete accordance with approved plans and specifications. Any permit or certificate which purports to sanction a violation of any applicable law or regulation shall be void and any approval of plans and specifications in the issuance of such permit shall likewise be void. THE FEE IS NON-REFUNDABLE.

Ref: Ord. No. 11083 and 11084

SIGNATURE (OWNER OR AGENT): [illegible] | DATE SIGNED: [illegible]

PRINT NAME: Charles H. [illegible] | CITY BUSINESS #:

CODE	TYPE OF PERMIT REQUIRED	NO.	AMOUNT
211	[illegible]		N/C
	[illegible]		

THIS IS NOT A PERMIT TO OPERATE! CALL 533-4400 FOR INSPECTION PRIOR TO OPERATION

THIS IS NOT A PERMIT TO OPERATE! CALL 533-4400 FOR INSPECTION PRIOR TO OPERATION

THIS IS NOT A PERMIT TO OPERATE! CALL 533-4400 FOR INSPECTION PRIOR TO OPERATION

NOTE: THIS APPLICATION IS NOT A VALID PERMIT UNTIL SIGNED BY AUTHORIZED AGENT.

BATTALION:

FIRE CO.:

TOTAL FEE DUE NON REFUNDABLE: N/C

FUND	REV. ACCT.	AMOUNT
100	73551	
100	73552	
100		
100	73713	

FIRE PERMIT: Approved ☐ Denied ☐

BOND REQUIRED ☐ REC. NO.

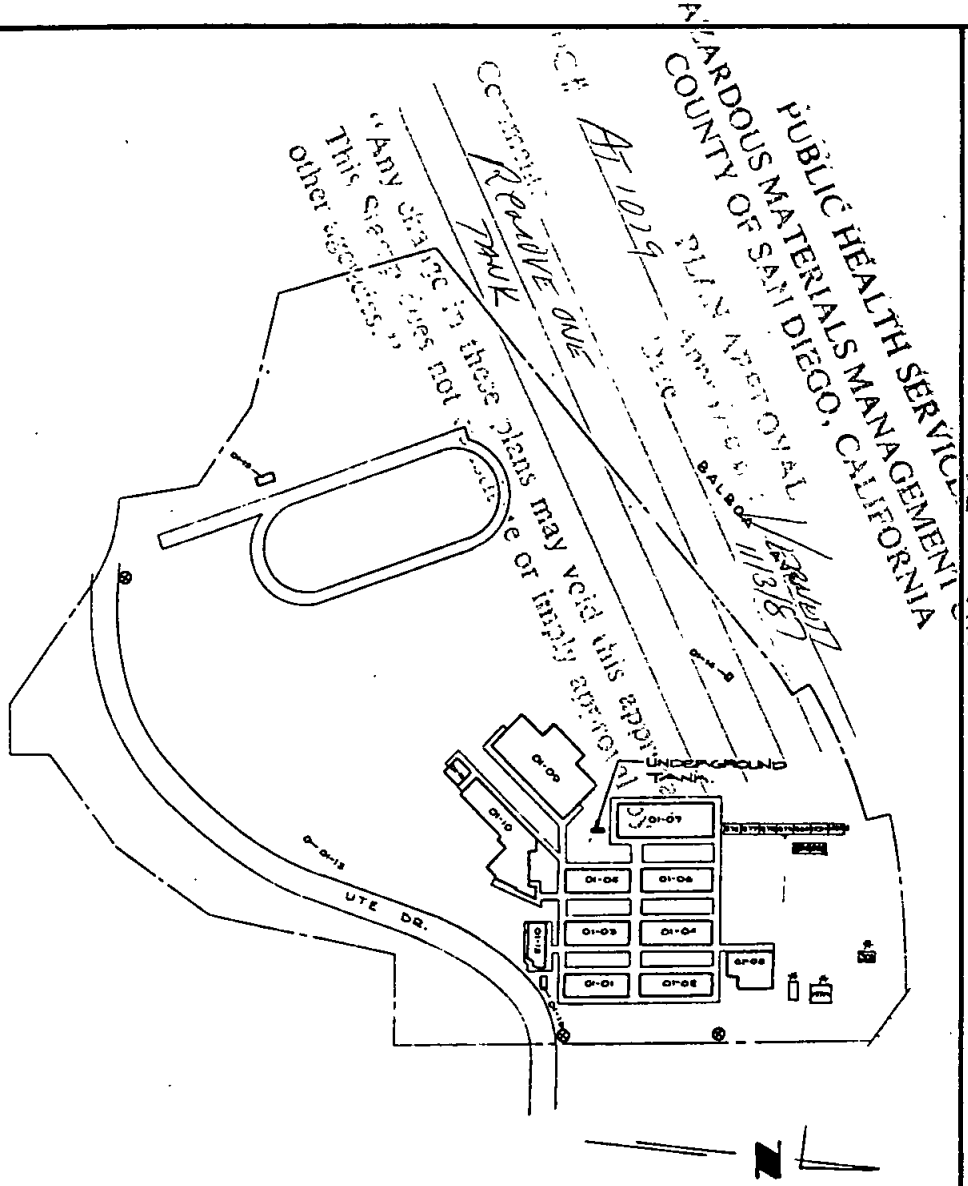
SIGNATURE OF INSPECTING DEPUTY:

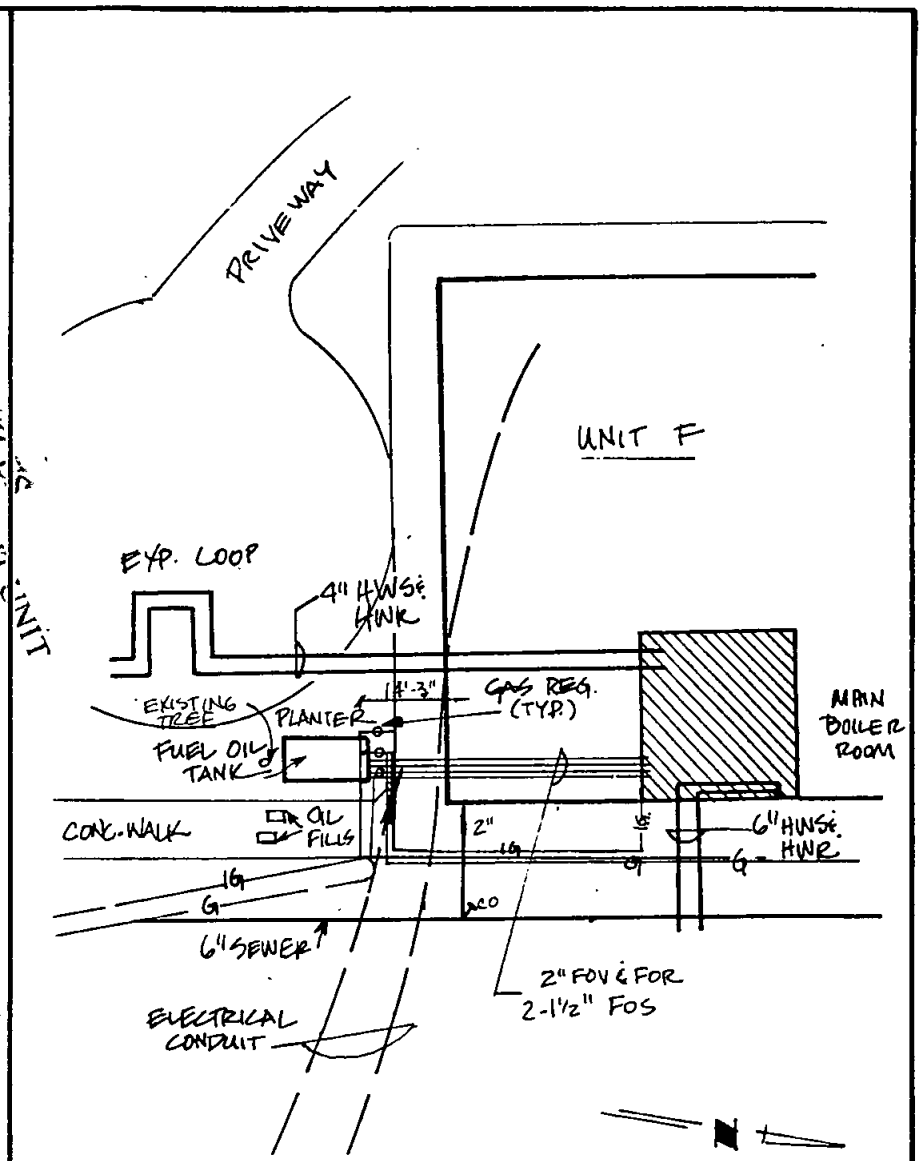
TITLE:

DATE OF INSPECTION	EXPIRATION DATE	UNIT NO.

DISTRIBUTION:
1 - WHITE: OFFICE FILE
2 - BLUE: SUSPENSE FILE
3 - YELLOW: INSPECTOR
4 - GREEN: PERMITTEE
5 - PINK: AUDITORS

FPB-213 (REV. 3-81)





NOTE: TANK REMOVAL MAY REQUIRE REMOVAL OF EXISTING TREE

CLAIREMONT HIGH SCHOOL
4150 UTE DRIVE - CLAIREMONT, CALIFORNIA 92117

DRAWN BY: ch	CHECKED BY: KJW	PROJECT NO: 8753103U-BD01	DATE: 6-12-87	FIGURE NO: 1

WOODWARD-CLYDE CONSULTANTS

SERVICES INVOICE

Social Security No. .....

September 1, 19 87

County of San Diego
NAME PRINT

To SAN DIEGO UNIFIED SCHOOL DISTRICT Dr.

Do Not Use This Space

Permit application fee for the
removal of existing underground
fuel oil tanks at Clairemont High School

Amount to be paid:

$156.00

80472529

Account to be charged:

332 XW 6128 8426

APPROVED FOR PAYMENT:

C. H. Johnson

SEND THREE COPIES TO ACCOUNTING DEPARTMENT

9/4/87

John E. Rubio
Asst. Supt., Bus. Svc. Div.

5-2M387-3

PURCHASE ORDER 47[illegible]529

SAN DIEGO CITY SCHOOLS

SD CS

VENDOR

COUNTY OF SAN DIEGO
AIR POLLUTION CONTROL DISTRICT
9150 CHESAPEAKE DR
SAN DIEGO CA 92123-1095

SHIP TO: 09/16/87

AS INDICATED

NO DELIVERIES AFTER 3:30 P.M.

DUE DATE	F.O.B	VIA	TERMS	BID NO.
AS REQD	DESTINATION SAN DIEGO	YOUR WAY	NET	1 SOURCE

ITEM		EXTENSION
01 A B	PERMIT APPLICATION FEE FOR THE REMOVAL OF EXISTING UNDERGROUND FUEL OIL TANKS AT CLAIREMONT HIGH SCHOOL	
TN	1 EA @ 156.00	156.00
C	NOTE TO ACCT'G - RAINES HAS INVOICE	
	TOTAL	156.00*

VENDOR ORIGINAL COPY

'87 SEP 18 A11:34

ACC PAY REC'D

INVOICE

INVOICE IN TRIPLICATE TO

Accounts Payable
4100 Normal Street
San Diego, CA
92103-2682

SHOW PURCHASE ORDER NUMBER ON ALL INVOICES

(619) 293-8211

CORRESPONDENCE

PURCHASE ORDER CORRESPONDENCE TO

Purchasing
2351 Cardinal Lane
San Diego, CA
92123-3799

SHOW PURCHASE ORDER NUMBER ON ALL CORRESPONDENCE

(619) 292-0641

– IMPORTANT –
SEE REVERSE SIDE FOR CONDITIONS

23963

REQ'N	F.Y.	BUYER	TELEPHONE
3108	87-88	WALKER	(619) 292-0641

ACCOUNT NUMBER 332-XW-6128-8426 ENC

CONDITIONS

(This section important and must be read by Vendor)

1. Payment on this order will be made only after all items appearing thereon have been received and accepted. Cash discounts will be computed from date of acceptance of completed order provided auditable invoices are then on file. Cash discounts of less than 20 days will be considered net. The District will not pay packing, crating, delivery or insurance charges, unless so stated.

2. When order states F.O.B. Destination, all transportation and delivery charges must be prepaid in full. When order states F.O.B. Shipping Point, all transportation and delivery charges must be prepaid in full and added to invoice. The District is exempt from paying tax on transportation. Invoice must be accompanied by original copy of receipted express or freight bill COLLECT SHIPMENTS WILL NOT BE ACCEPTED. For invoicing purposes the following conditions will prevail:

   A. Handling charges will be specified separately from transportation in order for the District to pay taxes.
   B. Tax will not be computed if shipping and handling are combined.

3. The Contractor shall maintain, or cause to be maintained, such insurance as will protect him and the District from Claims under Workmen's Compensation Acts, claims for damages for personal injury including claims under Workmen's Compensation Acts, and claims for damages for personal injury, including death, and damage to property, which may arise from operations under this Contract, whether such operations be by himself or by any subcontractor or anyone directly or indirectly employed by either of them. The Contractor agrees to save harmless and to indemnify the District from every claim or demand which may be made by reason of: (a) Any injury to person or property sustained by the Contractor or by any person, firm, or corporation, employed directly or indirectly by him upon or in connection with his work, however caused; and (b) Any injury to person or property sustained by any person, firm, or corporation, caused by any act, neglect, default, or omission of the Contractor or any person, firm or corporation directly, or indirectly employed by him upon or in connection with his work, whether the said injury or damage occurs upon or adjacent to the work; the Contractor at his own cost, expense and risk, shall defend any and all actions, suits, or other legal proceedings, that may be brought or instituted against the District on any such claim or demand, and pay or satisfy the judgment that may be rendered against the District in any such action, suit or legal proceedings or result thereof.

4. The Contractor shall hold the San Diego Unified School District, its officers, agents, servants and employees, harmless from liability of any nature or kind whatsoever, on account of use by the publisher or author, manufacturer or agent, of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used under this order.

5. Textbook Publisher's Obligations: Publisher shall comply with all obligations imposed upon the publisher by California Education Code Section 60061. Should the publisher willfully fail to comply with the obligations set forth in Section 60061, the District shall be entitled to recover damages from publisher pursuant to the provisions of Section 60061(g).

6. The Contractor shall not assign, transfer, convey, sublet, or otherwise dispose of this contract or any part thereof, or any rights accruing thereunder, title or interest therein, funds to be received hereunder, or any power to execute the same without the consent in writing of the Board of Education. Notice is hereby given that the District will not honor any assignment made by the Contractor unless the consent in writing, as indicated above, has been given.

7. Any equipment or material ordered on this purchase order must conform with safety orders, when applicable, of the California Division of Industrial Safety and to the requirements of CAL-OSHA and Title 8 of the California Administrative Code.

8. CHANGES. The District may make changes within the general scope of this order in drawings and specifications for specially manufactured supplies, place of delivery, method of shipment or packing of the order by giving notice to Seller and subsequently confirming such changes in writing. If such changes affect the cost of, or the time required for performance of this order, an equitable adjustment in the price or delivery or both shall be made. No change by Seller shall be recognized without written approval of the District Purchasing Department. Any claim of Seller for an adjustment under this Item must be made in writing within thirty (30) days from the date of receipt by Seller of notification of such change unless the District waives this condition. Nothing in this Item shall excuse Seller from proceeding with performance of the order as changed hereunder.

9. TERMINATION:

   A. The District may by written notice stating the extent and effective date, terminate this order for convenience in whole or in part, at any time. The District shall pay Seller as full compensation for performance until such termination: (1) The unit or pro rata order price for the delivered and accepted portion; and (2) a reasonable amount, not otherwise recoverable from other sources by Seller as approved by the District, with respect to the undelivered or unaccepted portion of this order; provided compensation hereunder shall in no event exceed the total order price.

   B. The District may by written notice terminate this order for Seller's default, in whole or in part, at any time, if Seller refuses or fails to comply with the provisions of this order, or so fails to make progress as to endanger performance and does not cure such failure within a reasonable period of time, or fails to make deliveries of the materials or supplies or perform the services within the time specified or any written extension thereof. In such event, the District may purchase or otherwise secure materials, supplies or services and, except as otherwise provided herein, Seller shall be liable to the District for any excess costs occasioned by District thereby.

      If, after notice of termination for default, the District determines that the Seller was not in default or that the failure to perform this order is due to causes beyond the control and without the fault or negligence of Seller (including, but not restricted to, acts of God or of the public enemy, acts of Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, and delays of a subcontractor or supplier due to such causes and without the fault or negligence of the subcontractor or supplier), termination shall be deemed for the convenience of the District, unless the District shall determine that the materials, supplies, or services covered by this order were obtainable from other sources in sufficient time to meet the required delivery schedule.

   C. If the District determines that Seller has been delayed in the work due to causes beyond the control and without the fault of negligence of Seller, the District may extend the time for completion of the work called for by this order, when promptly applied for in writing by Seller; and if such delay is due to failure of the District, not caused or contributed to by Seller, to perform services or deliver property in accordance with the terms of the order, the time and price of the order shall be subject to change under the Changes Article. Sole remedy of Seller in event of delay by failure of the District to perform shall, however, be limited to any money actually and necessarily expended in the work during the period of delay, solely by reason of the delay. No allowance will be made for anticipated profits.

   D. The rights and remedies of the District provided in this item shall not be exclusive and are in addition to any other rights and remedies provided by law or under this order.

   E. As used in this Item, the word "Seller" includes Seller and his subsupplier at any time.

10. TITLE. Title to the material and supplies purchased hereunder shall pass directly from Seller to the District at the f.o.b. point shown, subject to the right of the District to reject upon inspection.

11. DECLARED VALUATION OF SHIPMENTS. Except as otherwise provided on the face of this order, all shipments by Seller under this order for the District's account shall be made at the maximum declared value applicable to the lowest transportation rate or classification and the bill of lading shall so note.

COUNTY OF SAN DIEGO

5-2-96 R to DM

COMPLIANCE INSPECTION REPORT

EST NUMBER H 14073
DATE 5, 28, 96
PAGE 1 OF 2
BUS CODE K56
SPECIALIST P. Neubauer
CONTACT Carl Hiatt
TITLE BSS
PHONE 293-8117

BUSINESS NAME SDUSD Clairemont H.S.
ADDRESS 4150 Ute Dr.
CITY/ZIP San Diego 92117-5853

On the above date an inspection of your business/facility was conducted in order to determine compliance with the California Health and Safety Code (H&S) Chapters 6.5, 6.7, 6.95; Titles 19, 22 and 23 of the California Code of Regulations (CCR); and the San Diego County Code (SDCC). The following remarks are intended to provide guidance to correct the violations noted on the attached violation report.

JUN 14 1996

P:7/17/96

Office Use Only

Violations:

1. Observation: In the Graphic Arts classroom used photoprocessing chemicals are being discharged to the sanitary sewer.
Corrective action: Immediately cease and desist discharging hazardous waste to the sewer. Manage used fixer/developer has a hazardous waste.

2. Observation: The following Uniform hazardous waste Manifests are over 30 days old and are missing the TSDF signed manifest: 91005773, 95465589, 95466365, 95466008, 93448706 and 92085233.
Corrective action: Within 15 days obtain the TSDF signed manifest and keep onsite and available for review during inspections.

3. Observation: An updated Hazardous Material Business Plan / Emergency Contingency Plan not available. Delete P.N.
Corrective action: Within 30 days submit an updated plan to the HMMD.
updated plan onsite P.N.

Carl Hiatt
Signature of Business Representative

BSS IV
Title

Department of Environmental Health, Hazardous Materials Management Division, P.O. Box 85261, San Diego, CA, 92186-5261

(619) 338-2222

DEH:HM-924 (5/95) NCR

DISTRIBUTION: WHITE-RETURN TO HMMD
YELLOW-BUSINESS RETAINS

County of San Diego
Department of Environmental Health

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

EST. NUMBER H 14073
DATE 5 / 28 / 96
PAGE 2 OF 2

BUSINESS ADDRESS: 4150 Ute Dr. San Diego 92117-5853

VIOLATION REPORT: The items checked below refer to specific section numbers of Titles 19/22/23 of the California Code of Regulations (CCR), Chapters 6.5, 6.7, 6.95 of the Health and Safety Code (HSC), and/or the San Diego County Code (SDCC).

I HAZARDOUS WASTE REQUIREMENTS:

RECORD KEEPING

- [ ] Health Permit not obtained SDCC 68.905 — V0108 W____
- [ ] No EPA Identification Number 66262.12 — V0105 W____
- [ ] Waste Manifests/Receipts not on-site for 3 years 66262.40 — V0118 W____
- [ ] Manifest not properly completed 66262.23 — V0120 W____
- [ ] Manifest copy not sent to CAL-EPA 66262.23 — V0115 W____
- [X] TSDF signed-manifest not on-site 66262.40 — V0121 W____
- [ ] Biennial report not sent to CAL-EPA 66262.41 — V0122 W____
- [ ] LDR Documentation not available 66268.7 — V0123 W____
- [ ] Exception Rpt. not filed with CAL-EPA 66262.42 — V0116 W____
- [ ] Operating TSDF without authorization 25201 — V0124 W____

STORAGE AND HANDLING

- [ ] Waste stored longer than 90 days 66262.34 — V0221 W____
- [ ] Waste container missing/improperly labeled 66262.34 — V0222 W____
- [ ] Haz Materials not properly labeled 25124 — V0223 W____
- [ ] Waste container not kept closed 66265.173 — V0202 W____
- [ ] Waste container in poor condition 66265.171 — V0205 W____
- [ ] Waste container(s) not properly managed 66265.173 — V0210 W____
- [ ] Damaged container not repackaged 66265.171 — V0226 W____
- [ ] Container incompatible with waste 66265.172 — V0207 W____
- [ ] Incompatibles in the same container 66265.177 — V0224 W____
- [ ] Incompatibles not stored separately 66265.177 — V0213 W____
- [ ] Ignitible Wastes less than 50 feet 66265.176 — V0214 W____
- [ ] Ignitible Wastes not grounded 66265.31 — V0215 W____
- [ ] Storage area not inspected weekly 66265.174 — V0216 W____

DISPOSAL AND TRANSPORTATION

- [X] Unauth. disposal of waste to Sewer 25189.5 — V0313 W____
- [ ] Waste determination not made 66262.11 — V0319 W____
- [ ] Unlawful transport of haz. waste 25163 — V0315 W____
- [ ] Waste transported without manifest 66262.20 — V0316 W____
- [ ] No Extremely Haz. Waste Permit 67430.1 — V0317 W____

TRAINING, CONTINGENCY PLAN & EMERGENCY PROCEDURES

- [ ] Training records unavailable 66265.16 — V0405 W____
- [ ] Training program not adequate 66265.16 — V0406 W____
- [ ] Facility not designed to minimize release 66265.31 — V0501 W____
- [ ] Spill control equip not available 66265.32 — V0508 W____
- [ ] Aisle space is obstructed 66265.35 — V0509 W____
- [ ] Contingency plan not prepared and/or on file 66265.51, 66265.53 — V0609 W____

MISCELLANEOUS

- [ ] Waste oil contaminated 25250.7 — V0225 W____
- [ ] Used oil filters improperly managed 66266.130 — V0701 W____
- [ ] Damaged batteries improperly managed 66266.81 — V0702 W____

II UNDERGROUND STORAGE TANK (UST) REQUIREMENTS:

GENERAL UST REQUIREMENTS

- [ ] Health Permit not obtained 68.1005, 25284 — V3002 T____
- [ ] Repair/modify/close permit not obtained 68.1005 — V3007 T____
- [ ] UST Permit Application not submitted 25286(a) — V3010 T____
- [ ] Operating permit conditions violated 2712 — V3011 T____
- [ ] Failed to notify HMMD of changes 25284 — V3012 T____
- [ ] No owner/operator agreement 25293 — V3005 T____
- [ ] No records of financial coverage 25292.2 — V3013 T____
- [ ] No maint/monit/calib records available 2712(b), 2641i — V3001 T____

MONITORING REQUIREMENTS (SINGLE WALL)

- [ ] Leak Detection Method does not meet performance standards 2643 — V3014 T____
- [ ] Annual Integrity test not conducted 25292 — V3015 T____
- [ ] Copy of tank test not submitted to HMMD within 30 days 2643 — V3016 T____
- [ ] Manual tank gauging (<2000 gal) 2645 not done properly — V3017 T____
- [ ] Reconciliation not done properly 2646 — V3018 T____
- [ ] Reconciliation not approved for facility 2646 — V3019 T____
- [ ] Dispenser meter(s) not calib annually 2646 — V3020 T____
- [ ] Improper liquid measurements 2646 — V3021 T____
- [ ] Stick in poor condition 2646 — V3022 T____
- [ ] Improper monthly reconciliation 2646 — V3023 T____
- [ ] Failed to report excessive variation 2646 — V3024 T____
- [ ] Pressurized Product Piping Leak Device not tested annually 25292 — V3025 T____

MONITORING REQUIREMENTS (DOUBLE WALL)

- [ ] Monitoring system not functional 2632 — V3026 T____
- [ ] No written monitoring procedure 2632 — V3027 T____
- [ ] Written response plan not available 2632 — V3028 T____
- [ ] Spill/Overfill equip. not maintained or installed 2635 — V3029 T____

RELEASE REPORTING

- [ ] Failure to report an unauthorized release 25295 — V3009 T____
- [ ] Release record log not available 2651, 2650 — V3030 T____
- [ ] No leak report/investigation/action 2652 — V3031 T____

CLOSURE

- [ ] Temporary closure req. not completed 2671 — V3006 T____
- [ ] Abandoned tank not properly closed 25298 — V3032 T____
- [ ] Permanent closure req. not completed 2672 — V3033 T____

III HAZARDOUS MATERIALS BUSINESS PLAN REQUIREMENTS:

RECORD KEEPING

- [ ] Health Permit not obtained SDCC 68.1105 — V2001 W____
- [ ] Business Plan not established/implemented 25503.5 — V2002 W____
- [ ] Business Plan not submitted to HMMD 25505 — V2007 W____
- [X] Business Plan not amended 25505 — V2003 W____
- [ ] Personnel Training Records not available 2732 — V2302 W____

RELEASE REPORTING

- [ ] Failure to report a release/threatened release 25507 — V2008 W____

BUSINESS PLAN ELEMENTS

- [ ] Emergency Response Plan inadequate 25504 — V2201 W____
- [ ] Emergency Contacts not provided/current 25509 — V2203 W____
- [ ] Personnel Training Program inadequate 25504 — V2301 W____
- [ ] Inventory is incomplete 25504 — V2005 W____
- [ ] Site Map is not sufficient 25509 — V2202 W____
- [ ] Acutely Haz. Mat. not registered 25533 — V2009 W____

An inspection summary report will be mailed shortly. All violations must be corrected. Please call (619) 338-2222 if you have any questions.

ESTABLISHMENT REPRESENTATIVE: [signature]

TITLE: BSS IV

Department of Environmental Health, Hazardous Materials Management Division, P. O. Box 85261, San Diego, CA 92186-5261

DISTRIBUTION: WHITE-RETURN TO HMMD
YELLOW-BUSINESS RETAINS

DEH:HM-923 (Rev. 1/95) NCR

File
H14073

SAN DIEGO CITY SCHOOLS

EDUCATION CENTER • 4100 Normal Street, San Diego, CA 92103-2682 • Phone (619) 627-7345 Fax (619) 627-7353

BUSINESS SERVICES DIVISION
Risk Management Department
Revere Center

Pete Nielsen

MEMO TO: Carl Hyatt, Clairemont High School

FROM: John Baker, Safety Office JB

DATE: June 19, 1996

SUBJECT: COUNTY OF SAN DIEGO HAZARDOUS MATERIALS INSPECTION

This memo serves as a follow-up to compliance inspection conducted on May 28, 1996; report attached. There were three violations noted:

Violation #1
Graphic Arts Dept.
Unauthorized disposal of waste to sewer, photofixer, H&S 25189.5.
Follow-up: Safety Office will send a memo to all sites to correct this violation.
Action: No Further action is needed.

Violation #2
General
TSDF signed manifests not on site 66262.40.
Follow-up: Safety Office will send the TSDF signed manifests to the site.
Action: No Further action is needed.

Violation #3 General Violation
Business plan not amended 25505.
Location: N/A
Follow-up: The Safety Office has requested written clarification from HMMD to determine whether or not this requirement is applicable to the school district. I will continue to keep you informed on this matter.
Action: No action is recommended pending clarification from HMMD.

Should you have any questions regarding this matter, I can be contacted at 627-7350.

JB
Enc.

DATE 12/1/99

M. Bake 12-1-99

2

OFFICE USE ONLY
H 14673

MEDICAL WASTE MANAGEMENT PLAN

Business Name: SDUSD - Clairemont High School

Type of Business/ Practice: School

Site Address: 4150 Ute Dr. San Diego Zip: _____ Phone# 858-273-0201

Contact Person: Carl Hiatt Title: Plant Operations Supervisor

24 Hour Emergency Phone #( )

GENERATION AND STORAGE OF BIOHAZARDOUS WASTE:

Describe below the type and quantity of biohazardous waste generated and managed at this facility. **SEE SAMPLE PLAN AND ATTACHMENT FOR DEFINITION OF TERMS USED IN THIS PLAN**

MEDICAL WASTE TYPE	QUANTITY (lbs/month)	STORAGE (container type)	TREATMENT METHOD	ON-SITE	OFF-SITE	HAULER NAME*
BIOHAZARDOUS WASTE **Sharp Waste** Needles/syringes/slides	1 lb	Red Sharps Container	Autoclave		X	BFI
Non-sharp Waste Articles containing Fluid Blood (gauze, bandages, tubing, etc.)	NA					
Solids (cultures, lab waste, etc.)	NA					
Liquids (cultures, urine, etc.)	NA					
Trace chemotherapy waste	NA					
Contaminated animal carcasses	NA					
Other	NA					
MEDICAL SOLID WASTE Gloves, empty specimen containers, gauze with dry blood, treated biohazardous waste	N/A	Regular Trash Bags	N/A	N/A	N/A	Regular Trash Hauler

*** If applicable, attach a copy of biohazardous waste hauler contract or Limited Quantity Hauler exemption.**

Biohazardous WASTE STORAGE LOCATION: [Please check the appropriate box(es)].

Biohazardous Waste: [X] Inside establishment in secured area [ ] Outside in posted, secure area

Medical Solid Waste: [X] Inside establishment [ ] Outside in Locked/secured dumpster

PERSONNEL TRAINING:

All personnel handling biohazardous waste have been trained in all aspects of this management plan. Training includes the legal definition of biohazardous waste, separation and proper storage, transportation, treatment, and disposal of biohazardous waste. Documentation for completed employee training will be kept onsite.

CERTIFICATION STATEMENT:

I certify that the above management plan is complete and accurate, and that this business will adhere to all aspects of the plan. I further understand that any violation of this plan or any applicable law or regulation may result in legal action.

SIGNATURE OF RESPONSIBLE PERSON — TITLE: PLANT OPERATIONS SUPERVISOR

NAME OF RESPONSIBLE PERSON (please print or type) — DATE: 12/1/99

DISTRIBUTION: WHITE - RETURN TO HMMD
YELLOW - BUSINESS RETAINS

COUNTY OF SAN DIEGO

5-11-98 R. Pohle

EST. NO. H 14073
DATE 5-6-98
TIME START 8:30 END 11:15
BUS. CODE K56
SPECIALIST P. Neubauer
CONTACT Carl Hiatt
TITLE BSS IV
PHONE 273-0201

COMPLIANCE INSPECTION REPORT

BUSINESS NAME SDUSD Clairemont High School
ADDRESS 4150 Ute Drive
CITY/ZIP San Diego 92117-5853

On the above date an inspection of your business/facility was conducted in order to determine compliance with the California Health and Safety Code (H&S) Chapters 6.5, 6.7, 6.95; Titles 19, 22 and 23 of the California Code of Regulations (CCR); and the San Diego County Code (SDCC). The following remarks are intended to provide guidance to correct the violations noted on the attached violation report.

Office Use Only

MAY 18 1998

5/28/98

Violations:

1. Observation: Training has been conducted for custodial staff on May 1, 1998. No training documentation available for Science, Auto shop and graphic arts teachers.
Corrective action: Conduct training for all staff handling and/or storing hazardous materials/wastes. Refer to the Business Plan for specific topics.

2. Observation: Hazardous Material Business Plan has not been updated.
Corrective action: Within 15 days mail an updated Plan attn: Peter Neubauer at the address below.

Remarks:

3. Unused chemicals are being stored in the Chemistry Prep. room (314) and preserved animals in formaldehyde at the North end of building 300.
Science teachers at the time of ~~affected~~ inspection requested unused chemicals and specimens be disposed of.
Recommend contacting the Science teachers and coordinating a clean-out of any unused material.

Carl Hiatt 5/6/98 BSS IV
Signature of Business Representative — Date Signed — Title

Department of Environmental Health, Hazardous Materials Management Division, P.O. Box 129261, San Diego, CA, 92112-9261

(619) 338-2222

DEH:HM-924 (Rev. 2/98) NCR

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County of San Diego
Department of Environmental Health

COUNTY OF SAN DIEGO

SUPPLEMENTAL INSPECTION REPORT

EST. NUMBER H 14073
DATE 5 / 6 / 98
PAGE 2 OF 3

Office Use Only

BUSINESS ADDRESS: 4150 Ute Dr. San Diego ZIP CODE: 92117

4. At the autoshop the secoundary containment used for used motor oil storage is approximately 1/2 full of water and used oil. Remove liquid from containment and keep clean and dry. Manage used motor oil has a hazardous waste.

Carol Hiatt 5/6/98 BSS IV

Signature of Business Representative | Date Signed | Title

Department of Environmental Health, Hazardous Materials Management Division, P.O. Box 85261, San Diego, CA, 92186-5261

(619) 338-2222

DISTRIBUTION: WHITE-RETURN TO HMMD
YELLOW-BUSINESS RETAINS

DEH:HM-9110 (3/96) NCR

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

EST. NUMBER H 14073

DATE 5 / 6 / 98

PAGE 3 OF 3

BUSINESS ADDRESS: 4150 Ute Drive San Diego 92117

VIOLATION REPORT: The items checked below refer to specific section numbers of Titles 19/22/23 of the California Code of Regulations (CCR), Chapters 6.5, 6.7, 6.95 of the Health and Safety Code (HSC), and/or the San Diego County Code (SDCC).

I HAZARDOUS WASTE REQUIREMENTS:

RECORD KEEPING

- [ ] Health Permit not obtained SDCC 68.905 — V0108 W____
- [ ] No EPA Identification Number 66262.12 — V0105 W____
- [ ] Waste Manifests/Receipts not on-site for 3 years 66262.40 — V0118 W____
- [ ] Manifest not properly completed 66262.23 — V0120 W____
- [ ] Manifest copy not sent to DTSC 66262.23 — V0115 W____
- [ ] TSDF signed-manifest not on-site 66262.40 — V0121 W____
- [ ] Biennial report not sent to DTSC 66262.41 — V0122 W____
- [ ] LDR Documentation not available 66268.7 — V0123 W____
- [ ] Exception Rpt. not filed with DTSC 66262.42 — V0116 W____
- [ ] Operating TSDF without authorization 25201 — V0124 W____

STORAGE AND HANDLING

- [ ] Waste stored longer than 90, 180, or 270 days 66262.34 — V0221 W____
- [ ] Failure to clean up hazwaste off of floor surface 66262.10b — V0313 W____
- [ ] Waste container missing/improperly labeled 66262.34 — V0222 W____
- [ ] Haz Materials not properly labeled 25124 — V0223 W____
- [ ] Waste container not kept closed 66265.173 — V0202 W____
- [ ] Waste container in poor condition 66265.171 — V0205 W____
- [ ] Waste container(s) not properly managed 66265.173 — V0210 W____
- [ ] Damaged container not repackaged 66265.171 — V0226 W____
- [ ] Container incompatible with waste 66265.172 — V0207 W____
- [ ] Incompatibles in the same container 66265.177 — V0224 W____
- [ ] Incompatibles not stored separately 66265.177 — V0213 W____
- [ ] Ignitible Waste less than 50 feet 66265.176 — V0214 W____
- [ ] Ignitible Waste not grounded 66265.31 — V0215 W____
- [ ] Storage area not inspected weekly 66265.174 — V0216 W____

DISPOSAL AND TRANSPORTATION

- [ ] Unauth. disposal of waste to _____ 25189.5 — V0313 W____
- [ ] Waste determination not made 66262.11 — V0319 W____
- [ ] Unlawful transport of haz. waste 25163 — V0315 W____
- [ ] Waste transported without manifest 66262.20 — V0316 W____
- [ ] Extremely Haz Waste Permit not obtained 25205.7 — V0317 W____

TRAINING, CONTINGENCY PLAN & EMERGENCY PROCEDURES

- 1 [X] Training records unavailable 66265.16 — V0405 W____
- [ ] Training program not adequate 66265.16 — V0406 W____
- [ ] Facility not designed to minimize release 66265.31 — V0501 W____
- [ ] Spill control equip not available 66265.32 — V0508 W____
- [ ] Aisle space is obstructed 66265.35 — V0509 W____
- [ ] Contingency plan not prepared and/or on file 66265.51, 66265.53 — V0609 W____

MISCELLANEOUS

- [ ] Waste oil contaminated 25250.7 — V0225 W____
- [ ] Used oil filters improperly managed 66266.130 — V0701 W____
- [ ] Damaged batteries improperly managed 66266.81 — V0702 W____
- [ ] Facility has failed to notify local CUPA and DTSC of onsite treatment of hazardous waste (tiered pemitting) — V0125 W____
- [ ] Onsite treatment of waste without authorization 25201 — V0125 W____

II UNDERGROUND STORAGE TANK (UST) REQUIREMENTS:

GENERAL UST REQUIREMENTS

- [ ] Health Permit not obtained 68.1005, 25284 — V3002 T____
- [ ] Repair/modify/close permit not obtained 68.1005 — V3007 T____
- [ ] UST Permit Application not submitted 25286(a) — V3010 T____
- [ ] Operating permit conditions violated 2712 — V3011 T____
- [ ] Failed to notify HMMD of changes 25284 — V3012 T____
- [ ] No owner/operator agreement 25284 — V3005 T____
- [ ] No records of financial coverage 25292.2 — V3013 T____
- [ ] No maint/monit/calib records available 2712(b), 2641(j) — V3001 T____
- [ ] Monitoring Equip. not tested annually 2630, 2641 — V3003 T____

MONITORING REQUIREMENTS (SINGLE WALL)

- [ ] Leak Detection Method does not meet performance standards 2643 — V3014 T____
- [ ] Integrity test not conducted 25292 — V3015 T____
- [ ] Copy of tank test not submitted to HMMD within 30 days 2643 — V3016 T____
- [ ] Manual tank gauging (<2000 gal) 2645 not done properly — V3017 T____
- [ ] Reconciliation not done properly 2646 — V3018 T____
- [ ] Reconciliation not approved for facility 2646 — V3019 T____
- [ ] Dispenser meter(s) not calib annually 2646 — V3020 T____
- [ ] Improper liquid measurements 2646 — V3021 T____
- [ ] Stick in poor condition 2646 — V3022 T____
- [ ] Improper monthly reconciliation 2646 — V3023 T____
- [ ] Failed to report excessive variation 2646 — V3024 T____
- [ ] Pressurized Product Piping Leak Device not tested annually 25292 — V3025 T____
- [ ] No written monitoring procedure 2641 — V3027 T____
- [ ] No written emergency response plan 2641 — V3027 T____
- [ ] SIR reporting incorrectly done 2646.1 — V3004 T____

MONITORING REQUIREMENTS (DOUBLE WALL)

- [ ] Monitoring system not functional 2632 — V3026 T____
- [ ] No written monitoring procedure 2632 — V3027 T____
- [ ] Written emergency response plan not available 2632 — V3028 T____
- [ ] Spill/Overfill equip. not maintained or installed 2635 — V3029 T____

RELEASE REPORTING

- [ ] Failure to report an unauthorized release 25295 — V3009 T____
- [ ] Release record log not available 2651, 2650 — V3030 T____
- [ ] No leak report/investigation/action 2652 — V3031 T____

CLOSURE

- [ ] Temporary closure req. not completed 2671 — V3006 T____
- [ ] Unused tank not properly closed 25298 — V3032 T____
- [ ] Permanent closure req. not completed 2672 — V3033 T____
- [ ] Failed to apply for temporary closure 25298 — V3008 T____

III HAZARDOUS MATERIALS BUSINESS PLAN REQUIREMENTS:

RECORD KEEPING

- [ ] Health Permit not obtained SDCC 68.1105 — V2001 W____
- [ ] Business Plan not established/implemented 25503.5 — V2002 W____
- [ ] Business Plan not submitted to HMMD 25505 — V2007 W____
- N [X] Business Plan not amended 25505 — V2003 W____
- [ ] Personnel Training Records not available 19 CCR 2732 — V2302 W____

RELEASE REPORTING

- [ ] Failure to report a release/threatened release 25507 — V2008 W____

BUSINESS PLAN ELEMENTS

- [ ] Emergency Response Plan inadequate 25504 — V2201 W____
- [ ] Emergency Contacts not provided/current 25509 — V2203 W____
- [ ] Personnel Training Program inadequate 25504 — V2301 W____
- [ ] Inventory is incomplete 25504 — V2005 W____
- [ ] Site Map is not sufficient 25509 — V2202 W____
- [ ] Acutely Haz. Mat. not registered 25533 — V2009 W____

ALL VIOLATIONS MUST BE CORRECTED. PLEASE CALL (619) 338-2222 OR YOUR INSPECTOR IF YOU HAVE ANY QUESTIONS.

ESTABLISHMENT REPRESENTATIVE	DATE SIGNED	TITLE
[signature]	5/6/98	[signature]

Department of Environmental Health, Hazardous Materials Management Division, P. O. Box 129261, San Diego, CA 92112-9261

DISTRIBUTION: WHITE-RETURN TO HMMD
YELLOW-BUSINESS RETAINS

DEH:HM-923 (Rev. 1/98) NCR

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

PAGE 1 OF 3
EST. NO. H 14073
DATE 12-1-99
TIME START 11:15 END 1:00
BUS. CODE K56
SPECIALIST Mike Burke
CONTACT Carl Hight
TITLE Plant Operations Supervisor
PHONE 858-273-0261
Processed 1/12/00 by [illegible]

BUSINESS NAME SDUSD - Clairemont High School
ADDRESS 4150 Ute Dr
CITY/ZIP San Diego, Ca 92117

On the above date, an inspection of your business/facility was conducted in order to determine compliance with the California Health and Safety Code (H&S) Chapters 6.5, 6.7, 6.95; Titles 19, 22 and 23 of the California Code of Regulations (CCR); and the San Diego County Code (SDCC). The following remarks are intended to provide guidance to correct the violations noted on the attached violation report.

Office Use Only

Routine Inspection :

DEC 30 1999

(1) A current Health Permit was observed onsite.

(2) A Business Plan was observed onsite and complete.

(3) A Medical Waste Management Plan was observed onsite.

(4) Observed biohazardous and hazardous waste disposal documentation onsite.

(5) Observed used oil containers not labeled properly. Provide hazardous waste labels for all used oil drums.

(6) Observed photo processing waste is not collected and disposed of properly.
Start collecting the used fixer and store in a properly labeled container. Dispose of the waste properly and maintain copies of the manifest onsite.

[signature] 12/1/99 PLANT OPERATIONS SUPERVISOR
Signature of Business Representative / Date Signed / Title

Department of Environmental Health, Hazardous Materials Division, P.O. Box 129261, San Diego, CA 92112-9261; (619) 338-2222

DEH:HM-924 (Rev. 2/99) NCR

DISTRIBUTION: WHITE- RETURN TO HMD
YELLOW-BUSINESS RETAINS

County of San Diego
Department of Environmental Health

COUNTY OF SAN DIEGO

EST. NUMBER H 14073
DATE 12-1-99
PAGE 2 OF 3

MEDICAL WASTE GENERATOR REQUIREMENTS

BUSINESS ADDRESS: 4150 Ute Dr San Diego, Ca ZIP: 92117

VIOLATION REPORT: *The items checked below refer to specific section numbers of the California Health and Safety Code Sections 25100 and 117600 et. al.; the San Diego County Code of Regulatory Ordinances Sections 68.1201 et. al.; and the California Code of Regulations, Title 22 Sections 65600 et. al. and 66262.10 et. al.* **All violations must be corrected. Please call (619) 338-2222 or your Inspector if you have any questions.**

GENERAL REQUIREMENTS:

[ ] An Environmental Health Permit as a medical waste generator has not been obtained. 68.1203, 68.1204, and 117705 ..... V4101 W____
[ ] Unlawful disposal of untreated medical waste to an unauthorized point. 118340 ..... V4102 W____
[ ] Improper treatment of medical waste using an unapproved method or procedure. 118215 ..... V4103 W____
[ ] Medical SOLID WASTE is not stored in a locked trash receptacle or enclosure so as to deny access to unauthorized persons. 68.1202 ..... V4104 W____
[ ] Improper clipping or cutting of sharps waste at the point of generation. 68.1205 ..... V4105 W____
[ ] Medical waste was not separated from other waste at the point of origin. 118275 ..... V4106 W____
[ ] Generator has not maintained reusable containers/bins for medical waste storage in a clean and sanitary manner. 118295 and 118305 ..... V4107 W____
[ ] Storage time exceeded for frozen medical waste, e.g. greater than 90 days. 118280 ..... V4108 W____
[ ] Generator did not clean-up a leak or spill of medical waste in an approved manner. 118300 ..... V4109 W____
[ ] Generator has not secured the enclosure or designated accumulation area for medical waste containers so as to deny access to unauthorized persons. 118310 ..... V4110 W____
[ ] Operator did not post an approved and legible biohazardous waste "warning sign" in English and Spanish at the waste storage area(s). 118310 ..... V4111 W____
[ ] Generator did not store medical waste in approved and properly marked red bags (non-sharps). 118275 ..... V4112 W____
[ ] Did not place a label with the generator's name, address, and phone number on the outside of the red bag and/or sharps container. 68.1201 and 68.1205 ..... V4113 W____
[ ] Generator did not store sharps waste in approved and properly marked sharps container. 118275 ..... V4114 W____
[ ] Transportation of medical waste without State Hauler Registration or without a limited-quantity hauling exemption from County HMMD. 118025 ..... V4115 W____
[ ] Generator did not have standardized written operating procedures for a steam sterilizer available onsite. 118215 ..... V4116 W____
[ ] Did not have recording thermometer checked for calibration annually. 118215 ..... V4117 W____
[ ] Generator did not maintain records of thermometer calibration checks for at least 3 years. 118215 ..... V4118 W____
[ ] Operator did not use heat-sensitive tape or other approved method for each load of medical waste treated onsite. 118215 . V4119 W____
[ ] Need to use a biological indicator or other approved method at least once a month to confirm proper disinfection conditions. 118215 ..... V4120 W____
[ ] Must tie-off red bags to prevent leakage or expulsion of contents during handling and storage. 118280 ..... V4121 W____
[ ] Did not containerize and place red bags in rigid, leak resistant, and covered containers or bins. 118280 ..... V4122 W____
[ ] Must have waste container/bin labeled on the lid and side so as to be clearly visible. 118280 ..... V4123 W____
[ ] Did not tape closed or tightly-lid a full sharps container ready for disposal, to preclude loss of contents. 118285 ..... V4124 W____

SMALL QUANTITY GENERATOR REQUIREMENTS:
(<200 pounds per month of waste)

[ ] Medical Waste Management Plan has not been submitted to County HMMD (Annual Requirement) 68.1206 and 117935 .. V4025 W____
[ ] Must maintain and show proof of "onsite" medical waste treatment records for 3 years. 118215 and 117943 ..... V4026 W____
[ ] Generator did not retain on file disposal receipts and/or tracking documents for waste shipped offsite for at least 2 years. 117945 ..... V4027 W____
[ ] Need to apply for and receive a limited-quantity hauling exemption for "self-hauled" medical waste (<20 pounds of waste per week). 118030 and 118025 ..... V4028 W____
[ ] Did not renew a limited-quantity hauling exemption annually. 118030 ..... V4029 W____
[ ] Storage time exceeded for full sharps container(s), e.g. greater than 7 days at room temperatures (for >20 pounds/month generator). 118285 ..... V4030 W____
[ ] Storage time exceeded for red bag waste, e.g..more than 7 days at room temperature (>20 pounds/month generator). 118280 . V4031 W____
[ ] Very small quantity generator (e.g..<20 pounds per month) improperly storing waste for greater than 30 days onsite at room temperature. 118280 ..... V4032 W____
[ ] Maximum holding time exceeded for non-putrescible medical waste, e.g. greater than 180 days. 68.1203 ..... V4033 W____

LARGE QUANTITY WASTE GENERATORS:
(≥ 200 pounds of waste in a month)

[ ] Medical Waste Management Plan has not been submitted to County HMMD (Annual Requirement) . 117960 and 68.1206 . V4034 W____
[ ] Must maintain and show proof of "onsite" medical waste treatment records for 3 years. 118215 and 117975 ..... V4035 W____
[ ] Generator did not retain on file disposal receipts and/or tracking documents for waste shipped offsite for at least 3 years. 117975 ..... V4036 W____
[ ] Storage time exceeded for full sharps container(s), e.g. greater than 7 days at room temperature. 118285 ..... V4037 W____
[ ] Storage time exceeded for red bag waste, e.g. more than 7 days at room temperature. 118280 ..... V4038 W____

PATHOLOGY WASTE AND CHEMOTHERAPY WASTE HANDLING:

[ ] Did not segregate chemotherapy waste from other medical waste. 118275 ..... V4039 W____
[ ] Generator did not label container holding chemotherapy waste with the words "chemotherapy waste" or other approved markings on the lid and sides. 118275 ..... V4040 W____
[ ] Did not segregate pathology waste from other medical waste. 118275 ..... V4041 W____
[ ] Generator did not label container holding pathology waste with the words "pathology waste" or other approved markings on the lid and side. 118275 ..... V4042 W____
[ ] Unlawful disposal of pathology waste or chemotherapy waste to an unauthorized point. 118340 ..... V4043 W____

PHARMACEUTICAL WASTE HANDLING:

[ ] Generator did not segregate pharmaceutical waste from other medical waste. 118275g ..... V4044 W____
[ ] Generator did not label container holding pharmaceutical waste with the words "incineration only" or other approved markings on the lid and side. 118275g ..... V4045 W____
[ ] Storage time exceeded for pharmaceutical waste, e.g. more than 90 days. (≥ 10 pounds per calendar year generated) 118280e . V4046 W____
[ ] Very small quantity generator of pharmaceutical waste (e.g. <10 pounds waste /calendar year) improperly storing waste for longer than one year. 118280e ..... V4047 W____
[ ] Unlawful disposal of pharmaceutical waste to an unauthorized point. 118340 and 118222 ..... V4048 W____

ON-SITE MEDICAL WASTE TREATMENT FACILITY REQUIREMENTS:

[ ] Operator has not obtained an onsite medical waste treatment permit from the County. 117950, 118130, 118155, and CCR 65620 ..... V4049 W____
[ ] Must maintain an updated and complete copy of the medical waste treatment permit onsite and available for review. CCR 65621(f), 65623, 118165, and 118180 ..... V4050 W____
[ ] Did not comply with a condition of the medical waste treatment permit issued by the County. CCR 65623 ..... V4051 W____

PHOTOCHEMICAL and HAZARDOUS WASTE MGMT. AND DISPOSAL:

[X] Illegal disposal of photoprocessing/ hazardous waste to the sewer/ trash, etc. 25189.5 ..... V4052 W ✓
[ ] Generator has not maintained waste disposal records. e.g. manifests/milk-run receipts..onsite for 3 years. 66262.40 .... V4053 W____
[ ] Generator has not obtained an EPA Identification Number from the State DTSC for hazardous waste generation. e.g. photoprocessing/hazardous waste. 66262.12 ..... V4054 W____
[ ] Generator did not properly label the container holding hazardous waste. 66262.34 ..... V4055 W____
[ ] Generator did not maintain the container holding hazardous waste tightly closed except when adding or removing waste. 66265.173 ..... V4056 W____
[ ] Generator did not submit a notification to the County prior to treating photochemical waste onsite (e.g. >10 gallons/month: tiered permitting). 25201.5 ..... V4057 W____

Carl Allen Jr — ESTABLISHMENT REPRESENTATIVE
12/1/99 — DATE SIGNED
PLANT OPERATIONS SUPERVISOR — TITLE

DEH:HM-9255 (5/97) NCR

DISTRIBUTION: WHITE-RETURN TO HMMD
YELLOW-BUSINESS RETAINS

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

EST. NUMBER H 14073

DATE 12 / 1 / 99

PAGE 3 OF 3

BUSINESS ADDRESS: 4150 Ute Dr. San Diego Ca 92117

VIOLATION REPORT: The items checked below refer to specific section numbers of Titles 19/22/23 of the California Code of Regulations (CCR), Chapters 6.5, 6.7, 6.95 of the Health and Safety Code (HSC), and/or the San Diego County Code (SDCC).

I HAZARDOUS WASTE REQUIREMENTS:

RECORD KEEPING

- [ ] Health Permit not obtained SDCC 68.905 — V0108 W____
- [ ] No EPA Identification Number 66262.12 — V0105 W____
- [ ] Waste Manifests/Receipts not on-site for 3 years 66262.40 — V0118 W____
- [ ] Manifest not properly completed 66262.23 — V0120 W____
- [ ] Manifest copy not sent to DTSC 66262.23 — V0115 W____
- [ ] TSDF signed-manifest not on-site 66262.40 — V0121 W____
- [ ] Biennial report not sent to DTSC 66262.41 — V0122 W____
- [ ] LDR Documentation not available 66268.7 — V0123 W____
- [ ] Exception Rpt. not filed with DTSC 66262.42 — V0116 W____
- [ ] Operating TSDF without authorization 25201 — V0124 W____

STORAGE AND HANDLING

- [ ] Waste stored longer than 90, 180, or 270 days 66262.34 — V0221 W____
- [ ] Failure to clean up hazwaste off of floor surface 66262.10b — V0313 W____
- 2 [X] Waste container missing/improperly labeled 66262.34 — V0222 W____
- [ ] Haz Materials not properly labeled 25124 — V0223 W____
- [ ] Waste container not kept closed 66265.173 — V0202 W____
- [ ] Waste container in poor condition 66265.171 — V0205 W____
- [ ] Waste container(s) not properly managed 66265.173 — V0210 W____
- [ ] Damaged container not repackaged 66265.171 — V0226 W____
- [ ] Container incompatible with waste 66265.172 — V0207 W____
- [ ] Incompatibles in the same container 66265.177 — V0224 W____
- [ ] Incompatibles not stored separately 66265.177 — V0213 W____
- [ ] Ignitible Waste less than 50 feet 66265.176 — V0214 W____
- [ ] Ignitible Waste not grounded 66265.31 — V0215 W____
- [ ] Storage area not inspected weekly 66265.174 — V0216 W____

DISPOSAL AND TRANSPORTATION

- [ ] Unauth. disposal of waste to _____ 25189.5 — V0313 W____
- [ ] Waste determination not made 66262.11 — V0319 W____
- [ ] Unlawful transport of haz. waste 25163 — V0315 W____
- [ ] Waste transported without manifest 66262.20 — V0316 W____
- [ ] Extremely Haz Waste Permit not obtained 25205.7 — V0317 W____

TRAINING, CONTINGENCY PLAN & EMERGENCY PROCEDURES

- [ ] Training records unavailable 66265.16 — V0405 W____
- [ ] Training program not adequate 66265.16 — V0406 W____
- [ ] Facility not designed to minimize release 66265.31 — V0501 W____
- [ ] Spill control equip not available 66265.32 — V0508 W____
- [ ] Aisle space is obstructed 66265.35 — V0509 W____
- [ ] Contingency plan not prepared and/or on file 66265.51, 66265.53 — V0609 W____

MISCELLANEOUS

- [ ] Waste oil contaminated 25250.7 — V0225 W____
- [ ] Used oil filters improperly managed 66266.130 — V0701 W____
- [ ] Damaged batteries improperly managed 66266.81 — V0702 W____
- [ ] Facility has failed to notify local CUPA and DTSC of onsite treatment of hazardous waste (tiered pemitting) — V0125 W____
- [ ] Onsite treatment of waste without authorization 25201 — V0125 W____

II UNDERGROUND STORAGE TANK (UST) REQUIREMENTS:

GENERAL UST REQUIREMENTS

- [ ] Health Permit not obtained 68.1005, 25284 — V3002 T____
- [ ] Repair/modify/close permit not obtained 68.1005 — V3007 T____
- [ ] UST Permit Application not submitted 25286(a) — V3010 T____
- [ ] Operating permit conditions violated 2712 — V3011 T____
- [ ] Failed to notify HMMD of changes 25284 — V3012 T____
- [ ] No owner/operator agreement 25284 — V3005 T____
- [ ] No records of financial coverage 25292.2 — V3013 T____
- [ ] No maint/monit/calib records available 2712(b), 2641(j) — V3001 T____
- [ ] Monitoring Equip. not tested annually 2630, 2641 — V3003 T____

MONITORING REQUIREMENTS (SINGLE WALL)

- [ ] Leak Detection Method does not meet performance standards 2643 — V3014 T____
- [ ] Integrity test not conducted 25292 — V3015 T____
- [ ] Copy of tank test not submitted to HMMD within 30 days 2643 — V3016 T____
- [ ] Manual tank gauging (<2000 gal) 2645 not done properly — V3017 T____
- [ ] Reconciliation not done properly 2646 — V3018 T____
- [ ] Reconciliation not approved for facility 2646 — V3019 T____
- [ ] Dispenser meter(s) not calib annually 2646 — V3020 T____
- [ ] Improper liquid measurements 2646 — V3021 T____
- [ ] Stick in poor condition 2646 — V3022 T____
- [ ] Improper monthly reconciliation 2646 — V3023 T____
- [ ] Failed to report excessive variation 2646 — V3024 T____
- [ ] Pressurized Product Piping Leak Device not tested annually 25292 — V3025 T____
- [ ] No written monitoring procedure 2641 — V3027 T____
- [ ] No written emergency response plan 2641 — V3027 T____
- [ ] SIR reporting incorrectly done 2646.1 — V3004 T____

MONITORING REQUIREMENTS (DOUBLE WALL)

- [ ] Monitoring system not functional 2632 — V3026 T____
- [ ] No written monitoring procedure 2632 — V3027 T____
- [ ] Written emergency response plan not available 2632 — V3028 T____
- [ ] Spill/Overfill equip. not maintained or installed 2635 — V3029 T____

RELEASE REPORTING

- [ ] Failure to report an unauthorized release 25295 — V3009 T____
- [ ] Release record log not available 2651, 2650 — V3030 T____
- [ ] No leak report/investigation/action 2652 — V3031 T____

CLOSURE

- [ ] Temporary closure req. not completed 2671 — V3006 T____
- [ ] Unused tank not properly closed 25298 — V3032 T____
- [ ] Permanent closure req. not completed 2672 — V3033 T____
- [ ] Failed to apply for temporary closure 25298 — V3008 T____

III HAZARDOUS MATERIALS BUSINESS PLAN REQUIREMENTS:

RECORD KEEPING

- [ ] Health Permit not obtained SDCC 68.1105 — V2001 W____
- [ ] Business Plan not established/implemented 25503.5 — V2002 W____
- [ ] Business Plan not submitted to HMMD 25505 — V2007 W____
- [ ] Business Plan not amended 25505 — V2003 W____
- [ ] Personnel Training Records not available 19 CCR 2732 — V2302 W____

RELEASE REPORTING

- [ ] Failure to report a release/threatened release 25507 — V2008 W____

BUSINESS PLAN ELEMENTS

- [ ] Emergency Response Plan inadequate 25504 — V2201 W____
- [ ] Emergency Contacts not provided/current 25509 — V2203 W____
- [ ] Personnel Training Program inadequate 25504 — V2301 W____
- [ ] Inventory is incomplete 25504 — V2005 W____
- [ ] Site Map is not sufficient 25509 — V2202 W____
- [ ] Acutely Haz. Mat. not registered 25533 — V2009 W____

ALL VIOLATIONS MUST BE CORRECTED. PLEASE CALL (619) 338-2222 OR YOUR INSPECTOR IF YOU HAVE ANY QUESTIONS.

ESTABLISHMENT REPRESENTATIVE	DATE SIGNED	TITLE
[signature]	12/1/99	PLANT OPERATIONS SUPERVISOR

Department of Environmental Health, Hazardous Materials Management Division, P. O. Box 129261, San Diego, CA 92112-9261

DISTRIBUTION: WHITE-RETURN TO HMMD
YELLOW-BUSINESS RETAINS

DEH:HM-923 (Rev. 1/98) NCR

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

PAGE 1 OF 4
EST. NO. H 14073
DATE 14 June 2001
TIME START 730 END 830
BUS. CODE 1556
SPECIALIST Anderson
CONTACT C. Hiatt
TITLE Plants Ops.
PHONE 273-0201

BUSINESS NAME SDUSD Clairemont High School
ADDRESS 4150 Ute Dr.
CITY/ZIP San Diego CA 92117

On the above date, an inspection of your business/facility was conducted in order to determine compliance with the California Health and Safety Code (H&S) Chapters 6.5, 6.7, 6.95; Titles 19, 22 and 23 of the California Code of Regulations (CCR); and the San Diego County Code (SDCC). The following remarks are intended to provide guidance to correct the violations noted on the attached violation report.

AUG 03 2001

Office Use Only

Wood Shop.

The Wood Shop teacher stated that solvents (thinner, acetone) are used to clean brush and other items. The used solvent was stored in a container. In addition, the teacher stated that used solvent was disposed by dumping it into the bushes.

Corrective Action: Used solvents must be disposed as a hazardous waste. Used solvents must be stored in a leakproof, labeled and closed container. A Registered Hazardous Waste hauler must pick-up and dispose the waste. Maintain hazardous waste disposal manifest. They will be reviewed during an inspection.

Comments:
Waste photographic fixer must be stored in a leakproof, labeled and closed container. A Registered Hazardous Waste Hauler must dispose the waste.
Auto Shop - This area has a Clarifier. The Clarifier Sewer pipe was pointed towards the sky and not in the proper position. The Clarifier Sewer pipe must be pointed towards the bottom of the Clarifier.

Carl Hiatt Jr. — Signature of Business Representative
6/14/01 — Date Signed
PLANT OPERATIONS SUPERVISOR — Title

Department of Environmental Health, Hazardous Materials Division, P.O. Box 129261, San Diego, CA 92112-9261; (619) 338-2222

DEH:HM-924 (Rev. 2/99) NCR

DISTRIBUTION: WHITE- RETURN TO HMD
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County of San Diego
Department of Environmental Health

COUNTY OF SAN DIEGO

SUPPLEMENTAL INSPECTION REPORT

EST. NUMBER H 14073
DATE 6 / 14 / 01
PAGE 2 OF 4

Office Use Only

BUSINESS ADDRESS: 4150 Ute Dr. San Diego ZIP CODE: 92117

The Clarifier Sludge must be managed as a hazardous waste - (i.e. disposed through a Registered Hazardous waste Hauler).

Signature of Business Representative

6/14/01
Date Signed

PLANT OPERATIONS SUPERVISOR
Title

Department of Environmental Health, Hazardous Materials Management Division, P.O. Box 85261, San Diego, CA, 92186-5261

(619) 338-2222

DISTRIBUTION: WHITE-RETURN TO HMMD
YELLOW-BUSINESS RETAINS

DEH:HM-9110 (3/96) NCR

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

EST. NUMBER H 14073

DATE 6/14/01

BUSINESS ADDRESS: 4150 Ute Dr. San Diego CA 92117

VIOLATION REPORT: The items checked below refer to specific section numbers of Titles 19/22/23 of the California Code of Regulations (CCR), Chapters 6.5, 6.7, 6.95 of the Health and Safety Code (HSC), and/or the San Diego County Code (SDCC).

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- [ ] Ignitible Waste not grounded 66265.31 — V0215 W____
- [ ] Storage area not inspected weekly 66265.174 — V0216 W____

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- [ ] Waste transported without manifest 66262.20 — V0316 W____
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- [ ] Training program not adequate 66265.16 — V0406 W____
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- [ ] Spill control equip not available 66265.32 — V0508 W____
- [ ] Aisle space is obstructed 66265.35 — V0509 W____
- [ ] Contingency plan not prepared and/or on file 66265.51, 66265.53 — V0609 W____

MISCELLANEOUS

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- [ ] Used oil filters improperly managed 66266.130 — V0701 W____
- [ ] Damaged batteries improperly managed 66266.81 — V0702 W____
- [ ] Facility has failed to notify local CUPA and DTSC of onsite treatment of hazardous waste (tiered pemitting) — V0125 W____
- [ ] Onsite treatment of waste without authorization 25201 — V0125 W____

II UNDERGROUND STORAGE TANK (UST) REQUIREMENTS:

GENERAL UST REQUIREMENTS

- [ ] Health Permit not obtained 68.1005, 25284 — V3002 T____
- [ ] Repair/modify/close permit not obtained 68.1005 — V3007 T____
- [ ] UST Permit Application not submitted 25286(a) — V3010 T____
- [ ] Operating permit conditions violated 2712 — V3011 T____
- [ ] Failed to notify HMMD of changes 25284 — V3012 T____
- [ ] No owner/operator agreement 25284 — V3005 T____
- [ ] No records of financial coverage 25292.2 — V3013 T____
- [ ] No maint/monit/calib records available 2712(b), 2641(j) — V3001 T____
- [ ] Monitoring Equip. not tested annually 2630, 2641 — V3003 T____

MONITORING REQUIREMENTS (SINGLE WALL)

- [ ] Leak Detection Method does not meet performance standards 2643 — V3014 T____
- [ ] Integrity test not conducted 25292 — V3015 T____
- [ ] Copy of tank test not submitted to HMMD within 30 days 2643 — V3016 T____
- [ ] Manual tank gauging (<2000 gal) 2645 not done properly — V3017 T____
- [ ] Reconciliation not done properly 2646 — V3018 T____
- [ ] Reconciliation not approved for facility 2646 — V3019 T____
- [ ] Dispenser meter(s) not calib annually 2646 — V3020 T____
- [ ] Improper liquid measurements 2646 — V3021 T____
- [ ] Stick in poor condition 2646 — V3022 T____
- [ ] Improper monthly reconciliation 2646 — V3023 T____
- [ ] Failed to report excessive variation 2646 — V3024 T____
- [ ] Pressurized Product Piping Leak Device not tested annually 25292 — V3025 T____
- [ ] No written monitoring procedure 2641 — V3027 T____
- [ ] No written emergency response plan 2641 — V3027 T____
- [ ] SIR reporting incorrectly done 2646.1 — V3004 T____

MONITORING REQUIREMENTS (DOUBLE WALL)

- [ ] Monitoring system not functional 2632 — V3026 T____
- [ ] No written monitoring procedure 2632 — V3027 T____
- [ ] Written emergency response plan not available 2632 — V3028 T____
- [ ] Spill/Overfill equip. not maintained or installed 2635 — V3029 T____

RELEASE REPORTING

- [ ] Failure to report an unauthorized release 25295 — V3009 T____
- [ ] Release record log not available 2651, 2650 — V3030 T____
- [ ] No leak report/investigation/action 2652 — V3031 T____

CLOSURE

- [ ] Temporary closure req. not completed 2671 — V3006 T____
- [ ] Unused tank not properly closed 25298 — V3032 T____
- [ ] Permanent closure req. not completed 2672 — V3033 T____
- [ ] Failed to apply for temporary closure 25298 — V3008 T____

III HAZARDOUS MATERIALS BUSINESS PLAN REQUIREMENTS:

RECORD KEEPING

- [ ] Health Permit not obtained SDCC 68.1105 — V2001 W____
- [ ] Business Plan not established/implemented 25503.5 — V2002 W____
- [ ] Business Plan not submitted to HMMD 25505 — V2007 W____
- [ ] Business Plan not amended 25505 — V2003 W____
- [ ] Personnel Training Records not available 19 CCR 2732 — V2302 W____

RELEASE REPORTING

- [ ] Failure to report a release/threatened release 25507 — V2008 W____

BUSINESS PLAN ELEMENTS

- [ ] Emergency Response Plan inadequate 25504 — V2201 W____
- [ ] Emergency Contacts not provided/current 25509 — V2203 W____
- [ ] Personnel Training Program inadequate 25504 — V2301 W____
- [ ] Inventory is incomplete 25504 — V2005 W____
- [ ] Site Map is not sufficient 25509 — V2202 W____
- [ ] Acutely Haz. Mat. not registered 25533 — V2009 W____

ALL VIOLATIONS MUST BE CORRECTED. PLEASE CALL (619) 338-2222 OR YOUR INSPECTOR IF YOU HAVE ANY QUESTIONS.

ESTABLISHMENT REPRESENTATIVE	DATE SIGNED	TITLE
Carl Gion Jr	6/14/01	PLANT OPERATIONS SUPERVISOR

Department of Environmental Health, Hazardous Materials Management Division, P. O. Box 129261, San Diego, CA 92112-9261

DISTRIBUTION: WHITE-RETURN TO HMMD
YELLOW-BUSINESS RETAINS

DEH:HM-923 (Rev. 1/98) NCR

COUNTY OF SAN DIEGO

MEDICAL WASTE GENERATOR REQUIREMENTS

EST. NUMBER H 14073
DATE 14 June 2001
PAGE 3 OF 4

BUSINESS ADDRESS: 4150 Ute Dr San Diego CA ZIP: 92117

VIOLATION REPORT: *The items checked below refer to specific section numbers of the California Health and Safety Code Sections 25100 and 117600 et. al.; the San Diego County Code of Regulatory Ordinances Sections 68.1201 et. al.; and the California Code of Regulations, Title 22 Sections 65600 et. al. and 66262.10 et. al.* **All violations must be corrected. Please call (619) 338-2222 or your Inspector if you have any questions.**

GENERAL REQUIREMENTS:

[ ] An Environmental Health Permit as a medical waste generator has not been obtained. 68.1203, 68.1204, and 117705 ..... V4101 W____
[ ] Unlawful disposal of untreated medical waste to an unauthorized point. 118340 ..... V4102 W____
[ ] Improper treatment of medical waste using an unapproved method or procedure. 118215 ..... V4103 W____
[ ] Medical SOLID WASTE is not stored in a locked trash receptacle or enclosure so as to deny access to unauthorized persons. 68.1202 ..... V4104 W____
[ ] Improper clipping or cutting of sharps waste at the point of generation. 68.1205 ..... V4105 W____
[ ] Medical waste was not separated from other waste at the point of origin. 118275 ..... V4106 W____
[ ] Generator has not maintained reusable containers/bins for medical waste storage in a clean and sanitary manner. 118295 and 118305 ..... V4107 W____
[ ] Storage time exceeded for frozen medical waste, e.g. greater than 90 days. 118280 ..... V4108 W____
[ ] Generator did not clean-up a leak or spill of medical waste in an approved manner. 118300 ..... V4109 W____
[ ] Generator has not secured the enclosure or designated accumulation area for medical waste containers so as to deny access to unauthorized persons. 118310 ..... V4110 W____
[ ] Operator did not post an approved and legible biohazardous waste "warning sign" in English and Spanish at the waste storage area(s). 118310 ..... V4111 W____
[ ] Generator did not store medical waste in approved and properly marked red bags (non-sharps). 118275 ..... V4112 W____
[ ] Did not place a label with the generator's name, address, and phone number on the outside of the red bag and/or sharps container. 68.1201 and 68.1205 ..... V4113 W____
[ ] Generator did not store sharps waste in approved and properly marked sharps container. 118275 ..... V4114 W____
[ ] Transportation of medical waste without State Hauler Registration or without a limited-quantity hauling exemption from County HMMD. 118025 ..... V4115 W____
[ ] Generator did not have standardized written operating procedures for a steam sterilizer available onsite. 118215 ..... V4116 W____
[ ] Did not have recording thermometer checked for calibration annually. 118215 ..... V4117 W____
[ ] Generator did not maintain records of thermometer calibration checks for at least 3 years. 118215 ..... V4118 W____
[ ] Operator did not use heat-sensitive tape or other approved method for each load of medical waste treated onsite. 118215 . V4119 W____
[ ] Need to use a biological indicator or other approved method at least once a month to confirm proper disinfection conditions. 118215 ..... V4120 W____
[ ] Must tie-off red bags to prevent leakage or expulsion of contents during handling and storage. 118280 ..... V4121 W____
[ ] Did not containerize and place red bags in rigid, leak resistant, and covered containers or bins. 118280 ..... V4122 W____
[ ] Must have waste container/bin labeled on the lid and side so as to be clearly visible. 118280 ..... V4123 W____
[ ] Did not tape closed or tightly-lid a full sharps container ready for disposal, to preclude loss of contents. 118285 ..... V4124 W____

SMALL QUANTITY GENERATOR REQUIREMENTS:
(<200 pounds per month of waste)

[ ] Medical Waste Management Plan has not been submitted to County HMMD (Annual Requirement) 68.1206 and 117935 .. V4025 W____
[ ] Must maintain and show proof of "onsite" medical waste treatment records for 3 years. 118215 and 117943 ..... V4026 W____
[ ] Generator did not retain on file disposal receipts and/or tracking documents for waste shipped offsite for at least 2 years. 117945 ..... V4027 W____
[ ] Need to apply for and receive a limited-quantity hauling exemption for "self-hauled" medical waste (<20 pounds of waste per week). 118030 and 118025 ..... V4028 W____
[ ] Did not renew a limited-quantity hauling exemption annually. 118030 ..... V4029 W____
[ ] Storage time exceeded for full sharps container(s), e.g. greater than 7 days at room temperatures (for >20 pounds/month generator). 118285 ..... V4030 W____
[ ] Storage time exceeded for red bag waste, e.g..more than 7 days at room temperature (>20 pounds/month generator). 118280 . V4031 W____
[ ] Very small quantity generator (e.g.. <20 pounds per month) improperly storing waste for greater than 30 days onsite at room temperature. 118280 ..... V4032 W____
[ ] Maximum holding time exceeded for non-putrescible medical waste, e.g. greater than 180 days. 68.1203 ..... V4033 W____

LARGE QUANTITY WASTE GENERATORS:
(≥ 200 pounds of waste in a month)

[ ] Medical Waste Management Plan has not been submitted to County HMMD (Annual Requirement) . 117960 and 68.1206 . V4034 W____
[ ] Must maintain and show proof of "onsite" medical waste treatment records for 3 years. 118215 and 117975 ..... V4035 W____
[ ] Generator did not retain on file disposal receipts and/or tracking documents for waste shipped offsite for at least 3 years. 117975 ..... V4036 W____
[ ] Storage time exceeded for full sharps container(s), e.g. greater than 7 days at room temperature. 118285 ..... V4037 W____
[ ] Storage time exceeded for red bag waste, e.g. more than 7 days at room temperature. 118280 ..... V4038 W____

PATHOLOGY WASTE AND CHEMOTHERAPY WASTE HANDLING:

[ ] Did not segregate chemotherapy waste from other medical waste. 118275 ..... V4039 W____
[ ] Generator did not label container holding chemotherapy waste with the words "chemotherapy waste" or other approved markings on the lid and sides. 118275 ..... V4040 W____
[ ] Did not segregate pathology waste from other medical waste. 118275 ..... V4041 W____
[ ] Generator did not label container holding pathology waste with the words "pathology waste" or other approved markings on the lid and side. 118275 ..... V4042 W____
[ ] Unlawful disposal of pathology waste or chemotherapy waste to an unauthorized point. 118340 ..... V4043 W____

PHARMACEUTICAL WASTE HANDLING:

[ ] Generator did not segregate pharmaceutical waste from other medical waste. 118275g ..... V4044 W____
[ ] Generator did not label container holding pharmaceutical waste with the words "incineration only" or other approved markings on the lid and side. 118275g ..... V4045 W____
[ ] Storage time exceeded for pharmaceutical waste, e.g. more than 90 days. (> 10 pounds per calendar year generated) 118280e . V4046 W____
[ ] Very small quantity generator of pharmaceutical waste (e.g. <10 pounds waste /calendar year) improperly storing waste for longer than one year. 118280e ..... V4047 W____
[ ] Unlawful disposal of pharmaceutical waste to an unauthorized point. 118340 and 118222 ..... V4048 W____

ON-SITE MEDICAL WASTE TREATMENT FACILITY REQUIREMENTS:

[ ] Operator has not obtained an onsite medical waste treatment permit from the County. 117950, 118130, 118155, and CCR 65620 ..... V4049 W____
[ ] Must maintain an updated and complete copy of the medical waste treatment permit onsite and available for review. CCR 65621(f), 65623, 118165, and 118180 ..... V4050 W____
[ ] Did not comply with a condition of the medical waste treatment permit issued by the County. CCR 65623 ..... V4051 W____

PHOTOCHEMICAL and HAZARDOUS WASTE MGMT. AND DISPOSAL:

[ ] Illegal disposal of photoprocessing/ hazardous waste to the sewer, trash, etc. 25189.5 ..... V4052 W____
[ ] Generator has not maintained waste disposal records. e.g. manifests/milk-run receipts..onsite for 3 years. 66262.40 .... V4053 W____
[ ] Generator has not obtained an EPA Identification Number from the State DTSC for hazardous waste generation. e.g. photoprocessing/hazardous waste. 66262.12 ..... V4054 W____
[ ] Generator did not properly label the container holding hazardous waste. 66262.34 ..... V4055 W____
[ ] Generator did not maintain the container holding hazardous waste tightly closed except when adding or removing waste. 66265.173 ..... V4056 W____
[ ] Generator did not submit a notification to the County prior to treating photochemical waste onsite (e.g. >10 gallons/month: tiered permitting). 25201.5 ..... V4057 W____

[signature] ESTABLISHMENT REPRESENTATIVE — 6/14/01 DATE SIGNED — PLANT OPERATIONS SUPERVISOR TITLE

DEH:HM-9255 (5/97) NCR

DISTRIBUTION: WHITE-RETURN TO HMMD
YELLOW-BUSINESS RETAINS

COUNTY OF SAN DIEGO

CORRECTIVE ACTION FORM TO DOCUMENT RETURN TO COMPLIANCE

PERMIT # 1140 73
SPECIALIST HAHN
INSPECTION DATE: 10/17/02
CONTACT Wes Meyette

BUSINESS NAME SDUSD - Patrick Henry HS
ADDRESS 6702 Wandermere CITY SD ZIP 92120

VIOL #	DATE CORRECTED	INDICATE HOW VIOLATIONS WERE CORRECTED (ATTACH ANY SUPPORTING DOCUMENTATION TO THIS FORM)
1	10-18-02	ALL FOOD ITEMS REMOVED FROM REFRIGERATOR IN SCIENCE BLDG.
2	11-12-02	ALL BARRELLS HAVE BEEN LABELED WITH PROPER LABELING. (AUTO SHOP)
3		
4		
5		
6		
7		
8		
9		
10		

I certify under penalty of law that this business/site has corrected all violations marked on the Compliance Inspection Report /Notice of Violation. I have personally examined and am familiar with the information submitted and believe the information is true, accurate and complete. I am authorized to file this certification for the business/site, and am aware that there are significant penalties for submitting false information.

Responsible Party (Print Name): WES MEYETTE **Job Title** PLANT OPERATIONS SUPERVISOR

Signature of Responsible Party: Wes Meyette **Date:** 11/18/02

FAX: 856-694-3705

< Mail completed form and supporting documentation to the address listed below >

COUNTY OF SAN DIEGO USE ONLY: **Reviewed by:** Susan Hahn **Date:** 11/22/02

Specialist's comments:

Department of Environmental Health, Hazardous Materials Division, P.O. Box 129261, San Diego, CA 92112-9261; (619) 338-2222; 1-800-253-9933

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

PAGE 1 OF 1 DATE 9/12/02
PERMIT # 114073
TIME START 900 END 1130
BUS. CODE KSD
SPECIALIST HAHN
INSPECTION CONTACT/TITLE Carl Hiatt, Plant Op. Sup.
PHONE: (858) 273-0701
Passed 10/28/02 on file

BUSINESS NAME SDUSD - Clairemont HS
ADDRESS 4150 Ute Dr
CITY/ZIP SD 92117

On the above date, an inspection of your business/facility was conducted in order to determine compliance with the California Health and Safety Code (HSC) Chapters 6.5, 6.7, 6.95; Titles 19, 22 and 23 of the California Code of Regulations (CCR); and the San Diego County Code (SDCC). The following remarks are intended to provide guidance to correct the violations noted on the attached violation report.

Y	N/A		Y	N/A	
☒	☐	Unified Program Facility Permit current and available			Permit Expires on: 7/3/02
☒	☐	Hazardous Materials Business Plan available	☒	☐	Contingency Plan available
☒	☐	Employee Training is adequate	☒	☐	Employee Training records available
☒	☐	Waste disposal records available for review	☒	☐	Waste containers kept closed
☒	☐	Emergency contacts current ☐ Updated today	☒	☐	Waste containers kept labeled
☒	☐	Chemical inventory current ☐ Updated today	☒	☐	Waste containers in good condition

Remark:
1-5 gal plastic jug has a small (1 inch) amount of fluid - unknown - jug not labeled. Jug is cracked. Determine what liquid is and handle appropriately. Do not reuse this jug for hazardous waste.

☒ This is an annual certification that the Hazardous Materials Business Plan (inventory, emergency contacts, emergency response plan, and employee training plan) is current and includes all the information required in the H&SC and is maintained at the site where hazardous materials are stored.

Initials of Business Representative: CH

Carl Hiatt Jr. — Signature of Business Representative
9/12/02 — Date Signed
PLANT OPERATIONS SUPERVISOR — Title

Department of Environmental Health, Hazardous Materials Division, P.O. Box 129261, San Diego, CA 92112-9261; (619) 338-2222; sdcdeh.org

DEH-HM-924 (Rev. 05/02) NCR DISTRIBUTION: WHITE- RETURN TO HMD YELLOW-BUSINESS RETAINS

prsd 4-27-04 cwF, VE

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

PAGE 1 OF ___ DATE 3/25/04
PERMIT # 114073
TIME START 11:30 END 1:15
BUS. CODE 456
SPECIALIST HAHN
INSPECTION CONTACT/TITLE Jess Bowman
PHONE: (858) 273-0201

BUSINESS NAME SDUSD - Clairemont HS
ADDRESS 4150 Ute Dr
CITY/ZIP SD 92117

On the above date, an inspection of your business/facility was conducted in order to determine compliance with the California Health and Safety Code (HSC) Chapters 6.5, 6.7, 6.95; Titles 19, 22 and 23 of the California Code of Regulations (CCR); and the San Diego County Code (SDCC). The following remarks are intended to provide guidance to correct the violations noted on the attached violation report.

NOTE: Reinspection fees will be charged if additional inspections are required to determine compliance.

Y	N/A		Y	N/A	
☒	☐	Unified Program Facility Permit current and available			Permit Expires on: 31 JUL 04
☒	☐	Hazardous Materials Business Plan available	☒	☐	Contingency Plan available
☒	☐	Employee Training is adequate	☒	☐	Employee Training records available
☒	☐	Waste disposal records available for review	☒	☐	Waste containers kept closed
☒	☐	Emergency contacts current ☐ Updated today	☒	☐	Waste containers kept labeled
☒	☐	Chemical inventory current ☐ Updated today	☒	☐	Waste containers in good condition

☐ All violations noted on this compliance inspection report were corrected during this inspection.

ROUTINE INSPECTION

APR 13 2004

Insure all hazardous waste labels have accumulation start date. This a.m. auto shop started filling an used absorbant (oil) drum - accumulation start date filled in during inspection.

Site map does not reflect PROP HM recent changes. Update new location of chemistry classes + bungalow.

☒ This is an annual certification that the Hazardous Materials Business Plan (inventory, emergency contacts, emergency response plan, and employee training plan) is current and includes all the information required in the H&SC and is maintained at the site where hazardous materials are stored.

Initials of Business Representative

Signature of Business Representative

03/25/04
Date Signed

Title of Business Representative

Department of Environmental Health, Hazardous Materials Division, P.O. Box 129261, San Diego, CA 92112-9261; (619) 338-2222; sdcdeh.org

HM-924 (09/03) NCR

DISTRIBUTION: WHITE- RETURN TO HMD YELLOW-BUSINESS RETAINS

ENTERED APR 25 2006

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

PAGE 1 OF 1 DATE 2/16/06
PERMIT # 114073
TIME START 1130 END 1pm
BUS. CODE K56
SPECIALIST Maschoe
INSPECTION CONTACT/TITLE Patty Burch, P.O.S.
PHONE: (858) 273-0201

BUSINESS NAME SDUSD-Clairemont High School
ADDRESS 4150 Ute Drive
CITY/ZIP San Diego 92117

On the above date, an inspection of your business/facility was conducted in order to determine compliance with the California Health and Safety Code (HSC) Chapters 6.5, 6.7, 6.95; Titles 19, 22 and 23 of the California Code of Regulations (CCR); and the San Diego County Code (SDCC). The following remarks are intended to provide guidance to correct the violations noted on the attached violation report.

Y	N/A		Y	N/A	
☒	☐	Unified Program Facility Permit current and available			Permit Expires on: 31 Jul 06
☐	☒	Hazardous Materials Business Plan available	☐	☒	Contingency Plan available
☒	☐	Employee Training is adequate	☒	☐	Employee Training records available
☒	☐	Waste disposal records available for review	☒	☐	Waste containers kept closed
☐	☐	Emergency contacts current ☒ Updated today	☒	☐	Waste containers kept labeled
☐	☐	Chemical inventory current ☒ Updated today	☒	☐	Waste containers in good condition

A routine hazardous waste inspection was conducted this date with Patty Burch, Plant Ops Supervisor and James Patzold, VP for this school.

Nursing office had medical waste management plan and tracking documents and a well-labeled sharps container.
No photo processing done here any more.
Woodshop generates less than 10 gallons of paint thinner-related waste per year.
Only less-than disclosable quantities of hazardous materials on site.
Auto shop has 4 30-gallon drums for used oil, used antifreeze, used oil filters and paint-related waste. They would like to swap out paint waste 30-gallon container for an open-top 30 gallon for absorbent waste.

No violations observed on site this date.

☐ This is an annual certification that the Hazardous Materials Business Plan (inventory, emergency contacts, emergency response plan, and employee training plan) is current and includes all the information required in the H&SC and is maintained at the site where hazardous materials are stored.

Initials of Business Representative: _____

X Patty Busch — Signature of Business Representative
X 2/16/2006 — Date Signed
X Plant Operations Supervisor — Title of Business Representative

Department of Environmental Health, Hazardous Materials Division, P.O. Box 129261, San Diego, CA 92112-9261
Phone: (619) 338-2222 Fax: (619) 338-2377 1-800-253-9933 http://www.sdcounty.ca.gov/deh/hmd/index.html

file: 114073

SAN DIEGO CITY SCHOOLS

EUGENE BRUCKER EDUCATION CENTER
Revere Center, Room 7, 4100 Normal Street, San Diego, CA 92103-2682

OFFICE OF THE CHIEF ADMINISTRATIVE OFFICER
Risk Management Department
Tel: (858) 627-7345
Fax. 858-627-7353

March 9, 2006

County of San Diego
Dept. of Environmental Health
Attn: Manon Maschue
Environmental Health Specialist
P.O. Box 129261
San Diego, CA 92112-9261

Dear Ms. Maschue:

This letter is in response to the compliance inspection report for Clairemont High School, located at 4150 Ute Dr. San Diego, 92117, permit #114073, dated 2-16-06.

As noted in the report, there are no longer disclosable quantities of hazardous materials stored at the school. As a result, this school is not subject to Hazardous Materials Business Plan requirements.

The school has been informed to notify the Safety Office if there are disclosable quantities materials stored in the future.

Should you have any questions regarding this matter, I can be contacted at (858) 627-7350

Sincerely,

John Baker

John Baker, OHST

c: Principal

ENTERED APR 0 1 2008

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

PAGE ___ OF ___ DATE 2 28 08
PERMIT # 114073
TIME START 9:30 END ___
BUS. CODE KS6
SPECIALIST RAPISTA
INSPECTION CONTACT/TITLE
JOHN BAKER SAFETY
RALPH TUCKER POS
PHONE: 858 273-0201

BUSINESS NAME SDUSD-CLAIREMONT HIGH SCHOOL
ADDRESS 4150 UTE DRIVE
CITY/ZIP SAN DIEGO, CA 92117

On the above date, an inspection of your business/facility was conducted in order to determine compliance with the California Health and Safety Code (HSC) Chapters 6.5, 6.7, 6.95; Titles 19, 22 and 23 of the California Code of Regulations (CCR); and the San Diego County Code (SDCC). The following remarks are intended to provide guidance to correct the violations noted on the attached violation report.

NOTE: Reinspection fees will be charged if additional inspections are required to determine compliance.

Y	N/A		Y	N/A	
☒	☐	**Unified Program Facility Permit current and available**			**Permit Expires on:** 2 28 / 08
☐	☒	**Hazardous Materials Business Plan available**	☐	☐	**Contingency Plan available**
☐	☐	**Employee Training is adequate**	☐	☐	**Employee Training records available**
☒	☐	**Waste disposal records available for review**	☐	☐	**Waste containers kept closed**
☐	☐	**Emergency contacts current** ☒ **Updated today**	☐	☐	**Waste containers kept labeled**
☐	☐	**Chemical inventory current** ☐ **Updated today**	☐	☐	**Waste containers in good condition**

ON SITE TO PERFORM ROUTINE INSPECTION OF HAZARDOUS WASTE AND HAZARDOUS MATERIALS. RALPH TUCKER, PLANT OPERATIONS, AND JOHN BAKER, SAFETY, WERE PRESENT DURING THE INSPECTION. AREAS OF INSPECTION INCLUDED AUTO SHOP/REPAIR, CHEMISTRY/BIOLOGY CLASSROOMS, WOODSHOP, CUSTODIAL, GARDENING SHED, DRAMA SET DESIGN AND NURSES OFFICE.

NO VIOLATIONS OBSERVED TODAY.

RECEIVED MAR 1 3 2008

REMARKS:

(1) UNIVERSAL WASTE CONTAINER WITH FLUORESCENT BULBS WAS LABELED WITH PROPER LABEL DURING INSPECTION.

(2) ~~BOTH~~ PHOTOCHEMICALS NO LONGER BEING USED WERE BROUGHT TO CUSTODIAL SHED AND PROPERLY LABELED WITH HAZARDOUS WASTE.

(3) WASTE MANIFESTS, MEDICAL MANAGEMENT PLANT ON-SITE REVIEWED.

☐ **This is an annual certification that the Hazardous Materials Business Plan (inventory, emergency contacts, emergency response plan, and employee training plan) is current and includes all the information required in the H&SC and is maintained at the site where hazardous materials are stored.**

Initials of Business Representative _____

Signature of Business Representative	Date Signed	Title of Business Representative
[signature]	2 / 28 / 08	V. P.

Department of Environmental Health, Hazardous Materials Division, P.O. Box 129261, San Diego, CA 92112-9261
Phone: (619) 338-2222 Fax: (619) 338-2377 1-800-253-9933 http://www.sdcounty.ca.gov/deh/hmd/index.html

#114073
SINGNANSON

SAN DIEGO COUNTY
DEPARTMENT OF ENVIRONMENTAL HEALTH - CUPA
HAZARDOUS MATERIALS DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
(619) 338-2222 FAX (619) 338-2377
1-800-253-9933

RECEIVED
JAN 12 2009
ENVIRONMENTAL HEALTH

BUSINESS OWNER/OPERATOR IDENTIFICATION

Page of

I. IDENTIFICATION

FACILITY ID# 3 7 0 0 0 1 1 4 0 7 3	BEGINNING DATE 100: 2009-01-05	ENDING DATE 101:	
BUSINESS NAME (Same as FACILITY NAME or DBA – Doing Business As) 3: SDUSD- Clairemont High School	BUSINESS PHONE 102: (858) 273-0201 x		
BUSINESS SITE ADDRESS 103: 4150 Ute Dr.			
CITY 104: San Diego	CA	ZIP CODE 105: 92117	
DUN & BRADSTREET 106:	SIC CODE (4 digit #) 107:		
COUNTY 108: San Diego			
BUSINESS OPERATOR NAME 109: San Diego Unified School District	BUSINESS OPERATOR PHONE 110: (858) 637-3698 x		

II. BUSINESS OWNER

OWNER NAME 111: same as above	OWNER PHONE 112: (	
OWNER MAILING ADDRESS 113: 4100 Normal St.		
CITY 114: San Diego	STATE 115: CA	ZIP CODE 116: 92103-

III. ENVIRONMENTAL CONTACT

CONTACT NAME 117: Glenn Boogren	CONTACT PHONE 118: (858) 637-3698 x	
CONTACT MAILING ADDRESS 119: Risk Management 4100 Normal St		
CITY 120: San Diego	STATE 121: CA	ZIP CODE 122: 92103-

IV. EMERGENCY CONTACTS

–PRIMARY–	–SECONDARY–
NAME 123: William Lane	NAME 128: Ralph Tucker
TITLE 124: Vice-Principal	TITLE 129: Plant Operations Supervisor
BUSINESS PHONE 125: (858) 271-0201 x	BUSINESS PHONE 130: (858) 271-0201 x
24-HOUR PHONE 126:	24-HOUR PHONE 131:
PAGER # 127:	PAGER # 132:

ADDITIONAL LOCALLY COLLECTED INFORMATION:

E-MAIL: *	E-MAIL: *

*This information is optional and will remain confidential. Complete if you want to receive periodic program updates from HMD.

ALWAYS SUBMIT A COPY OF THIS COMPLETED PAGE WITH SUBMITTAL OF ANY OTHER UNIFIED PROGRAM CONSOLIDATED FORM.

Certification: Based on my inquiry of those individuals responsible for obtaining the information, I certify under penalty of law that I have personally examined and am familiar with the information submitted and believe the information is true, accurate, and complete.

SIGNATURE OF OWNER/OPERATOR OR DESIGNATED REPRESENTATIVE	DATE 134: 1/6/09	NAME OF DOCUMENT PREPARER 135: John Baker
NAME OF SIGNER (print) 136: Glenn C. Boogren	TITLE OF SIGNER 137: Safety Program Supervisor	

File 114073
Kiva comment made 1/23/09

Permit #: 114073 **Date: 1/5/09**

SAN DIEGO COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
Annual Carcinogen and Reproductive Toxin Reporting List

Business Name: SDUSD-Clairemont High School

Business Address: 4150 Ute Dr. San Diego, CA 92117

Business Owner or Operator: San Diego Unified School District

Please complete the following by entering the chemical name in the chemical name column and then place a check ✓ in the quantity column that most closely estimates the amount on hand. If measured by volume, check the appropriate gallon column(s). If measured by weight, check the appropriate pound column(s). If the chemical is a trade secret, you should check the trade secret box. For example, if you have one pint of benzene you would write benzene in the chemical name column and place a check ✓ in the <1-gallon column.
(**PLEASE NOTE:** the symbol < means **less than**).

Chemical Name	<1 gal.	<1 lb.	<10 gal.	<10 lbs.	<55 gal.	<500 lbs.	Trade Secret
LEAD COMPOUNDS	☐	☐	☐	☒	☐	☐	☐
NICKEL COMPOUNDS	☐	☐	☐	☒	☐	☐	☐
CADMIUM COMPOUNDS	☐	☐	☐	☒	☐	☐	☐
CHROMIUM COMPOUNDS	☐	☐	☐	☒	☐	☐	☐
	☐	☐	☐	☐	☐	☐	☐
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UPFP#: 114073
Please update effective: 11/24/09
Kiva reviewed on 11/24/09
Sonja Ingmanson

ENTERED DEC 0 1 2009 gn

SAN DIEGO COUNTY
DEPARTMENT OF ENVIRONMENTAL HEALTH - [illegible]
HAZARDOUS MATERIALS DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
(619) 338-2222 FAX (619) 338-2377
1-800-253-9933

BUSINESS OWNER/OPERATOR IDENTIFICATION

Page of

I. IDENTIFICATION

FACILITY ID# 3 7 0 0 0 1 1 4 0 7 3	BEGINNING DATE 100: 2009-11-23	ENDING DATE 101:	
BUSINESS NAME (Same as FACILITY NAME or DBA – Doing Business As) 3: SDUSD- Clairemont High School	BUSINESS PHONE 102: (858) 273-0201		
BUSINESS SITE ADDRESS 103: 4150 Ute Dr			
CITY 104: San Diego	CA	ZIP CODE 105: 92117-	
DUN & BRADSTREET 106:	SIC CODE (4 digit #) 107:		
COUNTY 108: San Diego			
BUSINESS OPERATOR NAME 109: San Diego Unified School District	BUSINESS OPERATOR PHONE 110: (858) 637-3698 x		

II. BUSINESS OWNER

OWNER NAME 111: same as above	OWNER PHONE 112: (	
OWNER MAILING ADDRESS 113: 4100 Normal St.		
CITY 114: San Diego	STATE 115: CA	ZIP CODE 116: 92103-

III. ENVIRONMENTAL CONTACT

CONTACT NAME 117: Glenn Boogren	CONTACT PHONE 118: (858) 637-3698 x	
CONTACT MAILING ADDRESS 119: Risk Management 4100 Normal St		
CITY 120: San Diego	STATE 121: CA	ZIP CODE 122: 92103-

IV. EMERGENCY CONTACTS

–PRIMARY–	–SECONDARY–
NAME 123: Peter Altomare	NAME 128: Ralph Tucker
TITLE 124: Vice-Principal	TITLE 129: Plant Operations Supervisor
BUSINESS PHONE 125: (858) 273-0201 x	BUSINESS PHONE 130: (858) 273-0201 x
24-HOUR PHONE 126:	24-HOUR PHONE 131:
PAGER # 127:	PAGER # 132:

ADDITIONAL LOCALLY COLLECTED INFORMATION:

E-MAIL: *	E-MAIL: *

*This information is optional and will remain confidential. Complete if you want to receive periodic program updates from HMD.

ALWAYS SUBMIT A COPY OF THIS COMPLETED PAGE WITH SUBMITTAL OF ANY OTHER UNIFIED PROGRAM CONSOLIDATED FORM.

Certification: Based on my inquiry of those individuals responsible for obtaining the information, I certify under penalty of law that I have personally examined and am familiar with the information submitted and believe the information is true, accurate, and complete.

SIGNATURE OF OWNER/OPERATOR OR DESIGNATED REPRESENTATIVE: [signature]	DATE 134: 11-23-09	NAME OF DOCUMENT PREPARER 135: John Baker
NAME OF SIGNER (print) 136: Glenn C. Boogren	TITLE OF SIGNER 137: Safety Program Supervisor	

San Diego Unified
SCHOOL DISTRICT

114073

Ginette Geicelle Commins
Safety Compliance Technician
PPO - Support Services – Safety Office
Phone: 858 627-7201
Fax: 858 573 5710
gcommins@sandi.net

RECEIVED
OCT 22 2010

October 1, 2010

Reviewed 11-15-10

County of San Diego
Department of Environmental Health
Hazardous Materials Division
P.O. Box 129261
San Diego, CA 92112-9261

RE: Business Owner/Operator Identification

To Whom It May Concern:

I would like to submit changes in business owner mailing address, environmental contact and emergency contacts of the following business sites. Attached herewith are completed Business Owner/Operator Identification Form [HM-9702 (03/10)] of each business site.

BUSINESS NAME	FACILITY ID#
1. Clairemont High School	114073
2. Correia Middle School	100132
3. Creative Performing Media Arts	117056
4. La Jolla High School	114078
5. Madison High School	114080
6. Marston Middle School	212184
7. Mission Bay High School	114082
8. Muirlands Middle School	212013
9. Pacific Beach Middle School	212186
10. Point Loma High School	114084
11. Standley Middle School	129378
12. University City High School	114086

Should you have any question regarding this matter, please feel free to contact me or the Safety Office at (858) 627-7174.

Sincerely,

Ginette G. Commins
Safety Compliance Technician

ENTERED FEB 25 2011 JS

COUNTY OF SAN DIEGO CUPA
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
(619) 338-2222 FAX (619) 338-2377
1-800-253-9933

BUSINESS OWNER/OPERATOR IDENTIFICATION

I. IDENTIFICATION

FACILITY ID # 3 7 0 0 0 1 1 4 0 7 3	BEGINNING DATE 100: 2010-10-01	ENDING DATE 101:	
BUSINESS NAME (Same as FACILITY NAME or DBA – Doing Business As) 3: SDUSD-Clairemont High School	BUSINESS PHONE 102: (858) 273-0201		
BUSINESS SITE ADDRESS 103: 4150 Ute Drive	BUSINESS FAX 102a: (858) 272-4219		
BUSINESS SITE CITY 104: San Diego	CA	ZIP CODE 105: 92117-	COUNTY 108: San Diego
DUN & BRADSTREET 106:	PRIMARY SIC 107:	PRIMARY NAICS 107a:	
BUSINESS MAILING ADDRESS 108a: same as above			
BUSINESS MAILING CITY 108b:	STATE 108c:	ZIP CODE 108d:	
BUSINESS OPERATOR NAME 109: San Diego Unified School District	BUSINESS OPERATOR PHONE 110: (858) 637-3698		

II. BUSINESS OWNER

OWNER NAME 111: San Diego Unified School District	OWNER PHONE 112: (858) 637-3698	
OWNER MAILING ADDRESS 113: 4860 Ruffner Street		
CITY 114: San Diego	STATE 115: CA	ZIP CODE 116: 92111-

III. ENVIRONMENTAL CONTACT

CONTACT NAME 117: Glenn Boogren	CONTACT PHONE 118: (858) 637-3698	
CONTACT MAILING ADDRESS 119: 4860 Ruffner Street	CONTACT EMAIL* 119a:	
CITY 120: San Diego	STATE 121: CA	ZIP CODE 122: 92111-

IV. EMERGENCY CONTACTS

–PRIMARY–	–SECONDARY–
NAME 123: Peter Altomare	NAME 128: Ralph Tucker
TITLE 124: Vice-Principal	TITLE 129: Plant Operations Supervisor
BUSINESS PHONE 125: (858) 273-0201 x	BUSINESS PHONE 130: (858) 273-0201
24-HOUR PHONE* 126:	24-HOUR PHONE* 131:
PAGER # 127:	PAGER # 132:

ADDITIONAL LOCALLY COLLECTED INFORMATION:

E-MAIL: *	E-MAIL: *

*This information will remain confidential.

ALWAYS SUBMIT A COPY OF THIS COMPLETED PAGE WITH SUBMITTAL OF ANY OTHER UNIFIED PROGRAM CONSOLIDATED FORM.

Certification: Based on my inquiry of those individuals responsible for obtaining the information, I certify under penalty of law that I have personally examined and am familiar with the information submitted and believe the information is true, accurate, and complete.

SIGNATURE OF OWNER/OPERATOR OR DESIGNATED REPRESENTATIVE	DATE 134: 2010-10-01	NAME OF DOCUMENT PREPARER 135: Ginette G. Commins
NAME OF SIGNER (print) 136: Glenn Boogren	TITLE OF SIGNER 137: Safety Program Supervisor	

ENTERED APR 30 2012

COUNTY OF SAN DIEGO CUPA
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
(619) 338-2222 FAX (619) 338-2377
1-800-253-9933

BUSINESS OWNER/OPERATOR IDENTIFICATION

I. IDENTIFICATION

FACILITY ID # 37-000114073		BEGINNING DATE 100: 2012-02-21	ENDING DATE 101: 2013-02-21
BUSINESS NAME (Same as FACILITY NAME or DBA – Doing Business As) 3: SDUSD-Clairemont High School		BUSINESS PHONE 102: (858) 273-0201	
BUSINESS SITE ADDRESS 103: 4150 Ute Drive		BUSINESS FAX 102a:	
BUSINESS SITE CITY 104: San Diego	CA	ZIP CODE 105: 92117-	COUNTY 108: San Diego
DUN & BRADSTREET 106:		PRIMARY SIC 107:	PRIMARY NAICS 107a:
BUSINESS MAILING ADDRESS 108a: same as above			
BUSINESS MAILING CITY 108b:	STATE 108c:	ZIP CODE 108d:	
BUSINESS OPERATOR NAME 109: San Diego Unified School District		BUSINESS OPERATOR PHONE 110: (858) 637-3698	

II. BUSINESS OWNER

OWNER NAME 111: San Diego Unified School District		OWNER PHONE 112: (858) 637-3698
OWNER MAILING ADDRESS 113: 4100 Normal Street		
CITY 114: San Diego	STATE 115: CA	ZIP CODE 116: 92103-

III. ENVIRONMENTAL CONTACT

CONTACT NAME 117: Glenn Boogren		CONTACT PHONE 118: (858) 637-3698
CONTACT MAILING ADDRESS 119: 4860 Ruffner Street		CONTACT EMAIL* 119a:
CITY 120: San Diego	STATE 121: CA	ZIP CODE 122: 92111-

IV. EMERGENCY CONTACTS

–PRIMARY–	–SECONDARY–
NAME 123: Peter Altomare	NAME 128: Ralph Tucker
TITLE 124: Vice-Principal	TITLE 129: Plant Operations Supervisor
BUSINESS PHONE 125: (858) 273-0201 x	BUSINESS PHONE 130: (858) 273-0201
24-HOUR PHONE* 126:	24-HOUR PHONE* 131:
PAGER # 127:	PAGER # 132:

ADDITIONAL LOCALLY COLLECTED INFORMATION:

E-MAIL: *	E-MAIL: *

*This information will remain confidential.

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Certification: Based on my inquiry of those individuals responsible for obtaining the information, I certify under penalty of law that I have personally examined and am familiar with the information submitted and believe the information is true, accurate, and complete.

SIGNATURE OF OWNER/OPERATOR OR DESIGNATED REPRESENTATIVE	DATE 134: 02/29/2012	NAME OF DOCUMENT PREPARER 135: Ginette G. Commins
NAME OF SIGNER (print) 136: Glenn Boogren	TITLE OF SIGNER 137: Safety Program Supervisor	

scan to file 114073

Permit #: 114073 **Date: 3/8/2012**

SAN DIEGO COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
Annual Carcinogen and Reproductive Toxin Reporting List

RECEIVED
MAR 13 2012
ENVIRONMENTAL HEALTH

Business Name: SDUSD - Clairemont High School

Business Address: 4150 Ute Drive, San Diego, CA 92117

Business Owner or Operator: San Diego Unified School District

Please complete the following by entering the chemical name in the chemical name column and then place a check ✓ in the quantity column that most closely estimates the amount on hand. If measured by volume, check the appropriate gallon column(s). If measured by weight, check the appropriate pound column(s). If the chemical is a trade secret, you should check the trade secret box. For example, if you have one pint of benzene you would write benzene in the chemical name column and place a check ✓ in the <1-gallon column.
(PLEASE NOTE: the symbol < means **less than**).

Chemical Name	<1 gal.	<1 lb.	<10 gal.	<10 lbs.	<55 gal.	<500 lbs.	Trade Secret
Phenolphthalein	☒	☒	☐	☐	☐	☐	☐
Lead Compounds	☐	☐	☐	☒	☐	☐	☐
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UPFP#: 114073
Please update effective: 3/8/12
Kiva reviewed on 3/16/12
Arleen Lim

COUNTY OF SAN DIEGO CUPA
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
(619) 338-2222 FAX (619) 338-2377
1-800-253-9933

BUSINESS OWNER/OPERATOR IDENTIFICATION

I. IDENTIFICATION

FACILITY ID # 3 7 0 0 0 1 1 4 0 7 3		BEGINNING DATE 100: 2012-02-21	ENDING DATE 101: 2013-02-21
BUSINESS NAME (Same as FACILITY NAME or DBA – Doing Business As) 3: SDUSD-Clairemont High School		BUSINESS PHONE 102: (858) 273-0201	
BUSINESS SITE ADDRESS 103: 4150 Ute Drive		BUSINESS FAX 102a:	
BUSINESS SITE CITY 104: San Diego	CA	ZIP CODE 105: 92117-	COUNTY 108: San Diego
DUN & BRADSTREET 106:		PRIMARY SIC 107:	PRIMARY NAICS 107a:
BUSINESS MAILING ADDRESS 108a: same as above			
BUSINESS MAILING CITY 108b:	STATE 108c:	ZIP CODE 108d:	
BUSINESS OPERATOR NAME 109: San Diego Unified School District		BUSINESS OPERATOR PHONE 110: (858) 637-3698	

II. BUSINESS OWNER

OWNER NAME 111: San Diego Unified School District	OWNER PHONE 112: (858) 637-3698	
OWNER MAILING ADDRESS 113: 4100 Normal Street		
CITY 114: San Diego	STATE 115: CA	ZIP CODE 116: 92103-

III. ENVIRONMENTAL CONTACT

CONTACT NAME 117: Glenn Boogren	CONTACT PHONE 118: (858) 637-3698	
CONTACT MAILING ADDRESS 119: 4860 Ruffner Street	CONTACT EMAIL* 119a:	
CITY 120: San Diego	STATE 121: CA	ZIP CODE 122: 92111-

IV. EMERGENCY CONTACTS

–PRIMARY–	–SECONDARY–
NAME 123: Peter Altomare	NAME 128: Ralph Tucker
TITLE 124: Vice-Principal	TITLE 129: Plant Operations Supervisor
BUSINESS PHONE 125: (858) 273-0201 x	BUSINESS PHONE 130: (858) 273-0201
24-HOUR PHONE* 126:	24-HOUR PHONE* 131:
PAGER # 127:	PAGER # 132:

ADDITIONAL LOCALLY COLLECTED INFORMATION:

E-MAIL: *	E-MAIL: *

*This information will remain confidential.

ALWAYS SUBMIT A COPY OF THIS COMPLETED PAGE WITH SUBMITTAL OF ANY OTHER UNIFIED PROGRAM CONSOLIDATED FORM.

Certification: Based on my inquiry of those individuals responsible for obtaining the information, I certify under penalty of law that I have personally examined and am familiar with the information submitted and believe the information is true, accurate, and complete.

SIGNATURE OF OWNER/OPERATOR OR DESIGNATED REPRESENTATIVE	DATE 134: 3/8/2012	NAME OF DOCUMENT PREPARER 135: Ginette G. Commins
NAME OF SIGNER (print) 136: Glenn Boogren	TITLE OF SIGNER 137: Safety Program Supervisor	

COUNTY OF SAN DIEGO
DEPARTMENT OF ENVIRONMENTAL HEALTH-CUPA
HAZARDOUS MATERIALS DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
1-800-253-9933 (619) 338-2222 FAX (619) 338-2377

HAZARDOUS MATERIALS BUSINESS PLAN CERTIFICATION

The California Health & Safety Code (H&SC), Division 20, Chapter 6.95, Section 25505 provides for the following:
The County of San Diego, Department of Environmental Health, Hazardous Materials Division (HMD), as the administering agency, requires a business that handles hazardous materials to submit the hazardous materials inventory, a list of emergency contacts, and a site plan, **in lieu of a complete Hazardous Materials Business Plan (HMBP),** only after the initial submittal of a complete HMBP. A complete HMBP includes the items to be submitted to the HMD and an Emergency Response Plan and Employee Training Plan, as established in H&SC Section 25504. The business must annually certify that a complete HMBP has been prepared, is current and is maintained at the site where the hazardous materials are stored. See *Back* for instructions and further clarification

I. IDENTIFICATION

FACILITY ID#	3 7 0 0 0 1 1 4 0 7 3 1		
BUSINESS NAME (Same as FACILITY NAME or DBA – Doing Business As)	SDUSD Clairemont High School		3
BUSINESS SITE ADDRESS	4150 Ute Drive		103
CITY 104	San Diego	CA	ZIP CODE 105 92117

II. CERTIFICATION STATEMENT

☐ **CARCINOGEN/REPRODUCTIVE TOXIN ANNUAL RENEWAL WITHOUT CHANGES: This is an annual renewal to certify that the list of carcinogens and/or reproductive toxins last provided is a current list as specified in the San Diego County Code of Regulatory Ordinances Section 68.1113.**

Check only ONE of the following boxes:

☐ **INITIAL CERTIFICATION: This is to certify (H&SC Section 25505(e)(1)) that a complete HMBP, which includes the hazardous materials inventory, a list of emergency contacts, a site plan, emergency response plan, and employee training plan, has been prepared and is maintained at the site where the hazardous materials are stored.**

☐ **ANNUAL CERTIFICATION WITHOUT CHANGES: This is an annual certification (H&SC Section 25505(d) & (e)(2)) that the HMBP, which includes the hazardous materials inventory, a list of emergency contacts, a site plan, emergency response plan, and employee training plan, is current and includes all the information required in H&SC Section 25504, and 25509, and is maintained at the site where the hazardous materials are stored.**

☒ **CERTIFICATION OF CHANGES/REVISIONS: This is to certify that the HMBP has been reviewed (H&SC Section 25505(c) & 25510) and all necessary changes/revisions have been made. The HMBP is current and is maintained at the site where the hazardous materials are stored. Attached are changes to the hazardous materials inventory and/or list of emergency contacts. For site map revisions, submit only the pages that have a change or revision and attach to this certification. This submittal satisfies annual certification requirements specified in H&SC Section 25505(d) & (e)(2).**

As an Authorized Representative, I certify, under the penalty of law, that I have personally examined and am familiar with the information submitted and believe the information is true, accurate, and complete. By checking any of the boxes above I also certify that: a) The information contained in the hazardous materials inventory most recently submitted to the CUPA or Administering Agency is complete, accurate, and up to date; b) There has been no change in the quantity of hazardous materials reported in the most recently submitted inventory; and c) All hazardous materials subject to inventory requirements are listed on the most recently submitted inventory.

SIGNATURE OF OWNER/OPERATOR OR DESIGNATED REPRESENTATIVE	DATE 4/26/2012
NAME OF SIGNER (print) Glenn Boogren	TITLE OF SIGNER Safety Program Supervisor

OFFICE USE

INSTRUCTIONS TO CLERICAL STAFF FOR HMBP ACCEPTANCE

☒ Site Map	5 / 8 / 12	*Note: Indicate the date that the inventory and/or ER contact information in the KIVA database was reviewed and changes were submitted for processing. If the inventory and ER contact information are exactly the same as it is recorded in KIVA, no changes need to be submitted.
☐ *Emergency Contacts	___/___/___	
☐ *Chemical Inventory	___/___/___	

Hazardous Materials Business Plan acceptance date will be changed to the acceptance date on new site map.
A letter will be mailed to business after processing of site map updates.

HIRT SITE ☐**

FIRE DIST.____

Specialist's Signature: (only required for new plans or for changes to site maps, chemical inventory and/or emergency contacts)

REMARKS:

** If HIRT box is checked, follow HIRT policy to indicate on the inventory forms which hazardous materials make this a HIRT site.

HM-953 (03/10)

ENTERED JUL 09 2012

COUNTY OF SAN DIEGO

COMPLIANCE INSPECTION REPORT

PAGE 1 OF 1 DATE 5/18/12
PERMIT# 114073 BUS. CODE K56
TIME START 1:00 END 2:40
SPECIALIST A. Lim
INSPECTION CONTACT Peter Altomare
TITLE Vice Principal
PHONE (858) 273-0201

FACILITY NAME SDUSD Clairemont High School
ADDRESS 4150 Ute Dr.
CITY/ZIP San Diego 92117

On the above date, the County inspected your facility under the authority of the California Health and Safety Code (H&SC), to determine compliance with applicable provisions of the H&SC, the California Code of Regulations (CCR), and the San Diego County Code of Regulatory Ordinances (SDCC). **This report serves as a Notice to Comply (H&SC 25187.8 & 25404.1.2) for any minor violations as defined in H&SC 25404 and 25117.6.** This report may contain both minor and more significant (Class II) violations. Minor violations do not include repeat violations or violations remaining uncorrected for more than 30 days (or as specified below). Minor violations do not include knowing, willful, intentional, or chronic violations; nor do they include violations showing a pattern of neglect or disregard. The remarks below are intended to provide guidance to correct any violations indicated on the attached violation report. You must submit a written response to this report within 30 days (or as specified below) demonstrating that all violations have been corrected or include a written notice of disagreement that clearly states the reason for any disputed violations. Prompt correction can protect you from penalties for a "minor violation". Penalties can be imposed for each day in violation for all other violations even if they are corrected promptly. However, correction within 30 days (or as specified below) will make a penalty less likely.

NOTE: Reinspection fees will be charged if additional inspections are required to determine compliance.

Y*	N/A*		Y*	N/A*	
☒	☐	Unified Program Facility Permit current			Permit Expires on: 7/31/12
☒	☐	Hazardous Materials Business Plan available	☒	☐	Contingency Plan available ☐LQG ☐SQG
☒	☐	Employee training is adequate	☒	☐	Employee training records available
☒	☐	Waste disposal records available for review	☒	☐	Universal waste managed properly
☒	☐	Emergency contacts current ☐ Updated today	☒	☐	Waste containers ☒ closed ☒ labeled
☒	☐	Chemical inventory/map current ☒ Updated today	☒	☐	Waste containers in good condition

Consent to inspect granted by: ☒ Inspection Contact ☐ Other:

RECEIVED JUN 19 2012

* ROUTINE INSPECTION *
Facility is a high school generating hazardous waste and disclosable quantities of hazardous materials.
- HMBP and disposal receipts available for review
- Annual carcinogen/repro toxin report submitted on 3/13/12.
- All waste containers were observed to be properly labeled and managed.
- Auto shop and wood shop onsite. Auto shop only generates waste lead acid batteries every 3-5 years.

REMARKS
- Disposal receipts reflect regular pick ups/disposal of flammable liquids, latex paint, waste aerosol cans and biohazardous red bag waste. All items will be added to inventory
- Observed 3/4 full 5 gallon bucket with sodium bicarbonate (unlabeled). This violation was corrected during inspection. Be advised all hazardous materials are required to be labeled within 10 days.

* NO VIOLATIONS OBSERVED *

☐ **This is an annual certification that the Hazardous Materials Business Plan (inventory & site map, emergency contacts, emergency response plan, and employee training plan) is current and includes all the information required in the H&SC and is maintained at the site where hazardous materials are stored.** — **Initials of Facility Representative**

PRINTED NAME OF FACILITY REPRESENTATIVE: PETER ALTOMARE
DATE SIGNED: 5/18/2012
SIGNATURE OF FACILITY REPRESENTATIVE: x Peter Altomare
TITLE OF FACILITY REPRESENTATIVE: VICE-PRINCIPAL

Department of Environmental Health, Hazardous Materials Division, P.O. Box 129261, San Diego, CA 92112-9261
Phone: (858) 505-6880 http://www.sdcdeh.org

HM-924 (03/11) NCR *(Y= Yes; N/A = Not Applicable) DISTRIBUTION: WHITE-HMD COPY; YELLOW-FACILITY COPY

15

COUNTY OF SAN DIEGO
DEPARTMENT OF ENVIRONMENTAL HEALTH-CUPA
HAZARDOUS MATERIALS DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
1-800-253-9933 (619) 338-2222 FAX (619) 338-2377

HAZARDOUS MATERIALS BUSINESS PLAN CERTIFICATION

The California Health & Safety Code (H&SC), Division 20, Chapter 6.95, Section 25505 provides for the following:
The County of San Diego, Department of Environmental Health, Hazardous Materials Division (HMD), as the administering agency, requires a business that handles hazardous materials to submit the hazardous materials inventory, a list of emergency contacts, and a site plan, **in lieu of a complete Hazardous Materials Business Plan (HMBP),** only after the initial submittal of a complete HMBP. A complete HMBP includes the items to be submitted to the HMD and an Emergency Response Plan and Employee Training Plan, as established in H&SC Section 25504. The business must annually certify that a complete HMBP has been prepared, is current and is maintained at the site where the hazardous materials are stored. See *Back* for instructions and further clarification

I. IDENTIFICATION

FACILITY ID# 3 7 0 0 0 1 1 4 0 7 3 1

BUSINESS NAME (Same as FACILITY NAME or DBA – Doing Business As) 3
SDUSD Clairemont High School

BUSINESS SITE ADDRESS 103
4150 Ute Drive

CITY 104: San Diego | CA | ZIP CODE 105: 92117

II. CERTIFICATION STATEMENT

☐ **CARCINOGEN/REPRODUCTIVE TOXIN ANNUAL RENEWAL WITHOUT CHANGES: This is an annual renewal to certify that the list of carcinogens and/or reproductive toxins last provided is a current list as specified in the San Diego County Code of Regulatory Ordinances Section 68.1113.**

Check only ONE of the following boxes:

☐ **INITIAL CERTIFICATION: This is to certify (H&SC Section 25505(e)(1)) that a complete HMBP, which includes the hazardous materials inventory, a list of emergency contacts, a site plan, emergency response plan, and employee training plan, has been prepared and is maintained at the site where the hazardous materials are stored.**

☐ **ANNUAL CERTIFICATION WITHOUT CHANGES: This is an annual certification (H&SC Section 25505(d) & (e)(2)) that the HMBP, which includes the hazardous materials inventory, a list of emergency contacts, a site plan, emergency response plan, and employee training plan, is current and includes all the information required in H&SC Section 25504, and 25509, and is maintained at the site where the hazardous materials are stored.**

☒ **CERTIFICATION OF CHANGES/REVISIONS: This is to certify that the HMBP has been reviewed (H&SC Section 25505(c) & 25510) and all necessary changes/revisions have been made. The HMBP is current and is maintained at the site where the hazardous materials are stored. Attached are changes to the hazardous materials inventory and/or list of emergency contacts. For site map revisions, submit only the pages that have a change or revision and attach to this certification. This submittal satisfies annual certification requirements specified in H&SC Section 25505(d) & (e)(2).**

As an Authorized Representative, I certify, under the penalty of law, that I have personally examined and am familiar with the information submitted and believe the information is true, accurate, and complete. By checking any of the boxes above I also certify that: a) The information contained in the hazardous materials inventory most recently submitted to the CUPA or Administering Agency is complete, accurate, and up to date; b) There has been no change in the quantity of hazardous materials reported in the most recently submitted inventory; and c) All hazardous materials subject to inventory requirements are listed on the most recently submitted inventory.

SIGNATURE OF OWNER/OPERATOR OR DESIGNATED REPRESENTATIVE	DATE
	6/1/2012
NAME OF SIGNER (print)	TITLE OF SIGNER
Glenn Boogren	Safety Program Supervisor

OFFICE USE

INSTRUCTIONS TO CLERICAL STAFF FOR HMBP ACCEPTANCE

☐ Site Map ___/___/___
☐ *Emergency Contacts ___/___/___
☒ *Chemical Inventory 6/18/12

*Note: Indicate the date that the inventory and/or ER contact information in the KIVA database was reviewed and changes were submitted for processing. If the inventory and ER contact information are exactly the same as it is recorded in KIVA, no changes need to be submitted.

Hazardous Materials Business Plan acceptance date will be changed to the acceptance date on new site map.
A letter will be mailed to business after processing of site map updates.

HIRT SITE ☐**
FIRE DIST.____

Specialist's Signature: (only required for new plans or for changes to site maps, chemical inventory and/or emergency contacts)

REMARKS:

** If HIRT box is checked, follow HIRT policy to indicate on the inventory forms which hazardous materials make this a HIRT site.

HM-953 (03/10)

Department of Toxic Substances Control

Matthew Rodriquez
Secretary for
Environmental Protection

Deborah O. Raphael, Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Edmund G. Brown Jr.
Governor

EPA ID PROFILE

ID Number: CAD981452642 **Name :** SDUSD - CLAIREMONT HIGH SCHOOL

Status: ACTIVE **Inactive Date:** **Record Entered:** 04/10/1987 **Last Updated:** 08/21/2013

County: SAN DIEGO **NAICS:** 61111 **SIC:** 8211

	Name	Address	City	State	Zip Code	Phone
Location	SDUSD - CLAIREMONT HIGH SCHOOL	4150 UTE DR	SAN DIEGO	CA	921175853	
Mailing		4860 RUFFNER ST	SAN DIEGO	CA	921110000	
Owner	SAN DIEGO UNIFIED SCHOOL DISTR	4100 NORMAL ST	SAN DIEGO	CA	921032653	8586373698
Operator/ Contact	John D. Baker, O.H.S.T.	4860 Ruffner St.	San Diego	CA	92111	8586277350

Based ONLY upon ID Number **CAD981452642**

Calif. Manifests ?	Non Calif. Manifests ?	Transporter Registration ?
YES	NO	NO

California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Calif. Manifest Counts and Total Tonnage

Top line represents Manifest Count and Bottom line represents Total Tonnage

	GENERATOR
1994	5 0.1945
1995	8 7.6678
1996	3 0.0865
1997	1 0.0250
1998	2 0.2042
1999	2 0.2542
2001	3 2.4206
2002	3 1.2126
2003	2 0.6334
2004	5 1.6140
2005	5 0.5182
2006	2 2.5770
2007	7 0.1086
2008	4 0.3563
2009	5 0.3051
2010	6 0.5628

	GENERATOR
2011	6 30.6417
2012	2 0.1076
2013	3 0.0302

Non California Manifest Total Tonnage

Waste Code By Year By Entity Matrix Report
(based on California Manifests only)

Calif.	Generator	Transporter 1	Transporter 2	TSDF	Alt. TSDF
RCRA	Generator	Transporter 1	Transporter 2	TSDF	Alt. TSDF

California Waste Code By Year Matrix

ID Number: CAD981452642

Entity Type : GENERATOR

Weight (in Tons)

Ship Years

Calif. Code	Description	1994	1995	1996	1997	1998	1999
	Blank/Unknown	0.0125					
122	ALKALINE SOLUTION (PH>=12.5) W/O METALS						
135	UNSPECIFIED AQUEOUS SOLUTION (2 < PH < 12.5)						
151	ASBESTOS-CONTAINING WASTE		0.9270				
181	OTHER INORGANIC SOLID WASTE						
214	UNSPECIFIED SOLVENT MIXTURE		0.0360				
221	WASTE OIL AND MIXED OIL						
222	OIL/WATER SEPARATION SLUDGE	0.0625	0.6255	0.0625		0.1042	0.1042
223	UNSPECIFIED OIL-CONTAINING WASTE						
261	POLYCHLORINATED BIPHENYLS & MATLS W/		5.9607				
291	LATEX WASTE						
331	OFF-SPEC, AGED, OR SURPLUS ORGANICS	0.0990	0.0990				0.1500

2001	2002	2003	2004	2005	2006	2007	2008	2009
0.0200								
					2.5200			
1.6856								
		0.1250					0.0200	0.0200
		0.1250	0.5700	0.0760	0.0570			
				0.2502		0.0417		0.2251
	0.3758							
				0.0500		0.0334		
0.5290		0.3834	0.6250	0.1250		0.0025	0.2921	0.0545

2010	2011	2012	2013
	30.3408		
0.1000			0.0110
		0.0076	
	0.2085		
	0.0083	0.0834	
0.4211	0.0033	0.0124	0.0125

		1994	1995	1996	1997	1998	1999
343	UNSPECIFIED ORGANIC LIQUID MIXTURE					0.1000	
352	OTHER ORGANIC SOLIDS						
551	LABORATORY WASTE CHEMICALS	0.0205	0.0096	0.0240	0.0125		
725	LIQUIDS WITH MERCURY >= 20 MG/L		0.0100				
791	LIQUIDS W PH<=2				0.0125		
	Grand Total	**0.1945**	**7.6678**	**0.0865**	**0.0250**	**0.2042**	**0.2542**

2001	2002	2003	2004	2005	2006	2007	2008	2009
	0.1700			0.0170				
	0.5000							
0.0810	0.1668		0.4185			0.0310	0.0442	0.0055
			0.0005					
0.1050								
2.4206	**1.2126**	**0.6334**	**1.6140**	**0.5182**	**2.5770**	**0.1086**	**0.3563**	**0.3051**

2010	2011	2012	2013
0.0417	0.0807	0.0042	0.0042
			0.0025
0.5628	30.6417	0.1076	0.0302

RCRA Waste Code By Year Matrix Report

ID Number: CAD981452642

Entity Type: GENERATOR

Weight (in Tons)

Ship Years

RCRA Code	Description	1994	1995	1996	1997	1998	1999
	Blank/Unknown	0.0707	7.6137	0.0675	0.0025	0.1042	0.1042
D001	Ignitable	0.1022	0.0371	0.0075	0.0050	0.1000	0.1500
D002	Corrosives	0.0166	0.0005		0.0125		
D003	Reactivity				0.0050		
D005	Barium						
D006	Cadmium						
D008	Lead		0.0065				
D009	Mercury	0.0050	0.0100	0.0010			
D011	Silver						
D035	Methyl ethyl ketone						
F002	Halogenated solvents						
F003	Non-halogenated solvents						
NONE	Blank/Unknown						

2001	2002	2003	2004	2005	2006	2007	2008
1.7196	**1.1292**	**0.2725**	**0.6200**	**0.1930**	**2.5770**	**0.0459**	**0.0067**
0.6350		**0.3510**	**0.9835**	**0.0750**		**0.0205**	**0.2921**
0.0200	**0.0834**	**0.0033**				**0.0083**	**0.0250**
0.0265							
0.0195							
						0.0005	
			0.0105				**0.0200**
							0.0125
		0.0066					
						0.0334	
				0.2502			

2009	2010	2011	2012	2013
0.2501	**0.0042**	**30.5633**	**0.0910**	**0.0042**
0.0545	**0.3111**	**0.0659**	**0.0166**	**0.0125**
	0.0042	**0.0125**		
	0.1334			**0.0110**
0.0005				**0.0025**
	0.1100			

		1994	1995	1996	1997	1998	1999
U072	p-Dichlorobenzene			**0.0075**			
U165	Naphthalene			**0.0030**			
	Grand Total	**0.1945**	**7.6678**	**0.0865**	**0.0250**	**0.2042**	**0.2542**

2001	2002	2003	2004	2005	2006	2007	2008
2.4206	**1.2126**	**0.6334**	**1.6140**	**0.5182**	**2.5770**	**0.1086**	**0.3563**

2009	2010	2011	2012	2013
0.3051	**0.5628**	**30.6417**	**0.1076**	**0.0302**

OK to 5/7/13 # 331.00 demo only

13 - ASB - 229

SAN DIEGO AIR POLLUTION CONTROL DISTRICT
10124 OLD GROVE ROAD, SAN DIEGO, CA 92131
PHONE (858) 586-2650 FAX (858) 586-2651

FOR APCD USE ONLY

Postmark	Received 5/07/13	Fee/ Receipt $331.00
Notification #	Entered 5/17/13	Sector M
Inspector Assigned/Date		DXG

NOTIFICATION OF ASBESTOS RENOVATION OR DEMOLITION OPERATIONS

Completed by: Anton Botter II Company: Anton's Service Inc Ck # 1503

NOTIFICATION

☒ Original ☐ Cancellation ☐ Courtesy ☐ Other(specify):

☐ Revision (Indicate type of revision) ☐ Change in asbestos amount (greater than 20%) ☐ Change in start/end date

PROJECT TYPE

☒ Demolition ☐ Ordered Demolition ☐ Renovation (removal)

☐ Emergency Removal ☐ Emergency Demolition ☐ Planned Renovation (annual)

FACILITY INFORMATION

Facility Name: Clairemont High School Demolition of 9 Bungalows			
Address: 4150 UTE Street		Cross Street: Modoc	
City: San Diego	Zip Code: 92117		
Facility Owner: San Diego Community College District			
Address: 3375 Camino del Rio South			
City: San Diego	State: CA	Zip Code: 92108	
Contact: Scott Ellis	Title: Project Manager	Phone No: 619-640-4310	
Building Size (sq. ft): 12400	Building Age (years): 16-20	Number of Floors: 1	Number of Units: 9
Building prior/present use:	☐ Commercial ☐ Hospital ☐ Industrial ☐ Office ☒ K-12 School ☐ Public Bldg ☐ House/Condo ☐ Ship ☐ Univ/College ☐ Other		

PROJECT INFORMATION

Asbestos Survey Performed?* ☒ Yes ☐ No	Is Asbestos Present? ☐ Yes ☒ No	Will the asbestos be removed? ☐ Yes ☒ No	Is the building to be demolished? ☒ Yes ☐ No	
Asbestos Amount to be removed (sq/ln ft):	**Friable** Pipes: Surface Area: Facility Component:	**Category I** Pipes: Surface Area: Facility Component:	**Category II** Pipes: Surface Area: Facility Component:	**Total**
Revised Amounts (if a revision)				

Asbestos Removal Start Date: n/a Asbestos Removal End Date: n/a	**Demolition Operation** Start Date: 5-22-2013 Demolition Operation End Date: 6-21-2013
For revisions only Revised Start Date: Revised End Date:	**For revisions only** Revised Start Date: Revised End Date:

Removal Contractor:	Name: n/a	Phone No:	CSLB License#:
Address:	City/State/Zip:	Site Supervisor:	
Demolition Contractor:	Name: Anton's Service Inc	Phone No: 619-579-9000	CSLB License#: 861069
Address: PO Box 455	City/State/Zip: Lakeside/CA/92040	Site Supervisor: Anton Botter II	

*Asbestos Surveys are required prior to Renovation and Demolition, however the actual survey is not required to be submitted with the notification.

NOTIFICATION OF ASBESTOS RENOVATION OR DEMOLITION OPERATIONS

Waste Transporter#1:		**Waste Transporter#2:**	
Name: Anton's Service Inc		Name: n/a	
Address: PO Box 455		Address:	
City/State/Zip: Lakeside, CA 92040		City/State/Zip:	
Contact Person: Anton Botter II	Phone: 619-579-9000	Contact Person:	Phone:
Waste Disposal Site (Landfill):	Name: Sycamore Land Fill		
Address: 8514 Mast Blvd		City/State/Zip: Santee, CA 92138	
Contact Person: Scott Miller		Phone: 858-637-5609	

Asbestos Detection Procedures:	Check the appropriate procedures and analytical methods used to detect the presence of asbestos containing materials.		
☒ Survey	☐ Inspection	☐ TEM	☐ PCM
☐ Bulk Sampling	☐ PLM	☐ Other: _____	

Describe work practices and engineering controls to be used. Check applicable methods below:

☒ Water	☐ Demolition w/roofing materials in place using sledge hammers.	☒ Skid Loaders/bobcats/Top Loaders
☐ Amended Water	☐ Axes ☒ Shovels	☐ Terminator™
☐ Roofing Cutting Saws	☐ Demolition w/Cat I Floor tiles in place	☐ Implosion
☐ High Pressure Water Blast	☐ Ice Chippers ☐ Pry Bars	☐ Explosion
☐ Infrared Machines	☐ Bulldozer	☐ Negative Air Machines
☐ Cranes (wrecking ball, clamshell, bucket)	☐ Intentional Burning	☐ Full Containment
☐ Zamboni	☐ Backhoes	☐ 3 Stage Decon
☐ Bead Blast	☒ Other: Excavator	☐ Glove Bag
☐ Floor Buffer		☐ Critical Barriers

For Ordered Demolition provide a copy of the order and complete the information below:

Agency Name:	Authorizing Person:	Title:
Date of Order:	Date Ordered to Begin:	Phone:

Contingency Plan	Describe actions to be followed if unexpected asbestos is found during demolition or removal or asbestos material becomes disturbed, crumbled, pulverized or reduced to powder.

Stop work, wet material, inform owner, test for asbestos content

Training Certification	I certify that an individual trained in the provisions of this regulation (CFR Part 61, Subpart M) will be on site during the removal and evidence that the required training has been accomplished by this person will be available for inspection during normal business hours.	
Date: 5-7-2013	Print Name: (Owner/Operator) Anton H Botter II	Signature: (Owner/Operator)
Information Certification:	I certify that the above information is correct.	
Date: 5-7-2013	Print Name: (Owner/Operator) Anton H Botter II	Signature: (Owner/Operator)

Original notifications are to be submitted to the District at least 10 working days prior to removal or demolition. Revised notices are to be submitted as soon as possible but no later than the original start date. Original notifications cannot be accepted without the required fee(s) (Rule 40(f)(2)), however revised notifications will be accepted without the required fee provided the fee is paid prior to the start date of the original notification.

State Water Resources Control Board

Division of Water Quality
1001 I Street • Sacramento, California 95814 • 1-866-563-3107
Mailing Address: P.O. Box 1977 • Sacramento, California • 95812-1977
FAX (916) 341-5543 • http://www.waterboards.ca.gov

Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

Storm Water
DEC 2010
Division of Water Quality

Ref: 410014
Date: 12/20/2010
WDID: 9 37C360074

December 15, 2010

Fee Statement
Reference # 410014

55096

C360074

Facility/Site
CLAIREMONT HIGH SCHOOL
4150 UTE DRIVE
San Diego CA 92117

Thank you for submitting the Permit Registration Documents (PRD) for the facility/site referenced above. Before a WDID number is assigned an Application Fee of $636.00 must be received by February 13, 2011 .If the Storm Water Section does not receive your application fee of $636.00 by February 13, 2011 your PRDs will be returned.

Please make checks payable to: SWRCB

Mail this Fee Statement with an original signature and $636.00 to:

Regular Mailing Address:
SWRCB
Storm Water Section
PO Box 1977
Sacramento, CA 95812-1977

Overnight Mailing Address:
SWRCB
Storm Water Section
1001 I Street – 15th Floor
Sacramento, CA 95814

SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD
2011 MAR 25 A 11: 5

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

JAMES WATTS DIRECTOR OF PLANNING

Printed Name - Title

Signature

State Water Resources Control Board

NOTICE OF INTENT

GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH CONSTRUCTION ACTIVITY
(WQ ORDER No. 2009-0009-DWQ)

WDID: **Risk Level:** Level2

Property Owner Information

Type: Private Individual

Name: SDUSD
Address: 4860 Ruffner Street
Address 2:
City/State/Zip: San Diego CA 92111

Contact Name: Jim Watts
Title:
Phone #: 858-627-7241
Email: jwatts@sandi.net

Contractor/Developer Information

Name: TRITON STRUCTURAL CONCRETE INCORPORATI
Address: 14435 INNOVATION DRIVE
Address 2: SUITE 225
City/State/Zip: San Diego CA 92128

Contact Name: JENNIFER ERLER
Title: Qualified SWPPP Practitioner
Phone #: 760-745-2010
Email: jennifer@i-gst.com

Construction Site Information

Site Name: CLAIREMONT HIGH SCHOOL
Address: 4150 UTE DRIVE
City/State/Zip: San Diego CA 92117
County: San Diego
Latitude: 32.80821 Longitude: -117.2049

Contact Name: JENNIFER ERLER
Title: Qualified SWPPP Practitioner
Site Phone #: 760-745-2010
Email: jennifer@i-gst.com

Total Size of Construction Area: 12.13
Total Area to be Disturbed: 12.13

Construction Start: December 20, 2010
Complete Grading: May 31, 2011
Final Stabilization: July 30, 2011

Type of Construction: *Commercial*Reconstruction*Other: High School Football and Baseball Field Upgrades
Receiving Water: MISSION BAY
Qualified SWPPP Developer: ROSS KUNISHIGE
Certification #:
RWQCB Jurisdiction: Region 9 - San Diego
Phone: 858-467-2952
Email: r9_stormwater@waterboards.ca.gov

Certification

Name:
Date: 12-16-2010
Title: DIRECTOR OF PLANNING SDUSD

San Diego Unified
SCHOOL DISTRICT

ANTHONY RASO
Civil / Environmental Engineering Coordinator
Capital Improvement Bond Program
858.573.5775
Fax: 858.496.1767
traso@sandi.net

December 16, 2010

State Water Resources Control Board
Division of Water Quality
1001 "I" Street – 15th Floor
P. O. Box 1977
Sacramento, California 95814

To Whom It May Concern:

Subject: Proposition S Program Development
Clairemont High School Athletic Facility
Notice of Intention/WDID # Assignment
Reference Number 410014

Enclosed is a San Diego Unified School District warrant payable to the State Water Resources Control Board. Attached are the following documents:

[1] NOI fee statement
[2] Executed NOI
[3] Warrant payable to SWRCB

The LRP certified the NOI. The SWPPP was uploaded by the QSD in accordance with CGP conditions.

Warrant Number	Payee	Amount	Date
15811994	SWRCB	$ 666.00	12/10/10

If you have any questions or require additional clarification associated with this subject, please email me at traso@sandi.net or contact me at my direct line 858.573.5775.

Sincerely,

Anthony Raso
Civil / Environmental Engineering Coordinator

TR: daw

Attachments.

c: G. Capano, B. Higdon, J. Watts

THE CITY OF SAN DIEGO

February 3, 2014

Ninyo & Moore
Attn: Lisa Bestard
5710 Ruffin Rd
San Diego, CA 92123

Dear Ms.Lisa Bestard :

A search of the San Diego Prevention Inspection files found the following information:

- Some records were located for **4150 Ute Dr. ,San Diego, CA 92117.** They are attached to this page.

For information regarding current chemical inventories, please contact:

County of San Diego
Department of Environmental Health
5500 Overland Avenue, San Diego, CA 92123
858-505-6700 or 800-253-9933

If you have any questions, please contact me at (619) 533-4477.

Sincerely,

Mrs. Beth Carroll

Mrs. Beth Carroll
Fire Prevention Bureau
bcarroll@sandiego.gov

DIVERSITY

THE CITY OF SAN DIEGO

REQUEST FOR TECHNICAL SERVICES PERMIT INFORMATION

Permit information requests cost **$5.00 per address**. Checks must be made payable to the "**CITY TREASURER**." Permit information requests are processed on Mondays only.

BUSINESS NAME: Ninyo & Moore

YOUR NAME: Lisa Bestard (lbestard@ninyoandmoore.com)

STREET: 5710 Ruffin Road

CITY: San Diego STATE: CA ZIP CODE: 92123

TELEPHONE: 858-576-1000 FAX: 858-576-9600

Site Address: 4150 Ute Drive, San Diego, CA 92117 Y N Y

Site Address:

Site Address:

Site Address:

Site Address:

Report(s) to be: * Mailed e-mailed Picked-up X

Please return this form along with your payment to:

FIRE AND HAZARD PREVENTION SERVICES
1010 SECOND AVENUE, SUITE 300
SAN DIEGO, CA 92101

ATTN: TECHNICAL SERVICES CLERK

Documents can be mailed if a stamped self-addressed envelope is mailed to us.

FIRE DEPARTMENT USE

Amount Received: $500

Receipt Number: 111415

Initials: BC

Date: 2-3-14

CITY OF SAN DIEGO

JAN 23 2014

Clear Entire Form

CITY OF SAN DIEGO
FIRE DEPARTMENT
1222 FIRST AVENUE, SAN DIEGO, CA 92101
Phone 236-6495

PERMIT/APPL. NO. ~~[illegible]~~

FILE

FIRE SURVEY / APPLICATION / PERMIT

INSTRUCTIONS: PLEASE PRINT OR TYPE REQUESTED INFORMATION. MAKE REMITTANCE PAYABLE TO CITY TREASURER, MAIL OR BRING IN PERSON TO SAN DIEGO FIRE DEPARTMENT.

OWNER

NAME (OR NAME OF BUSINESS): San Diego Drum & Bugle Corps, Inc.

MAILING ADDRESS (NUMBER) (STREET): 2875 Ulpia Dr.

CITY: San Diego | ZIP: 92139 | TELEPHONE NO.: 262-5924

CITY BUSINESS LICENSE NO.:

STATEMENT: I hereby acknowledge that I have read this application; that the information given is correct; and that I am the owner, or the duly authorized agent of the owner. This application does not constitute a permit until all fees have been paid and it has been approved by the Chief or his Deputy. All permits or certificates issued shall be presumed to contain the proviso that the applicant, his agents and employees shall carry out the proposed activity in compliance with all laws and regulations applicable thereto, whether specified or not, and in complete accordance with approved plans and specifications. Any permit or certificate which purports to sanction a violation of any applicable law or regulation shall be void and any approval of plans and specifications in the issuance of such permit shall likewise be void. THE FEE IS NON-REFUNDABLE.

Ref: Ord. No. 11083 and 11084

JOB ADDRESS

NAME (IF NOT OWNER): Clairemont High School

ADDRESS (NUMBER) (STREET): 4150 Ute Dr.

CITY: San Diego, CA | ZIP: 92117 | TELEPHONE NO.:

SIGNATURE (OWNER OR AGENT): Norma A. Sturcut | DATE SIGNED: 3/2/75

CODE	TYPE OF PERMIT REQUIRED	NO.	AMOUNT
21	Color Guard Contest, high school gymnasium	1	NO FEE
	X4 Clairemont High School, 4150 Ute Dr. S.D.		
	March 8, 1975		
			NO CHARGE Stamped for Record Purposes Only
			City Treasurer

NOTE: THIS APPLICATION IS NOT A VALID PERMIT UNTIL SIGNED BY AUTHORIZED AGENT.

BATTALION:

FIRE CO.:

TOTAL FEE DUE NON REFUNDABLE: NO FEE

FUND	REV. ACCT.	AMOUNT
100	73551	
100	73552	NO FEE
100	73553	
100	73554	

FOR FIRE DEPARTMENT USE ONLY

FIRE PERMIT Approved ☑ Denied ☐

BOND REQUIRED ☐ REC. NO.

SIGNATURE OF INSPECTING DEPUTY: [illegible]

TITLE: Capt

DATE OF INSPECTION: 3-5-75 | EXPIRATION DATE: 3-7-75 | UNIT NO.

DISTRIBUTION:
WHITE: OFFICE FILE
YELLOW: INSPECTOR
PINK: AUDITORS
GREEN: PERMITTEE
BLUE: SUSPENSE FILE

FPB 213 (7-73)

GRINNELL FIRE PROTECTION SYSTEMS COMPANY REPORT OF CERTIFICATION

CLAREMONT HIGH SCHOOL
BUSINESS NAME
4150 UTE DRIVE
STREET
SAN DIEGO CA 92117
CITY, STATE, ZIP CODE

WET PIPE SPRINKLER SYSTEMS

Pat Brown
INSPECTED BY:
10-3-86
DATE SYSTEM CERTIFIED:
Pat n
SIGNATURE

	YES	N/A	NO
I. Fire Department Connections:			
1. Are fire department connections free of obstructions?	X		
2. Are fire department connections in good condition?	X		
3. Are couplings free and rotate freely?	X		
4. Do clappers move freely and close completely?	X		
5. Are gaskets in place and in good condition?	X		
6. Are caps in place?	X		
7. Are inlets identified with a sign?	X		
II. Control Valves:			
1. Are control valves free of leaks?	X		
2. Are control valves secured in open position?	X		
3. Are control valves free of visible or exterior obstructions?	X		
4. Open inspection test valve - alarm within 90 seconds?	X		
III. Riser:			
1. Is riser free of leaks?	X		
2. Is riser bracing properly secured and free of damage?	X		
3. Is riser free of visible or exterior damage?	X		
IV Gauges:			
1. Are gauages in good condition?	X		
2. Are gauge valves turned on?	X		
3. System Presure - p.s.i.	115		
4. Supply Pressure - p.s.i.	85		
5. Residual Presure - p.s.i.	110		
V. Sprinkler Heads:			
1. Are sprinkler heads free of leaks, corrosion, paint or loading?	X		
2. Is all storage at least 18" below deflectors?	X		
3. Are sprinklers installed in proper position?	X		
4. Are extra heads and proper orifice wrench available?	X		
5. Are extra heads of the proper orifice size and temperature ratings?	X		

EXPLANATION OF "NO" ANSWERS:

ALL PROBLEMS REPAIRED FOR CERTIFICATION

City of San Diego Fire Rescue Department
1010 Second Ave., Suite 400, San Diego, California
92101
(619) 533-4300
www.sandiego.gov/fireandems

FCIP ANNUAL INSPECTION Assigned To Station, Sta 27, E27, C on 12/8/2011

Start Date: 12/8/2011 2:30:52PM

Finish Date: 12/8/2011 3:12:55PM

Notice

Notice of Fire and Safety Hazards You are hereby notified that an inspection of your premises has disclosed the following fire safety hazards and/or violations of the provisions of appropriate local or state codes.

Order to Comply As such conditions are contrary to law you are hereby required to correct these conditions immediately upon receipt of this notice. An inspection to determine whether you have complied will be conducted on or before the next inspection date. Failure to comply with the foregoing order before the date of the next inspection may subject you to further enforcement action and penalties as provided by law.

Potential Enforcement Consequences for Failure to Timely Comply with this Notice Misdemeanor criminal prosecution (maximum fine of $1,000 per day for each violation plus six months in jail), civil injunction, administrative abatement, revocation of permits, recordation of Notice of Violation, civil penalties (maximum of $2,500 per day for each violation).

Occupancy ID: 91000606

Address: 4150 UTE DR Unit No: SDCS

Business Name: CLAIREMONT HIGH SCH

City/State/Zip: SAN DIEGO, CA 92117

Occupancy Use: E1 - EDUCATION O.L. 50+ USE 12+ HRS/WK

Property Uses: 215 - High school/junior high school/middle school

***** NONE *****

Code Section: 0000

No Violations Found

12/08/2011

Occupancy ID:	91000606
Address:	4150 UTE DR Unit No: SDCS
Business Name:	CLAIREMONT HIGH SCH
City/State/Zip:	SAN DIEGO, CA 92117
Occupancy Use:	E1 - EDUCATION O.L. 50+ USE 12+ HRS/WK
Property Uses:	215 - High school/junior high school/middle school

Recipient Signature

Recipient:

X Peter Altomare

peter altomare

City of San Diego Fire Rescue Department
1010 Second Ave., Suite 400, San Diego, California
92101
(619) 533-4300
www.sandiego.gov/fireandems

FCIP ANNUAL INSPECTION Assigned To Station, Sta 27, E27, A on 12/7/2012

Start Date: 12/7/2012 9:49:53AM

Finish Date: 12/7/2012 10:08:37AM

Notice

Notice of Fire and Safety Hazards You are hereby notified that an inspection of your premises has disclosed the following fire safety hazards and/or violations of the provisions of appropriate local or state codes.

Order to Comply As such conditions are contrary to law you are hereby required to correct these conditions immediately upon receipt of this notice. An inspection to determine whether you have complied will be conducted on or before the next inspection date. Failure to comply with the foregoing order before the date of the next inspection may subject you to further enforcement action and penalties as provided by law.

Potential Enforcement Consequences for Failure to Timely Comply with this Notice Misdemeanor criminal prosecution (maximum fine of $1,000 per day for each violation plus six months in jail), civil injunction, administrative abatement, revocation of permits, recordation of Notice of Violation, civil penalties (maximum of $2,500 per day for each violation).

Occupancy ID: 91000606

Address: 4150 UTE DR Unit No: SDCS

Business Name: CLAIREMONT HIGH SCH

City/State/Zip: SAN DIEGO, CA 92117

Occupancy Use: E1 - EDUCATION O.L. 50+ USE 12+ HRS/WK

Property Uses: 215 - High school/junior high school/middle school

***** NONE *****

Code Section: 0000

No Violations Found

12/07/2012

Occupancy ID:	91000606
Address:	4150 UTE DR Unit No: SDCS
Business Name:	CLAIREMONT HIGH SCH
City/State/Zip:	SAN DIEGO, CA 92117
Occupancy Use:	E1 - EDUCATION O.L. 50+ USE 12+ HRS/WK
Property Uses:	215 - High school/junior high school/middle school

Recipient Signature

Recipient:

X

City of San Diego Fire Rescue Department
1010 Second Ave., Suite 400, San Diego, California
92101
(619) 533-4300
www.sandiego.gov/fireandems

FCIP ANNUAL INSPECTION Assigned To Station, Sta 27, E27, B on 12/20/2013

Start Date:	12/20/2013 3:41:46PM
Finish Date:	12/20/2013 3:53:47PM

Notice

Notice of Fire and Safety Hazards You are hereby notified that an inspection of your premises has disclosed the following fire safety hazards and/or violations of the provisions of appropriate local or state codes.

Order to Comply As such conditions are contrary to law you are hereby required to correct these conditions immediately upon receipt of this notice. An inspection to determine whether you have complied will be conducted on or before the next inspection date. Failure to comply with the foregoing order before the date of the next inspection may subject you to further enforcement action and penalties as provided by law.

Potential Enforcement Consequences for Failure to Timely Comply with this Notice Misdemeanor criminal prosecution (maximum fine of $1,000 per day for each violation plus six months in jail), civil injunction, administrative abatement, revocation of permits, recordation of Notice of Violation, civil penalties (maximum of $2,500 per day for each violation).

Occupancy ID:	91000606
Address:	4150 UTE DR Unit No: SDCS
Business Name:	CLAIREMONT HIGH SCH
City/State/Zip:	SAN DIEGO, CA 92117
Occupancy Use:	E1 - EDUCATION O.L. 50+ USE 12+ HRS/WK
Property Uses:	215 - High school/junior high school/middle school

***** NONE *****

Code Section: 0000

No Violations Found

12/20/2013

Occupancy ID:	91000606
Address:	4150 UTE DR Unit No: SDCS
Business Name:	CLAIREMONT HIGH SCH
City/State/Zip:	SAN DIEGO, CA 92117
Occupancy Use:	E1 - EDUCATION O.L. 50+ USE 12+ HRS/WK
Property Uses:	215 - High school/junior high school/middle school

Recipient Signature

Recipient:

Closed Disposal Site Inspection Report (188)

Enforcement Agency:	**City of San Diego**

SWIS Facility File Number (99-xx-9999)	**Inspection Date**	**Program Code**
37-CR-0015	**5/23/2014**	**LEA Periodic**

Time In	9:45 AM	**Time Out**	10:30 AM	**Inspection Time**	0.75 Hours

Facility Name	**Received By**
Clairemont H.S. Burnsite	San Diego Unified School District
Facility Location	**Owner Name**
4150 Ute Drive, San Diego 92117	San Diego Unified School District
Inspector	**Also Present (Name)**
Daron Warkentin	Bill Prinz, LEA; Loren Chico, SDUSD

THE ABOVE FACILITY WAS INSPECTED FOR COMPLIANCE WITH APPLICABLE SECTIONS OF THE DIVISION 30 OF THE PUBLIC RESOURCES CODE (PRC) AND TITLE 14 AND TITLE 27 CALIFORNIA CODE OF REGULATIONS (CCR)

	No Violations or Areas of Concern	
V	**A**	**Regulations**
X		21140 - Final Cover
		Comments: The owner shall maintain a Final Cover that provides waste containment to protect public health and safety.

Inspection Report Comments:

On May 7, 2014, Mr. Loren Chico notified the LEA that San Diego Unified School District (SDUSD) has been advised by the Department of Toxic Substances Control to remediate a section of burn ash located north of Ute Drive and south of the school parking lot at Clairemont High School.

Up until May 27, 2014, the Clairemont High School Burnsite was archived in the SWIS Database system with a zero inspection frequency. Until further notice, the LEA will conduct Semi-Annual inspections.

Clairemont High School is currently under Department of Toxic Substances Control authority.

SDUSD hired Ninyo & Moore to complete a site characterization. Based on their reports, the burn ash is located along Ute Drive. It is east of the ball fields, south of the school buildings, west of the condominium homes on Clairemont Drive, and north of the canyon. The burn ash is brownish yellow-red to medium brown to brown-black to gray, silty sand to clayey sand with gravel to cobbles along with wastes consisting of primarily broken glass but including other miscellaneous wastes.

Inspectors observed burn ash out cropping in a slope north of Ute Drive and south of the school parking lot, which is currently protected by a chain link fence. Burn ash was also observed south of Ute Drive along the upper rim of the canyon.

Lisa Bestard

From: Warkentin, Daron [DWarkentin@sandiego.gov]
Sent: Friday, August 22, 2014 9:06 AM
To: Lisa Bestard
Cc: Glenn.Young@CalRecycle.ca.gov; Prinz, Bill
Subject: RE: Draft PEA - Clairemont High School

Hi Lisa,

According to Title 27 California Code of Regulations (CCR) 20005(c), Title 27 Chapters 1, 2, 3, and portions of Chapter 4 shall apply to all disposal sites meaning active, inactive, closed, or abandoned, as defined in section 40122 of the Public Resources Code (PRC). Burn ash sites, as historical solid waste dumps that received municipal solid waste and through combustion and the resultant concentration of metals in the ash, have been deemed to be hazardous by legal definition. Therefore, what was originally received as solid waste is now deemed hazardous creating a jurisdictional overlap of responsibility. According to PRC 40122, a disposal site means the place, location, tract of land, area, or premises in use, intended to be used, or which has been used, for the disposal of solid wastes. Clairemont High School is an area that has been identified as a closed disposal site and currently has solid waste burn ash exposed. Based on the description of the site and the definition of PRC 40122, Clairemont High School is subject to Title 27 California Code of Regulations per Title 27 CCR 20005(c).

In accordance with AB 709, which established a collaborative relationship between CalRecyle and their LEAs, DTSC and Regional Water Quality Control Boards, when determining jurisdiction over burn ash sites (see attached document). Such relationships currently exist with other San Diego School burn ash sites: Noah Webster School and Correia Middle School. DTSC takes the lead at public school sites while the LEA acts as the local liaison and provides inspection services that assure protection of public health and safety and the environment in accordance with 27 CCR.

Please contact me with any questions or concerns.

Thank you,

Daron Warkentin
Solid Waste Inspector
City of San Diego
Solid Waste Local Enforcement Agency (LEA)
1010 Second Avenue, Suite 600, Mail Stop 606L
San Diego, CA 92101-4998
LEA Phone: (619) 533-3688
Direct Phone: (619) 533-3694
Fax: (619) 533-3689
DWarkentin@sandiego.gov

Reduce Reuse Recycle Re-Buy

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APPENDIX E

ENVIRONMENTAL DATABASE REPORT, CHAIN-OF-TITLE REPORT, AND LIEN SEARCH REPORT

Clairemont High School
4150 Ute Drive
San Diego, CA 92117

Inquiry Number: 3835292.5
January 21, 2014

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

1/21/14

Site Name:	**Client Name:**
Clairemont High School	Ninyo & Moore
4150 Ute Drive	5710 Ruffin Rd
San Diego, CA 92117	San Diego, CA 92123
EDR Inquiry # 3835292.5	Contact: Lisa Bestard

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Ninyo & Moore were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Site Name:	Clairemont High School
Address:	4150 Ute Drive
City, State, Zip:	San Diego, CA 92117
Cross Street:	
P.O. #	105338088
Project:	Clairemont HS PEA
Certification #	1992-4A76-AF99

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results
Certification # 1992-4A76-AF99

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Ninyo & Moore (the client) is permitted to make up to THREE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

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Clairemont High School
4150 Ute Drive
San Diego, CA 92117

Inquiry Number: 3835292.10S
January 30, 2014

The EDR Chain of Title Report

EDR Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Chain of Title

The EDR Chain of Title Report tracks a line of successive owners from the present back to 1940 of a particular parcel of property, linked together by recorded transactions which pass title. Available nationwide, this report provides a summary of a property's ownership history and is a valuable source for determining the prior uses of a property

A network of professional abstractors following established procedures, uses client supplied address Information to locate:

- Historical Chain of Title research
- Leases and Miscellaneous

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EDR Chain of Title

TARGET PROPERTY INFORMATION

ADDRESS

Clairemont High School
4150 Ute Drive
San Diego, CA 92117

Research Source

Source 1:	San Diego County Assessor
Source 2:	San Diego County Recorder
Examiner's Note:	Public records of San Diego County, California were searched from January 1, 1940 to January 29, 2014, and no other deeds vesting title in the subject property were found of record during the period searched.

PROPERTY DESCRIPTION

Current Owner:	San Diego Unified School District of San Diego County, California
Legal Description:	All that certain piece or parcel of land being that portion of Lot 3 in the subdivision of Pueblo Lot 1209 of the Pueblo Lands of San Diego, according to the Partition Map thereof filed in the Office of the County Clerk of San Diego, in Case No. 8341, situate and lying in the County of San Diego, State of California.
Property Identifiers:	425-800-01-00

HISTORICAL CHAIN OF TITLE

See Exhibit "A"

LEASES AND MISCELLANEOUS

See Exhibit "B" - Not Requested

Chain of Title

Exhibit "A"

EDR Chain of Title

HISTORICAL CHAIN OF TITLE

PARCEL NO. 1

Chain 1

According to the San Diego County Assessor, the current owner of the subject property is San Diego Unified School District of San Diego County, California. Records were searched at the San Diego County Recorder's Office. An Easement for the subject property from San Diego Unified School District of San Diego County, California into The City of San Diego was filed 09/25/1958 as Instrument 162461. No other conveyance was found of record transferring fee title ownership into San Diego Unified School District of San Diego County, California for the subject property.

LEASES and MISCELLANEOUS

Exhibit “B”

EDR Chain of Title

LEASES and MISCELLANEOUS

1. Type of Instrument:
First Party:
Second Party:
Recorded:
Book:
Page:
Document No.:

2. Type of Instrument:
First Party:
Second Party:
Recorded:
Book:
Page:
Document No.:

Clairemont High School
4150 Ute Drive
San Diego, CA 92117

Inquiry Number: 3835292.11S
January 30, 2014

The EDR Environmental LienSearch™ Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Environmental LienSearch™ Report

The EDR Environmental LienSearch Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EDR Environmental LienSearch™ Report

TARGET PROPERTY INFORMATION

ADDRESS

Clairemont High School
4150 Ute Drive
San Diego, CA 92117

RESEARCH SOURCE

Source 1: San Diego County, California Assessor

Source 2: San Diego County, California Recorder

PROPERTY INFORMATION

Deed 1:

According to the San Diego County Assessor, the current owner of the subject property is San Diego Unified School District of San Diego County, California. Records were searched at the San Diego County Recorder's Office. An Easement for the subject property from San Diego Unified School District of San Diego County, California into The City of San Diego was filed 09/25/1953 as Instrument 162461. No other conveyance was found of record transferring fee title ownership into San Diego Unified School District of San Diego County, California for the subject property.

Legal Description: All that certain piece or parcel of land being that portion of Lot 3 in the subdivision of Pueblo Lot 1209 of the Pueblo Lands of San Diego, according to the Partition Map thereof filed in the Office of the County Clerk of San Diego, in Case No. 8341, situate and lying in the County of San Diego, State of California.

Legal Current Owner: San Diego Unified School District of San Diego County, California

Property Identifiers: 425-800-01-00

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

If found:

1st Party:

2nd Party:

Dated:

Recorded:

Book:

Page:

Docket:

Volume:

Instrument:

Comments:

Miscellaneous:

EDR Environmental LienSearch™ Report

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AUL's: Found ☐ Not Found ☒

If found:

1st Party: California Environmental Protection Agency, Department of Toxic Substances Control (DTSC)

2nd Party: San Diego Unified School District

Dated: 04/05/2002
Recorded:
Book:
Page:
Docket:
Volume:
Instrument:
Comments: Site History: The Site is occupied by Clairemont High School, approximately 44 acres, since its construction in approximately 1957. The Site consists of school and administrative buildings located on the northern portion of the property, and athletic fields, hard courts, parking lots, and an undeveloped area of land located on the southern portion of the property.

The San Diego Unified School District (SDUSD) was excavating utility trenches in a paved parking lot of the school in July 2011 and encountered a deposit of burned waste material. SDUSD collected soil samples from the trench and stockpile and the results indicated elevated levels of metals. In a letter, dated August 24, 2011, SDUSD requested DTSC oversight via inclusion of this existing school in the Master Oversight Agreement; on March 23, 3012, the First Amendment to the Master Oversight Agreement was fully executed which added this project.

In August 2011, SDUSD submitted a Technical Memorandum Workplan to evaluate the extent and chemical characteristics of the burned waste material to DTSC. On August 30, 2011, DTSC conditionally concurred with a revised Technical Memorandum Workplan to dig exploratory trenches in the parking lot, sample and analyze burned waste material / soil, and backfill the trenches. DTSC received a Report presenting the results of the exploratory trenching investigation conducted in September 2011. On January 25, 2012, DTSC provided comments on the Report (considered as a PEA Equivalent Report) and requested submittal of a Response to Comments table and a PEA Technical Memorandum Workplan for additional assessment. On June 28, 2012, DTSC received a Workplan for additional assessment of the burned waste material and approved the Workplan on August 9, 2012. Fieldwork (trenching) activities to implement the Workplan commenced on August 20, 2013. (see attached documents)
Miscellaneous:

EDR Environmental LienSearch™ Report

DEED EXHIBIT

MISCELLANEOUS EXHIBITS

STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Agreement Regarding:	)	Docket Number HSA-A 01/02-034
	)	
San Diego Unified School District School Sites San Diego, California	)))	Master Oversight Agreement
	)	
Project Proponent:	))	Health and Safety Code Section 25355.5(a) (1) (c);
San Diego Unified School District 4860 Ruffner Street San Diego, California 92111-1522	)))	Education Code Sections 17213.1 and 17213.2
	)	

I.
INTRODUCTION

1.1 Parties. The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) enters into this Master Oversight Agreement (Agreement) with the San Diego Unified School District (SDUSD). DTSC and SDUSD are referred to collectively herein as the "Parties".

1.2 Site(s). The real properties which are the subject of this Agreement (sites) are located throughout the City of San Diego and within unincorporated areas of the County of San Diego. They consist of proposed school sites and expansions of existing school sites for which Preliminary Endangerment Assessments (PEAs) must be completed pursuant to Education Code, or for existing schools for which SDUSD requests DTSC oversight. A list of proposed school sites, which SDUSD anticipates to develop over the next five (5) years, is attached as Exhibit A. A list of existing school

sites to be investigated is attached as Exhibit B. These lists are for informational purposes only and may change upon agreement by both parties. Sites for which Phase I environmental reports are completed pursuant to statute and for which PEAs are not required are not subject to this Agreement.

1.3 Jurisdiction. This Agreement is entered into by DTSC and SDUSD pursuant to Health and Safety Code Section 25355.5(a) (1) (c) and Education Code Sections 17213.1 and 17213.2. These sections authorize DTSC to enter into an enforceable agreement with SDUSD to oversee SDUSD's investigation, characterization and response actions at sites contaminated with hazardous materials as defined in Education Code Section 17210.

1.4. Purpose. The purpose of this Agreement is for SDUSD to conduct and complete all necessary PEAs, remedial investigations, and response actions under the oversight of DTSC, at proposed and existing school sites, to determine, among other things, whether current or past hazardous material management practices or waste management practices have resulted in a release or threatened release of hazardous materials, or whether naturally occurring hazardous materials are present. The purpose of this Agreement is also for DTSC to obtain reimbursement from SDUSD for DTSC's oversight costs.

II.

BACKGROUND

2.1. Ownership. SDUSD owns or is in the process of acquiring all sites that are covered by this Agreement. Some of these sites are being acquired through eminent

domain proceedings.

2.2. History and Status. SDUSD is planning to construct up to 13 new schools over the next 5 years, requiring that SDUSD evaluate 2 to 3 locations for each proposed school, totaling 26 to 39 sites, in response to burgeoning school enrollments. The specific site history and status of each individual site shall be incorporated into individual PEA Reports.

2.3. Physical Description. The specific physical description for each site shall be incorporated into individual PEA Reports.

III.

AGREEMENT

3.0. **IT IS HEREBY AGREED THAT DTSC** will provide review, oversight, and approval of investigations and response activities conducted by SDUSD in accordance with Education Code Sections 17213.1 and 17213.2, and the Scope of Work (Exhibit C). SDUSD shall conduct the activities in the manner specified herein and in accordance with the schedule specified in Project Schedule (Exhibit D). All work shall be performed consistent with Chapter 6.8, Division 20 of the Health and Safety Code (commencing with Health and Safety Code Section 25300 et seq.), as amended; the National Contingency Plan (40 Code of Federal Regulations [CFR] Part 300), as amended; and U.S. EPA and DTSC Superfund guidance documents regarding site investigation and remediation

3.1. Scope of Work and DTSC Oversight. DTSC shall review, provide written

comments on, and approve SDUSD deliverables described in Exhibit C (Scope of Work) and other documents applicable to the scope of the project in accordance with the schedule provided in Exhibit D. DTSC shall provide oversight of field activities, including sampling and remedial activities, as appropriate. As part of the effort to expedite the review and approval of these sites, DTSC has agreed to review and comment on all environmental investigations that have been performed by SDUSD or its contractors at these proposed school sites. In some cases, DTSC may also review and comment on existing remedial systems, or previous investigations at existing school sites, which are currently occupied by students and staff. In order to ensure a timely and comprehensive review of the sites, SDUSD shall cause any and all background information for each of the sites to be submitted to DTSC for review and comment. All reports for sites to be reviewed shall be in the format of a PEA Report or PEA equivalent. For individual sites, if determined to be appropriate by DTSC, and if SDUSD elects to proceed with the site as a school, SDUSD shall prepare and submit a Remedial Investigation Feasibility Study (RI/FS) Workplan for review and approval. The results of the investigation will be used to determine the overall extent of contamination of both soil and groundwater at each of the sites and the necessary response actions required, if any. After these investigative activities are completed, if SDUSD elects to continue with the site for school use, and if determined to be necessary by DTSC, SDUSD shall prepare and submit a draft Removal Action Workplan (RAW) and/or draft Remedial Action Plan (RAP) for the site to DTSC for review and approval. Once a RAW and/or RAP is approved, SDUSD shall implement the RAW and/or RAP according to a schedule approved by DTSC.

3.2. Additional Activities. Additional activities may be conducted and DTSC oversight provided by amendment to this Agreement or Exhibits hereto in accordance with Paragraph 3.17. If DTSC expects additional oversight costs to be incurred related to these additional activities, DTSC will provide a written estimate of the additional oversight costs to SDUSD before the additional activities are undertaken, unless DTSC and SDUSD agree that the circumstances of the site make it impracticable to provide the estimate prior to performance of the additional activities.

3.3. Agreement Managers. Ms. Sharon Fair, Branch Chief, School Property Evaluation and Cleanup Division, is designated by DTSC as its Manager for this Agreement. Mr. L.M. Smith, Chief Operating Officer, San Diego Unified School District, is designated by SDUSD as its Manager for this Agreement. Each party to this Agreement shall provide at least ten (10) days advance written notice to the other of any change in its designated manager.

3.4. Notices and Submittals. All notices, documents and communications required to be given under this Agreement, unless otherwise specified herein, shall be sent to the respective parties at the following addresses in a manner that produces a record of the sending of the notice, document or communication such as certified mail, overnight delivery service, facsimile transmission or courier hand delivery service:

3.4.1. To DTSC:

Ms. Sharon Fair, Branch Chief
School Property Evaluation and Cleanup Division
Attn: Ms. Shawna Chambers
Department of Toxic Substances Control
1011 North Grandview Avenue
Glendale, California 91201

3.4.2. To SDUSD:

Mr. L.M. Smith, Chief Operating Officer
San Diego Unified School District
4860 Ruffner Street
San Diego, California 92111-1522

3.5. DTSC Review and Approval. If DTSC determines that any report, plan, schedule or other document submitted for approval pursuant to this Agreement fails to comply with this Agreement or fails to protect public health or safety or the environment, DTSC may (1) return comments to SDUSD with recommended changes; or (2) if agreed by the SDUSD, modify the document as deemed necessary and approve the document as modified.

3.6. Communications. All approvals and decisions made regarding submittals and notifications will be communicated to each party in writing by the other party's Agreement Manager or his/her designee. No informal advice, guidance, suggestions or comments by either party regarding reports, plans, specifications, schedules or any other writings shall be construed to relieve the party of the obligation to obtain such written approvals.

3.7. Endangerment During Implementation. In the event DTSC determines that any activity (whether or not pursued in compliance with this Agreement) may pose an imminent or substantial endangerment to the health and safety of people on the site or in the surrounding area or to the environment, DTSC may order SDUSD to stop further implementation of this Agreement for such period of time as may be needed to abate the endangerment.

3.8. Payment. In accordance with the requirements of Education Code Sections

17210.1 and 17213.1, SDUSD agrees to pay (1) all costs incurred by DTSC for review of documents submitted prior to the effective date of the Agreement, and (2) all costs incurred by DTSC in providing oversight pursuant to this Agreement, including review of the documents described in the Scope of Work (Exhibit C) and associated documents, and in providing oversight of field activities. An estimate of DTSC's oversight costs is attached as Exhibit E. It is understood by the parties that the Cost Estimate (Exhibit E) is an estimate and cannot be relied upon as the final cost figure. DTSC will provide SDUSD with quarterly invoices which contain a detailed accounting and supporting documentation of all expenditures during the previous quarter. DTSC will assign a site-specific CalStars Site Code for each site which is reviewed under this Agreement. In addition, an SDUSD "Master Agreement Code" shall be created to charge time spent on tracking and coordinating the review of all sites and to charge activities that would apply to multiple sites, i.e., the review and comment on a master generic Health and Safety Plan (HASP), Quality Assurance/Quality Control (QA/QC) Plan, and Public Participation Plan (PPP), as well as any routinely scheduled coordination meetings between DTSC and SDUSD where the status of a multitude of sites may be briefly discussed. SDUSD shall pay all DTSC costs within sixty days (60) days of receipt of the billing. Such billings will reflect any amounts that have been advanced to DTSC by SDUSD. DTSC will later reimburse SDUSD for any costs found to have been improperly billed pursuant to Paragraph 3.24.3 herein. If required by a decision for a billing dispute made pursuant to Paragraph 3.24.3, DTSC will reimburse SDUSD for any costs in accordance with that decision.

3.8.1. In anticipation of the services to be rendered, SDUSD shall make an advance payment of fifty percent (50%) of the estimate of DTSC's oversight costs set forth in Exhibit E. SDUSD shall make an advance payment of $67,000.00 to DTSC. That payment shall be made no later than ninety (90) days after this Agreement is fully executed. If SDUSD's advance payment does not cover all costs payable to DTSC under this Agreement, SDUSD agrees to pay the additional costs within sixty (60) days of receipt of a bill from DTSC.

3.8.2. If any bill is not paid by SDUSD within sixty (60) days after it is sent by DTSC, SDUSD may be deemed to be in material default of this Agreement.

3.8.3. All payments made by SDUSD pursuant to this Agreement shall be by warrant or cashier's check made payable to the "Department of Toxic Substances Control," and bearing on its face the docket number ("SDUSD Master Agreement, Docket Number HSA-A 01/02-034") of this Agreement. Payments shall be sent directly to:

Department of Toxic Substances Control
Accounting/Cashier
1001 I Street, 21st Floor
P.O. Box 806
Sacramento, California 95812-0806

A photocopy of the warrant or check shall be sent concurrently to DTSC's Agreement Manager.

3.8.4. If the advance payment exceeds DTSC's actual oversight costs, DTSC will provide an accounting for expenses and refund the difference within one hundred-twenty (120) days after completion of all activities for each individual site covered by this Agreement. In no other case shall SDUSD be entitled to a refund from DTSC or to

assert a claim against DTSC for any amount paid or expended under this Agreement. SDUSD has the right to conduct an independent audit of DTSC's oversight costs.

3.9. Condition Precedent. It is expressly understood and agreed that DTSC's receipt of SDUSD's advance payment, described in Paragraph 3.8.1, is a condition precedent to DTSC's obligation to provide oversight, review, comment, and/or approval on documents pursuant to this Agreement.

3.10. Record Retention. DTSC shall retain all cost records associated with the work performed under this Agreement for such time periods as may be required by applicable state law. DTSC shall maintain records of oversight activities as required by applicable state law. SDUSD may request to inspect all documents which support DTSC's cost determination in accordance with the Public Records Act, Government Code Section 6250 et seq.

3.11. Project Coordinator. The work performed by and on behalf of SDUSD pursuant to this Agreement shall be under the direction and supervision of a qualified project coordinator, which shall be an environmental assessor as, defined in Education Code Section 17210 (b). SDUSD shall submit: 1) the name and address of the project coordinator; and 2) in order to demonstrate the qualifications of an environmental assessor, the resume of the coordinator. SDUSD shall promptly notify DTSC of any change in the identity of the project coordinator. All engineering and geological work shall be conducted in conformance with applicable state law, including but not limited to, Business and Professions Code Sections 6735 and 7835.

3.12. Access. SDUSD shall provide, and/or use best efforts to obtain access to

each site and offsite area to which access is necessary to implement this Agreement. Such access shall be provided to DTSC's employees, contractors, and consultants at all reasonable times. Nothing in this paragraph is intended or shall be construed to limit in any way the right of entry or inspection that DTSC or any other agency may otherwise have by operation of any law. SDUSD gives it permission, to the extent it has authority to give such permission, to DTSC and its authorized representatives to enter and move freely about all property at each site at all reasonable times for purposes including, but not limited to: inspecting records, operating logs, sampling and analytic data, and contracts relating to the site; reviewing the progress of SDUSD in carrying out the terms of this Agreement; conducting such tests as DTSC may deem necessary; and verifying the data submitted to DTSC by SDUSD.

3.13. Sampling, Data and Document Availability. When requested by DTSC, SDUSD shall make available to DTSC, and shall provide copies of, all data and information concerning the presence, if any, of hazardous materials at each site, including technical records and contractual documents, sampling and monitoring information and photographs and maps, whether or not such data and information was developed pursuant to this Agreement, that is within SDUSD's possession or control.

3.14. Notification of Field Activities. SDUSD shall inform DTSC at least seven (7) days in advance of all field activities pursuant to this Agreement and shall allow DTSC and its authorized representatives to take duplicates of any samples collected by SDUSD pursuant to this Agreement. DTSC and SDUSD will agree to the most appropriate method of collecting the duplicate samples.

3.15. Notification of Environmental Condition. SDUSD shall notify DTSC's Agreement Manager immediately upon learning of any condition at any of the sites posing an immediate threat to public health or safety or the environment. Within seven (7) days of the onset of such a condition, SDUSD shall furnish a report to DTSC, signed by SDUSD's Agreement Manager, setting forth the events, which occurred, and the measures taken by or on behalf of SDUSD in response thereto.

3.16. Preservation of Documentation. SDUSD shall maintain a central repository of the data, reports, and other documents prepared pursuant to this Agreement. All such documents shall be preserved by SDUSD for a minimum of six (6) years after the conclusion of all activities carried out under this Agreement. If DTSC requests that some or all of these documents be preserved for a longer period of time, SDUSD shall either comply with that request, deliver the documents to DTSC, or permit DTSC to copy the documents prior to destruction. SDUSD shall notify DTSC in writing at least ninety (90) days prior to the expiration of the six-year minimum retention period before destroying any documents prepared pursuant to this Agreement. If any litigation, claim, negotiation, audit or other action involving the documents has been started before the expiration of the six-year period, the related records shall be retained until the completion and resolution of all issues arising therefrom or until the end of the six-year period, whichever is later.

3.17. Amendments. This Agreement may be amended or modified solely upon written consent of both parties. Such amendments or modifications may be proposed by any party and shall be effective the third business day following the day the last party

signs the amendment or modification. The last party signing the amendment or modification shall send notification of signing to the other party. The parties may agree to a different effective date.

3.18. Exhibits. All exhibits attached to this Agreement are incorporated herein by this reference.

3.19. Time Periods. Unless otherwise specified, time periods begin from the date this Agreement is fully executed, and "days" means calendar days. "Business days" means all calendar days that are not weekends or official State holidays.

3.20. SDUSD Liabilities. Nothing in this Agreement shall constitute or be considered a satisfaction or release from liability for any condition or claim arising as a result of SDUSD's past, current, or future operations. Nothing in this Agreement is intended to be construed to limit the rights of any of the parties with respect to claims arising out of or relating to the deposit or disposal at any other location of substances removed from any of the sites covered by this Agreement. By entering into this Agreement, SDUSD does not assume any liability for contamination on any site as it exists on the effective date of this Agreement. SDUSD shall not be deemed to be an operator of any site under state or federal law solely by reason of conducting environmental investigations subject to DTSC oversight in compliance with this Agreement. Nothing in this Agreement commits SDUSD to remediate a site that it sells or assigns to others for other than school use. If investigations indicate that offsite sources are responsible for impacts on existing school sites, DTSC, at its discretion, may assist SDUSD in requiring responsible parties to address these impacts.

3.21. Government Liabilities. The State of California, by issuance of this Agreement, assumes no liability for any injuries or damages to persons or property resulting from acts or omissions by SDUSD or its directors, officers, employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Agreement. Neither DTSC nor the State of California may be deemed to be a party to any contract entered into by SDUSD or its directors, officers, employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Agreement.

3.22. Third-Party Actions. In the event that SDUSD is a party to any suit or claim for damages or contribution relating to any site to which DTSC is not a party, SDUSD shall notify DTSC in writing within ten (10) days after service of the complaint in the third-party action. SDUSD shall pay all costs incurred by DTSC relating to such third-party actions, including but not limited to responding to subpoenas.

3.23. Reservation of Rights. DTSC and SDUSD reserve the following rights.

3.23.1. DTSC reserves its right to pursue cost recovery under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, the California Health and Safety Code Section 25360, and any other applicable section of the law, except as set forth in Paragraph 3.21 of this Agreement.

3.23.2. Nothing in this Agreement is intended or shall be construed to limit or preclude DTSC from taking any action authorized by law or equity to protect public health and safety or the environment and recovering the costs thereof.

3.23.3. Nothing in this Agreement shall constitute or be construed as a waiver of

SDUSD's rights (including any covenant not to sue or release) with respect to any claim, cause of action, or demand in law or equity that SDUSD may have against any "person", as defined in Section 101(21) of CERCLA, or Health and Safety Code Section 25319, that is not a signatory to this Agreement.

3.23.4. By entering into this Agreement, SDUSD does not admit to (nor does DTSC allege) any fact, fault or liability under any statute or regulation.

3.24. Dispute Resolution. If SDUSD disputes a DTSC billing, or any part thereof, SDUSD shall notify DTSC's assigned project manager and attempt to informally resolve the dispute with DTSC's project manager and branch chief. If SDUSD desires to formally request dispute resolution with regard to the billing, SDUSD shall file a request for dispute resolution in writing within 45 days of the date of receiving the bill in dispute. The written request shall describe all issues in dispute and shall set forth the reasons for the dispute, both factual and legal. The written request shall be sent to:

Special Assistant for Cost Recovery and Reimbursement Policy
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806

A copy of the written request for dispute resolution shall also be sent to the person designated by DTSC to receive submittals under this Agreement. A decision on the billing dispute will be rendered by the Special Assistant for Cost Recovery and Reimbursement Policy or other DTSC designee.

3.24.1. The existence of a dispute shall not excuse, stay, or suspend any other compliance obligation or deadline required pursuant to this Agreement.

3.25. Compliance with Applicable Laws. Nothing in this Agreement shall relieve

DTSC or SDUSD from complying with all applicable laws and regulations, and DTSC and SDUSD shall conform all actions required by this Agreement with all applicable federal, state and local laws and regulations.

3.26. California Law. This Agreement shall be governed, performed and interpreted under the laws of the State of California.

3.27. Severability. If any portion of this Agreement is ultimately determined not to be enforceable, that portion will be severed from this Agreement and the severability shall not affect the enforceability of the remaining terms of this Agreement.

3.28. Parties Bound. This Agreement applies to and is binding, jointly and severally, upon each signatory and its officers, directors, agents, receivers, trustees, heirs, executors, administrators, successors, and assigns, and upon any successor agency of the State of California that may have responsibility for and jurisdiction over the subject matter of this Agreement. No change in the ownership or corporate or business status of any covered facility or site shall alter any signatory's responsibilities under this Agreement.

3.29. Effective Date. The effective date of this Agreement is the date when this Agreement is fully executed.

3.30. Representative Authority. Each undersigned representative of the parties to this Agreement certifies that she or he is fully authorized to enter into the terms and conditions of this Agreement and to execute and legally bind the parties to this Agreement.

3.31. Counterparts. This Agreement may be executed and delivered in any

number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.

//

Date: 4/5/02

Ms. Sharon Fair
Branch Chief
School Property Evaluation and Cleanup Division
Department of Toxic Substances Control

Date: 3/14

Mr. L.M. Smith
Chief Operating Officer
San Diego Unified School District

LEGALITY AND FORM APPROVED

TAD SETH PARZEN, Assistant General Counsel
San Diego Unified School District

Approved in public meeting of the Board of Education of the San Diego Unified School District on 3/12/02

Cheryl Ward, Board Action Officer, Board of Education

LIST OF EXHIBITS

A - LIST OF PROPOSED SCHOOL SITES

B - LIST OF EXISTING SCHOOL SITES

C - SCOPE OF WORK

D - PROJECT SCHEDULE

E - COST ESTIMATE

Exhibit A

LIST OF PROPOSED SCHOOL SITES

SDUSD Proposed School Sites

Project Name	***Priority***
Temporary EBS ES	
52nd Street ES	
Brooklyn/Kimbrough Area ES	
Central Area ES	X
Winona Area ES	X
Edison, Hamilton, Parks Area ES	
King/Logan/Perkins Area ES	X
Sherman Area ES	
Adams/Franklin Area ES	
Mason/Hage Area ES	
Kennedy/Knox Area ES	
Scripps Ranch MS	X
Undesignated ES	

Exhibit B

LIST OF EXISTING SCHOOL SITES

SDUSD Existing School Sites

Project Name	***Priority***
Lincoln Area HS	X
Burbank ES	
Mead ES	

Exhibit C

SCOPE OF WORK

EXHIBIT C

SCOPE OF WORK

The purpose of the Scope of Work is to identify a process for completing remedial work at the various sites in a manner, which ensures the safety of students, school personnel and the adjoining community. The following Tasks may be completed as part of this Agreement depending upon site-specific considerations. Final selection of Tasks for each site will occur during the course of the Project as determined appropriate and/or necessary by DTSC.

TASK 1. Submittal of Existing Data.

For each site, SDUSD shall submit to DTSC, if relevant and available, all background information, sample analysis results, environmental assessment reports, and any other information pertinent to the hazardous materials management and/or release, characterization and cleanup of the site not previously submitted as part of the Phase I Environmental Site Assessment reviewed by DTSC. DTSC will review the information, and in consultation with SDUSD, identify areas and media of concern, and determine the additional work, if any, required to complete the assessment of the site. This information may be submitted as appendices to the Preliminary Endangerment Assessment (PEA) Workplan for the site.

TASK 2. Preliminary Endangerment Assessment (PEA)

SDUSD shall conduct a PEA to determine whether a release or threatened release of hazardous materials exists at the site, or whether naturally occurring hazardous materials are present, which pose a threat to children's health and learning abilities, public health or the environment. The PEA shall be conducted in accordance with the DTSC guidance manual for evaluating hazardous substance release sites, titled: "Preliminary Endangerment Assessment Guidance Manual," State of California, Environmental Protection Agency, Department of Toxic Substances Control (January 1994). Documents which may be required as part of the PEA are:

(A) PEA Workplan. This Workplan shall include a sampling plan designed to determine the presence of contamination or naturally occurring hazardous materials at the site, and, if present, the type and extent of the materials or contamination; a health and safety plan addressing health and safety issues and safe work practices; and a quality assurance/quality control plan to produce data of known quality.

(B) Final Draft PEA Report. This report will document whether a release has occurred or exists, or whether naturally occurring hazardous materials are present, the threat the site poses to children's health and learning abilities, public health and the environment, and whether further action is necessary.

(C) SDUSD shall comply with the public participation requirements set forth in California Education Code Section 17213.1(a)(6). Comments pertaining to the final draft PEA shall be submitted to DTSC immediately.

(D) Final PEA Report. A final PEA report shall be submitted to DTSC upon completion of public participation requirements set forth in California Education Code Section 17213.1(a)(6) that includes any DTSC required revisions upon completion of the required public comment period on the final draft PEA.

TASK 3. Remedial Investigation/Feasibility Study (RI/FS).

If determined to be necessary by DTSC, the RI/FS shall be conducted consistent with the U.S. Environmental Protection Agency's Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA, October 1988, (EPA/540-G-89/004).

3.1. Remedial Investigation/Feasibility Study Objectives.
The objectives of the RI/FS are to:

(A) Characterize the extent of hazardous substance contamination at the site;
(B) Identify existing and potential migration pathways, including the direction, rate and dispersion of contaminant migration;
(C) Analyze the baseline health risks to help determine the need for action at the site;
(D) Determine levels of chemicals that can remain onsite and still be adequately protective of human health; and
(E) Evaluate feasible remedial alternatives.

3.2. Remedial Investigation/Feasibility Study Workplan. A draft RI/FS Workplan will be submitted to DTSC for review and approval. Following approval by DTSC, SDUSD will implement the Workplan in accordance with an approved implementation schedule. DTSC may provide oversight of the Workplan implementation.

3.3. Remedial Investigation/Feasibility Study Report. SDUSD will submit a draft RI/FS Report which summarizes the results of the remedial investigation and an examination of remedial action alternatives, including a final baseline health risk assessment report. This report will be submitted to DTSC within one month of completion of all field work. The report will include:

(A) Site background information, including physical characteristics and site history;
(B) Sources of contamination;
(C) Summary of investigation, discussing all media investigated (i.e., soil, geology, groundwater, surface water, air, biota);
(D) Nature and extent of contamination;
(E) Description of the current situation;
(F) Description of remedial action technologies;
(G) Screening of remedial action technologies;
(H) Analysis of remedial action alternatives; and
(I) Recommended remedial action.

The Report will be signed by a California-registered geologist (RG) or professional engineer (PE) and submitted to DTSC for review and approval.

TASK 4. Health-Based Risk Assessment.

A scoping meeting may be held to discuss how the risk assessment will be conducted for each site. SDUSD will then prepare and submit a Health-Based Risk Assessment (HRA) report for DTSC review and approval. The report will be prepared consistent with U. S. EPA Risk Assessment Guidance for Superfund (EPA/540/1-89/002) and DTSC Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities. The HRA report must include the following components:

(A) Contaminant identification;
(B) Exposure assessment;
(C) Toxicity assessment;
(D) Risk characterization;
(E) Environmental evaluation; and
(F) Soil, surface water and groundwater remediation goals.

TASK 5. Removal Action Workplan.

If DTSC determines that a removal action is appropriate, SDUSD will prepare a draft Removal Action Workplan (RAW) for DTSC review and approval. The RAW shall be based upon the approved RI/FS Report and will include an implementation schedule and:

(A) A description of the site contamination;
(B) The goals to be achieved by the removal action;
(C) An analysis of the alternative options considered and rejected and the basis for that rejection. This should include a discussion for each alternative which covers its effectiveness, implementability and cost;
(D) Administrative record list; and
(E) A statement that the RAW serves as an equivalent document to the Engineering Evaluation/Cost Analysis document required by the National Contingency Plan.

If the proposed removal action requires preparation of a Remedial Action Plan (RAP), SDUSD will prepare a draft RAP for DTSC review and approval.

TASK 6. Remedial Action Plan.

If determined to be appropriate by DTSC, SDUSD shall prepare a draft Remedial Action Plan (RAP) for DTSC review and approval. The RAP shall be based upon the approved RI/FS Report, and will specify the appropriate steps to remediate soil, surface water and groundwater contamination at the site and adjacent areas. In addition, the RAP shall include a schedule for the implementation of all proposed remedial actions.

TASK 7. Implementation of the Final RAP.

Upon DTSC issuance of the RAP and schedule, SDUSD shall implement the final RAP as approved.

TASK 8. Public Participation.

SDUSD shall work cooperatively with DTSC to ensure that the affected and interested public and community are involved in DTSC's decision-making process. SDUSD shall conduct appropriate public participation activities given the nature of the community surrounding an individual site and the level of community interest. Any such public participation activities shall be conducted in accordance with Assembly Bill 2644, the DTSC Public Participation Policy and Procedures Manual, and with DTSC's review and approval.

8.1. Public Notice during the PEA. SDUSD shall provide a notice to residents in the immediate area prior to initiating any field work.

8.2. Public Review and Comment before CEQA. If SDUSD's approved environmental documents (Environmental Impact Report (EIR) or Negative Declaration), prepared pursuant to the California Environmental Quality Act (CEQA), are not available until more than 90 days after the final draft PEA is approved, SDUSD can conduct public review and comment of the final draft PEA before CEQA. SDUSD must separately publish a notice of the availability of the final draft PEA for public review in a local newspaper of general circulation, within 60 days of DTSC approval of the final draft PEA. SDUSD shall hold a public hearing for both the final draft PEA report and final draft CEQA document. All public comments received by SDUSD pertaining to the final draft PEA and draft CEQA document shall be forwarded to DTSC immediately for consideration in the final PEA approval.

8.3. Public Review and Comment with CEQA Process. After DTSC approves the final draft PEA, if SDUSD elects to proceed with the site acquisition or construction project, SDUSD must make the final draft PEA available to the public on the same basis and at the same time the draft EIR or Negative Declaration, pursuant to the CEQA requirements for the school site, are made available. SDUSD shall hold a public hearing for both the final draft PEA report and the final draft CEQA document. All public comments received by SDUSD pertaining to the final draft PEA shall be forwarded to DTSC immediately for consideration in the final PEA approval.

8.4. Public Review and Comment after CEQA. If SDUSD has previously complied with CEQA prior to initiating the PEA, SDUSD must reconsider the adequacy of its approved environmental documents (EIR and Negative Declaration) with respect to the information provided in the approved final draft PEA. SDUSD must then hold a public hearing on both the final draft PEA and SDUSD's determination as to the adequacy of the existing CEQA documents. All public comments pertaining to the final draft PEA and the CEQA documents shall be forwarded to DTSC immediately for consideration in the final PEA approval.

8.5. Public Review and Comment for No Further Action PEA: If DTSC determines that further investigation of the site is not required, DTSC will notify the California Department of Education (CDE) and the SDUSD of its approval of the Draft Final PEA. SDUSD must hold a 30-day public review and comment period. Following the public review, SDUSD must hold a public hearing for the final draft PEA. All public comments pertaining to the final draft PEA shall be forwarded to DTSC immediately for consideration in the final PEA approval.

8.6. Public Review and Comment for Further Action PEA: SDUSD shall publish, in a major local newspaper(s), a public notice announcing the availability of the RAW/RAP for public review and comment. The public comment period shall last a minimum of thirty (30) days. DTSC may require that SDUSD hold at least one public meeting to inform the public of the proposed activities and to receive public comments on the RAW/RAP. Within two (2) weeks of the close of the public comment period, SDUSD shall prepare and submit to DTSC a draft response to the public comments received. If appropriate, SDUSD will revise the RAW/RAP on the basis of comments received from the public, and submit the revised RAW/RAP to DTSC for review and approval. SDUSD will also notify the public of any significant changes from the action proposed in the RAW/RAP.

TASK 9. California Environmental Quality Act (CEQA).

Based upon the results of the draft Initial Study, DTSC will prepare the necessary CEQA documents. If required, SDUSD shall submit the information necessary for DTSC to prepare these documents.

TASK 10. Operation and Maintenance (O&M).

SDUSD shall comply with all operation and maintenance requirements in accordance with the final RAW, final RAP, and/or Remedial Design Implementation Plan. SDUSD shall enter into an O&M Agreement, which includes financial assurance, with DTSC prior to certification of the site.

TASK 11. Discontinuation of Remedial Technology.

Any remedial technology employed in implementation of the final RAW/RAP shall be left in place and operated by SDUSD until and except to the extent that DTSC authorizes the SDUSD in writing to discontinue, move or modify some or all of the remedial technology because SDUSD has met the criteria specified in the final RAW/RAP for its discontinuance, or because the modifications would better achieve the goals of the final RAW/RAP.

TASK 12. Quality Assurance/Quality Control (QA/QC) Plan.

All sampling and analysis conducted by SDUSD under this Agreement shall be performed in accordance with a QA/QC Plan submitted by SDUSD and approved by

DTSC. The QA/QC Plan will describe:

(A) the procedures for the collection, identification, preservation and transport of samples;

(B) the calibration and maintenance of instruments;

(C) the processing, verification, storage and reporting of data, including chain of custody procedures and identification of a qualified person(s) conducting the sampling and of a laboratory certified or approved by DTSC pursuant to Health and Safety Code Section 25198; and

(D) how the data obtained pursuant to this Agreement will be managed and preserved in accordance with the Preservation of Documentation section of this Agreement.

TASK 13. Health and Safety Plan.

SDUSD will submit a Site Health and Safety Plan (HASP) in accordance with California Code of Regulations, Title 8, Section 5192 and DTSC guidance, which covers all measures, including contingency plans, which will be taken during field activities to protect the health and safety of the workers at the site and the general public from exposure to hazardous waste, substances or materials. The HASP should describe the specific personnel, procedures and equipment to be utilized.

Exhibit D

PROJECT SCHEDULE

EXHIBIT D

SDUSD MASTER AGREEMENT PROJECT SCHEDULE

This schedule is intended to be a guide for the implementation of oversight by DTSC for the multiple sites covered by this Agreement noting only major milestones. Site specific needs and individual tasks not identified may affect the implementation time line for any given site. Additional scheduling of specific tasks and/or sub-tasks not outlined is to be determined, coordinated and left to the discretion of the Agreement Managers and Project Managers for SDUSD and DTSC.

TASK	TIME LINE
Agreement Execution	October 2001
SDUSD to submit all background information, sample analysis results, environmental assessment reports, and any other pertinent information related to the hazardous waste management and/or release, characterization and cleanup for each of the proposed school sites and for any existing school site which SDUSD wishes to have DTSC review. At a minimum, these submittals shall be in the Preliminary Endangerment Assessment (PEA) Report format.	All sites should be submitted in an orderly, systematic and timely fashion according to a schedule agreed to by both parties. Sites should be submitted in a staggered fashion so as not to place an undue burden on available DTSC resources at any given time.
DTSC to review and comment on the PEA or equivalent report(s) or other applicable documents for each site and determine what additional work, if any, needs to be conducted to further characterize or remediate the site.	Within 30 days of submittal of all site-specific background information and/or a PEA Report (or equivalent). Meeting this time line is contingent upon the availability of DTSC resources and the workload already placed upon it by previous SDUSD submittals.
If determined to be necessary by DTSC, SDUSD will submit a site-specific Sampling and Analysis Plan (SAP) to further characterize a site.	Within 30 days of notification by DTSC that additional sampling will be necessary.
DTSC to review and comment on SAP	Within 30 days of receipt of a draft SAP.

If determined to be necessary by DTSC, SDUSD will submit a site-specific Remedial Investigation and/or Feasibility Study (RI/FS) Workplan. Note: A Feasibility Study may be incorporated or drafted separately from the RI Workplan depending upon site specific needs. If necessary, SDUSD will submit PPPs, QA/QC Plans, and HASPs as well.	Within 30 days of receiving comments from DTSC that a RI/FS Workplan (or any of the other specified tasks) will be required.
DTSC to review and comment on draft RI/FS Workplan	Within 30 days of receiving draft RI/FS Workplan
SDUSD to incorporate changes and finalize RI/FS Workplan	As required
SDUSD to begin implementation of approved RI/FS Workplan	Within 15 days of DTSC's approval of RI/FS Workplan
SDUSD to submit draft RI/FS Report	Within 30 days of completion of field activities
DTSC to review and comment on draft RI/FS Report	Within 30 days of receiving draft RI/FS Report
SDUSD to incorporate changes and finalize Report	As required
If a Health Risk Assessment (HRA) was not previously conducted, or if a HRA was not incorporated into the PEA Report, SDUSD shall submit a draft HRA	Within 30 days of completion of field activities or within 30 days of notification by DTSC that a HRA will be required.
DTSC to review and comment on a site-specific draft HRA	Within 30 days of receiving draft HRA
If necessary (based upon final RI/FS Reports), SDUSD is to submit a draft RAP along with any requested information for the CEQA initial study	Within 30 days of DTSC's approval of final RI/FS Report
DTSC to review and comment on draft RAP. Draft RAP is public noticed and opened for 30-day comment period	Within 30 days of receiving draft RAP
SDUSD to incorporate changes and finalize RAP	As required
SDUSD to implement RAP	Within 15 days of DTSC's approval of RAP

SDUSD to submit draft RAP Implementation Report	Within 30 days of completion of remedial activities
If necessary, SDUSD to submit draft Operation and Maintenance Plan	Within 30 days of completion of remedial activities
DTSC to prepare Certification Package	Within 30 days of approval of Implementation Report and execution of O&M Agreement

Site-specific scheduling is to be determined by site-specific needs. At any step in the process, DTSC may make a determination that any of the sites reviewed require "No Further Action". This will be based upon a review of the available information, the materials present, the potential routes of exposure and the ability of DTSC to independently support the conclusion that the site does not pose a threat to public health and/or the environment.

Exhibit E

COST ESTIMATE

EXHIBIT E

COST ESTIMATE WORKSHEET

MASTER OVERSIGHT AGREEMENT

Project Name: SDUSD MASTER AGREEMENT
Site Code: 404271-11

Title	VCP Coord.	Project Manager		Supervisor		Toxicology	Geology	Industrial Hygiene	HQ Engring	Public Particip	HQ CEQA	Legal	Clerical
Classification	HSS	HSS	HSE	HSSI	HSEII	Staff Toxicologist	Eng Geol.	Assoc IH	HSE	PPS	AEP	Staff Counsel	WPT
TASK: Agreement Prep./Negotiation													
Review Existing Data													
Scoping Documents: HASP/SAP/QAP													
Review and Comment on Preliminary Endangerment Assessment (PEA) Reports, PEA Workplans and other general project oversight			520	104		260	208						52
Remedial Investigation/ Feasibility Study (RI/FS)		*		*	*	*	*						
- Workplan		*		*	*	*	*						
- Implementation		*		*	*	*	*						
- Report		*		*	*	*	*						
Risk Assessment													
Public Participation		*		*	*	*	*			52			
CEQA													
Removal Action Workplan		*		*	*	*	*						
Implement Removal Action													
Design													
Remedial Action Plan (RAP)		*		*	*	*	*						
Certification													
Deed Restriction													
Operation & Maint													
Total No. Hours/Class	0	0	520	104	0	260	208	0	0	52	0	0	52
Hourly Rate/Class	100	100	111	115	121	135	105	104	111	93	96	138	52
Cost/Class	0	0	57720	11960	0	35100	21840	0	0	4836	0	0	2704
Grand Total Cost	$134,160												

* These activities may be required for some sites, but the estimated costs have not been incorporated into this estimate. If necessary, a separate site-specific cost estimate may be prepared.

August 23, 2011
Revised August 25, 2011
Project No. 105338071

Mr. Shahir Haddad
Supervising Engineer
Department of Toxic Substances Control
Schools Unit – Cypress Office
5796 Corporate Avenue
Cypress, California 90630

Subject: Revised Technical Memorandum Work Plan
Burned Waste Assessment
Clairemont High School
4150 Ute Drive
San Diego, California

Dear Mr. Haddad:

On behalf of the San Diego Unified School District (SDUSD), Ninyo & Moore has prepared this Technical Memorandum Work Plan to perform an assessment of burned waste encountered at Clairemont High School (site). The scope of this work plan is based on discussions with the SDUSD and California Environmental Protection Agency, Department of Toxic Substances Control (DTSC).

SITE DESCRIPTION AND BACKGROUND

The site is located at 4150 Ute Drive in the city of San Diego, California (Figure 1) and has been occupied by Clairemont High School since its construction in approximately 1960. The site property is approximately 44 acres and consists of school and administration buildings located on the northern portion of the property and athletic fields, hard courts, parking lots, and an undeveloped area of land on the southern portion of the property (Figure 2).

On July 21, 2011 a contractor excavating utility trenches in a paved parking lot at the southern end of the site along Ute Drive encountered a deposit of burned waste (Figure 2). At the request of the SDUSD, Ninyo & Moore personnel visited the site to dcoument the presence of the burned

waste. The burned waste was observed to start approximately 20 feet from the southwestern end of the trench and extend approximately 100 feet northeast along the length the trench before it terminated. The burned waste was observed from approximately 0.5 to 1 foot below the asphalt/concrete and base layer to the total depth of the trench at approximately 4 feet below ground surface (bgs). The material excavated from the trench was placed into an approximately 20 cubic yard soil stockpile at the site. The material in the excavation and in the stockpile was observed to contain broken glass/ceramics and some metal debris.

Two soil samples were collected from within the burned waste inside of the trench and two soil samples were collected from within the soil stockpile. The samples were analyzed for Title 22 Metals by the United States Environmental Protection Agency (USEPA) test method 6010B/7471. The results indicate that the material contains elevated concentrations of cadmium, chromium, copper, lead, and zinc (Table 1). Additional analysis for soluble metals was performed for waste characterization purposes and based on the results, the material would be characterized as a California-hazardous waste for lead.

OBJECTIVES

The objective of this assessment is to evaluate the extent and chemical characteristics of burned wastes at the site.

SCOPE OF WORK

Specific tasks are listed below.

- Conduct historical research of the site, including a review of historical aerial photographs, as-built construction plans, in-house/online resources, and a review of records at the City of San Diego Local Enforcement Agency, if applicable.
- Prepare a site-specific Health & Safety Plan that addresses worker safety associated with field activities.
- Prepare a brief notification letter generally describing the planned assessment activities, dates the work will be performed and contact information; and distribute to residents of adjacent properties.

- Nofity Underground Service Alert, a public utility locator, of the proposed excavation area a minimum of 48 hours before field activities and provide a licensed geophysical surveyor to clear the parking lot area for underground utility conflicts.

- Provide equipment and a licensed subcontractor to excavate and backfill exploratory trenches. The actual number of exploratory trenches is not known at this time; however, for purposes of this proposal, we have assumed that 8 to 12 areas will be explored. The trench locations will be selected based upon information obtained from historic aerial photographs, topographic maps, and grading /building plans. However, the trenches will be placed both north-south and east-west trending and will be placed around the perimeter of the existing trench with observed burned waste. The selection of trench locations will be performed by or under the supervision of a California Registered Professional Geologist or Engineer.

- Two to three soil samples will be collected from each trench based upon observations made in the field. If possible, one sample will be collected within the burned waste and one sample will be collected in the native material underlying the waste.

- One soil sample from each trench will be analyzed for Title 22 metals by USEPA test method 6010B/7471A and one to two additional samples from each trench will be analyzed for total lead by USEPA test method 6010B. The two samples with the highest lead concentration will be additionally analyzed for dioxins and furans by USEPA test method 8280.

- Soil samples, those known or suspected of containing the highest lead or other metal concentrations, will be additionally analyzed for total petroleum hydrocarbons extended range by USEPA test method 8015(M)B, semi-volatile organic compounds (SVOCs) by USEPA test method 8270C, volatile organic compounds by USEPA test 8260B, polychlorinated biphenyls by USEPA test method 8082, or ganochlorine pesticides by USEPA test method 8081A, and pH by USEPA test method 9045C, as required by the accepting disposal facility or as needed.

- Samples with metals concentrations that exceed 10 times the soluble threshold limit concentration will be analyzed for those metals by the waste extraction test (WET) method, as required by the accepting disposal facility or as needed.

- Samples with metals concentrations that exceed 20 times the toxicity characteristic leaching procedure (TCLP) limit will be analyzed for those metals by the TCLP, as required by the accepting disposal facility or as needed..

- Two duplicate soil samples and one equipment blank sample will be analyzed for Title 22 metals and SVOC by the methods described above.

- Collect five background soil samples at locations believed to be unimpacted by the burned waste. Samples will either be collected from the excavated trenches or from other locations in the site vicinity using hand methods (e.g., shovel, hand auger, etc.).

- Analyze the five background samples for Title 22 metals by USEPA test method 6010B/7471.

- Backfill the trenches with excavated materials in the approximate reverse order excavated.
- Stockpile excess excavated material that cannot be placed back in trenches.
- Provide transportation and disposal for soil generated by the utility contractor and excess excavated material generated during this assessment as California Hazardous waste.
- Prepare a report that documents field methodologies and summarizes findings. Analytical results and sampling locations will be presented in tabular and graphic formats. The report will include photographs, trench logs, laboratory analytical reports, and other relevant data.

SCHEDULE

Upon receiving authorization to proceed from SDUSD and approval of this Technical Memorandum from DTSC, Ninyo & Moore will immediately commence the scope of services described herein. The District's goal is to complete the trench excavation, backfilling, and repaving operations prior to the start of the 2011/2012 school year on September 6.

We trust that this work plan satisfies your current requirements.

Sincerely,
NINYO & MOORE

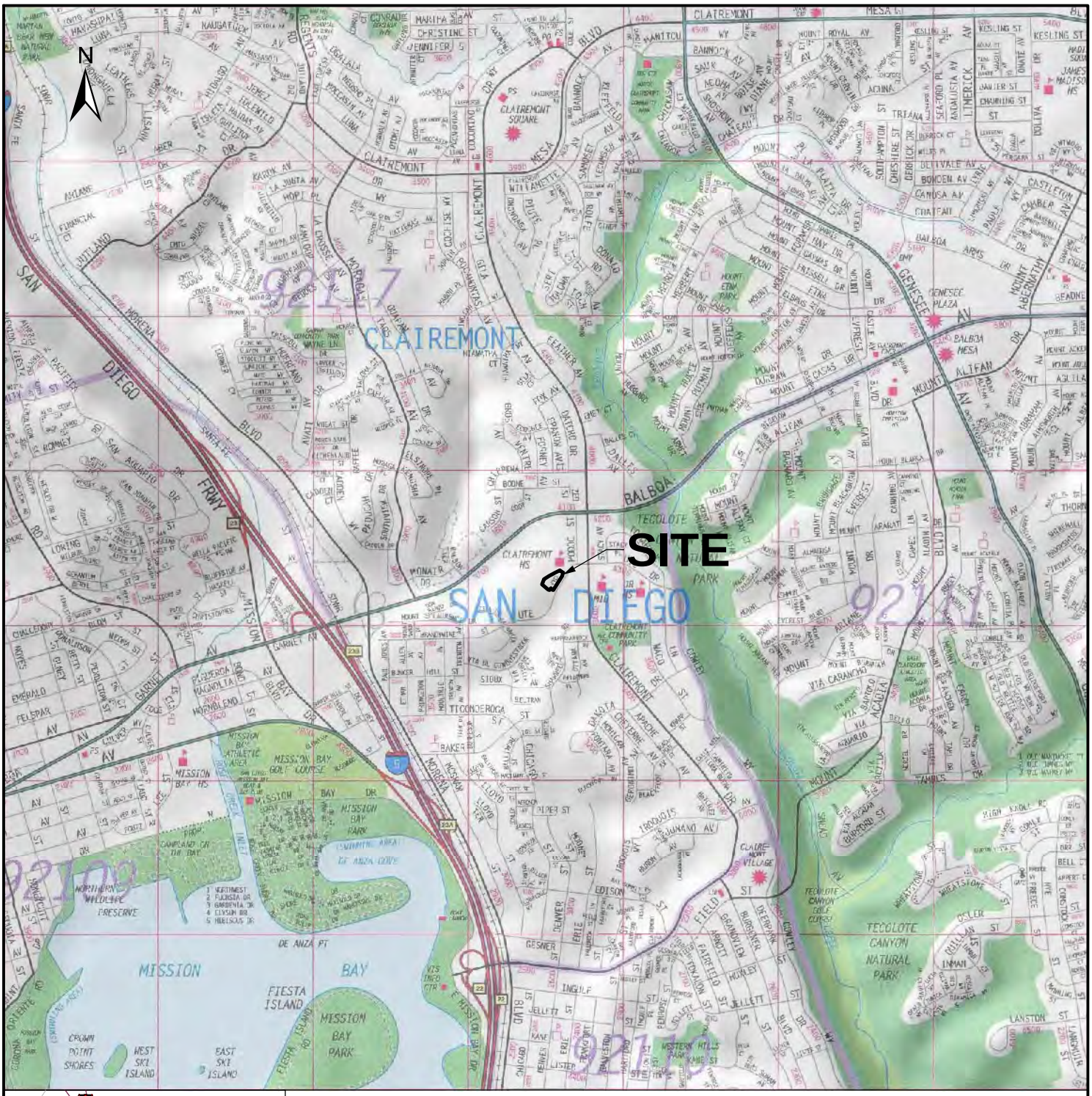
Lisa Bestard, REA
Senior Project Environmental Scientist

Beth S. Abramson-Beck, PG 4580
Principal Geologist

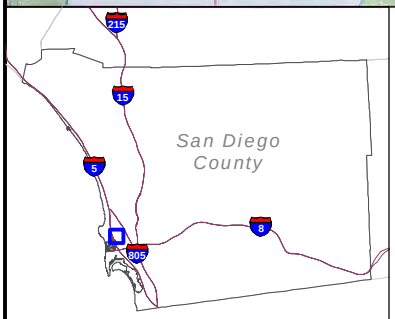
LB/SB/

Attachments: Figure 1 – Site Location
Figure 2 – Site Plan
Table 1 – Summary of Detected Title 22 Metals Results
Attachment A – Laboratory Analytical Report

Distribution: (1) Addressee
(1) Mr. Loren Chico
(1) Mr. James Watts, SDUSD (electronic)
(1) Ms. Jaquelyn Adams, City of San Diego Solid Waste Local Enforcement Agency, 1010 Second Avenue, Suite 600, MS 606L, San Diego, California 92101-4998



SOURCE: 2008 Thomas Guide for San Diego County, Street Guide and Directory; Map © Rand McNally, R.L.07-S-129



MAP EXTENT

SCALE IN FEET

0 1,200 2,400 4,800

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

Ninyo & Moore		SITE LOCATION	FIGURE
PROJECT NO.	DATE	CLAIREMONT HIGH SCHOOL 4150 UTE DRIVE SAN DIEGO, CALIFORNIA	1
105338069	8/11		

S:\ArcGIS\Projects\100000_SD\105000-105999\105338_SDUSD\069\fig1_105338069_sl.mxd 8/23/2011 2:45:02 PM JDL

SOURCE: Aerial Imagery - ©2011 Pictometry International Corp.

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

SCALE IN FEET

0 50 100 200

Ninyo & Moore		SITE PLAN	FIGURE
PROJECT NO.	DATE	CLAIREMONT HIGH SCHOOL 4150 UTE DRIVE SAN DIEGO, CALIFORNIA	2
105338069	8/11		

S:\ArcGIS\Projects\100000_SD\105000-105999\105338_SDUSD\069\fig1_105338069_sp.mxd 8/23/2011 2:49:56 PM JDL

Table 1 - Summary of Detected Title 22 Metals Results

Sample ID	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Chromium WET (mg/l)	Chromium TCLP (mg/l)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Lead WET (mg/l)	Lead TCLP (mg/l)	Molybdenum (mg/kg)	Mercury (mg/kg)	Nickel (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	Zinc WET (mg/l)
SP1	9.5	19	700	10	120	ND	ND	8.5	460	980	--	0.34	3.5	0.26	84	26	2,800	200
SP2	10	21	860	12	50	--	--	11	550	1,600	42	0.20	3.5	0.30	41	23	2,800	--
T1	2.7	5.7	460	6.3	13	--	--	3.4	130	310	--	0.36	ND	ND	9.2	9.3	900	--
T2	12	11	130	3.5	17	--	--	4.7	150	1,000	--	0.85	3.4	ND	24	13	230	--

Notes:

-- - not anlayzed

mg/kg - milligrams per kilogram

mg/l - milligrams per liter

ND - not detected at or above the method detection limit.

ATTACHMENT A

LABORATORY ANALYTICAL REPORT

August 05, 2011

Lisa Bestard
Ninyo & Moore
5710 Ruffin Road
San Diego, CA 92123
TEL: (858) 576-1000
FAX: (858) 576-9600

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 119242

RE: Clairemont H.S., 105338069

Attention: Lisa Bestard

Enclosed are the results for sample(s) received on August 02, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *05-Aug-11*

CLIENT: Ninyo & Moore
Project: Clairemont H.S., 105338069
Lab Order: 119242
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
119242-001A	SP1	Solid	7/21/2011 2:35:00 PM	8/2/2011	8/5/2011
119242-002A	SP2	Solid	7/21/2011 2:35:00 PM	8/2/2011	8/5/2011
119242-003A	T1	Solid	7/21/2011 2:30:00 PM	8/2/2011	8/5/2011
119242-004A	T2	Solid	7/21/2011 2:30:00 PM	8/2/2011	8/5/2011

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *05-Aug-11*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	SP1
Lab Order:	119242	**Collection Date:**	7/21/2011 2:35:00 PM
Project:	Clairemont H.S., 105338069	**Matrix:**	SOLID
Lab ID:	119242-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_110804A	QC Batch: 74718			PrepDate:	8/4/2011	Analyst: **CBB**
Antimony	9.5	2.0		mg/Kg	1	8/4/2011 01:49 PM
Arsenic	19	1.0		mg/Kg	1	8/4/2011 01:49 PM
Barium	700	1.0		mg/Kg	1	8/4/2011 01:49 PM
Beryllium	ND	1.0		mg/Kg	1	8/4/2011 01:49 PM
Cadmium	10	1.0		mg/Kg	1	8/4/2011 01:49 PM
Chromium	120	1.0		mg/Kg	1	8/4/2011 01:49 PM
Cobalt	8.5	1.0		mg/Kg	1	8/4/2011 01:49 PM
Copper	460	2.0		mg/Kg	1	8/4/2011 01:49 PM
Lead	980	1.0		mg/Kg	1	8/4/2011 01:49 PM
Molybdenum	3.5	1.0		mg/Kg	1	8/4/2011 01:49 PM
Nickel	84	1.0		mg/Kg	1	8/4/2011 01:49 PM
Selenium	ND	1.0		mg/Kg	1	8/4/2011 01:49 PM
Silver	ND	1.0		mg/Kg	1	8/4/2011 01:49 PM
Thallium	ND	1.0		mg/Kg	1	8/4/2011 01:49 PM
Vanadium	26	1.0		mg/Kg	1	8/4/2011 01:49 PM
Zinc	2800	5.0		mg/Kg	5	8/4/2011 02:17 PM
MERCURY BY COLD VAPOR TECHNIQUE						
				EPA 7471A		
RunID: AA1_110804A	QC Batch: 74716			PrepDate:	8/4/2011	Analyst: **VV**
Mercury	0.26	0.10		mg/Kg	1	8/4/2011 01:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *05-Aug-11*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	SP2
Lab Order:	119242	**Collection Date:**	7/21/2011 2:35:00 PM
Project:	Clairemont H.S., 105338069	**Matrix:**	SOLID
Lab ID:	119242-002A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_110804A	QC Batch: 74718			PrepDate:	8/4/2011	Analyst: **CBB**
Antimony	10	2.0		mg/Kg	1	8/4/2011 01:52 PM
Arsenic	21	1.0		mg/Kg	1	8/4/2011 01:52 PM
Barium	860	1.0		mg/Kg	1	8/4/2011 01:52 PM
Beryllium	ND	1.0		mg/Kg	1	8/4/2011 01:52 PM
Cadmium	12	1.0		mg/Kg	1	8/4/2011 01:52 PM
Chromium	50	1.0		mg/Kg	1	8/4/2011 01:52 PM
Cobalt	11	1.0		mg/Kg	1	8/4/2011 01:52 PM
Copper	550	2.0		mg/Kg	1	8/4/2011 01:52 PM
Lead	1600	1.0		mg/Kg	1	8/4/2011 01:52 PM
Molybdenum	3.5	1.0		mg/Kg	1	8/4/2011 01:52 PM
Nickel	41	1.0		mg/Kg	1	8/4/2011 01:52 PM
Selenium	ND	1.0		mg/Kg	1	8/4/2011 01:52 PM
Silver	ND	1.0		mg/Kg	1	8/4/2011 01:52 PM
Thallium	ND	1.0		mg/Kg	1	8/4/2011 01:52 PM
Vanadium	23	1.0		mg/Kg	1	8/4/2011 01:52 PM
Zinc	2800	5.0		mg/Kg	5	8/4/2011 02:20 PM
MERCURY BY COLD VAPOR TECHNIQUE						
				EPA 7471A		
RunID: AA1_110804A	QC Batch: 74716			PrepDate:	8/4/2011	Analyst: **VV**
Mercury	0.30	0.10		mg/Kg	1	8/4/2011 01:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *05-Aug-11*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	T1
Lab Order:	119242	**Collection Date:**	7/21/2011 2:30:00 PM
Project:	Clairemont H.S., 105338069	**Matrix:**	SOLID
Lab ID:	119242-003A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_110804A	QC Batch: 74718			PrepDate:	8/4/2011	Analyst: **CBB**
Antimony	2.7	2.0		mg/Kg	1	8/4/2011 01:55 PM
Arsenic	5.7	1.0		mg/Kg	1	8/4/2011 01:55 PM
Barium	460	1.0		mg/Kg	1	8/4/2011 01:55 PM
Beryllium	ND	1.0		mg/Kg	1	8/4/2011 01:55 PM
Cadmium	6.3	1.0		mg/Kg	1	8/4/2011 01:55 PM
Chromium	13	1.0		mg/Kg	1	8/4/2011 01:55 PM
Cobalt	3.4	1.0		mg/Kg	1	8/4/2011 01:55 PM
Copper	130	2.0		mg/Kg	1	8/4/2011 01:55 PM
Lead	310	1.0		mg/Kg	1	8/4/2011 01:55 PM
Molybdenum	ND	1.0		mg/Kg	1	8/4/2011 01:55 PM
Nickel	9.2	1.0		mg/Kg	1	8/4/2011 01:55 PM
Selenium	ND	1.0		mg/Kg	1	8/4/2011 01:55 PM
Silver	ND	1.0		mg/Kg	1	8/4/2011 01:55 PM
Thallium	ND	1.0		mg/Kg	1	8/4/2011 01:55 PM
Vanadium	9.3	1.0		mg/Kg	1	8/4/2011 01:55 PM
Zinc	900	5.0		mg/Kg	5	8/4/2011 02:24 PM
MERCURY BY COLD VAPOR TECHNIQUE						
				EPA 7471A		
RunID: AA1_110804A	QC Batch: 74716			PrepDate:	8/4/2011	Analyst: **VV**
Mercury	ND	0.10		mg/Kg	1	8/4/2011 01:22 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories

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Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *05-Aug-11*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	T2
Lab Order:	119242	**Collection Date:**	7/21/2011 2:30:00 PM
Project:	Clairemont H.S., 105338069	**Matrix:**	SOLID
Lab ID:	119242-004A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_110804A	QC Batch: 74718			PrepDate:	8/4/2011	Analyst: **CBB**
Antimony	12	2.0		mg/Kg	1	8/4/2011 01:58 PM
Arsenic	11	1.0		mg/Kg	1	8/4/2011 01:58 PM
Barium	130	1.0		mg/Kg	1	8/4/2011 01:58 PM
Beryllium	ND	1.0		mg/Kg	1	8/4/2011 01:58 PM
Cadmium	3.5	1.0		mg/Kg	1	8/4/2011 01:58 PM
Chromium	17	1.0		mg/Kg	1	8/4/2011 01:58 PM
Cobalt	4.7	1.0		mg/Kg	1	8/4/2011 01:58 PM
Copper	150	2.0		mg/Kg	1	8/4/2011 01:58 PM
Lead	1000	1.0		mg/Kg	1	8/4/2011 01:58 PM
Molybdenum	3.4	1.0		mg/Kg	1	8/4/2011 01:58 PM
Nickel	24	1.0		mg/Kg	1	8/4/2011 01:58 PM
Selenium	ND	1.0		mg/Kg	1	8/4/2011 01:58 PM
Silver	ND	1.0		mg/Kg	1	8/4/2011 01:58 PM
Thallium	ND	1.0		mg/Kg	1	8/4/2011 01:58 PM
Vanadium	13	1.0		mg/Kg	1	8/4/2011 01:58 PM
Zinc	230	1.0		mg/Kg	1	8/4/2011 01:58 PM
MERCURY BY COLD VAPOR TECHNIQUE						
				EPA 7471A		
RunID: AA1_110804A	QC Batch: 74716			PrepDate:	8/4/2011	Analyst: **VV**
Mercury	ND	0.10		mg/Kg	1	8/4/2011 01:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Ninyo & Moore
Work Order: 119242
Project: Clairemont H.S., 105338069

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-74718** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **8/4/2011** RunNo: **135588**
Client ID: **PBS** Batch ID: **74718** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **8/4/2011** SeqNo: **2220744**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	2.0									
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Lead	ND	1.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.143	1.0									

Sample ID: **LCS-74718** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **8/4/2011** RunNo: **135588**
Client ID: **LCSS** Batch ID: **74718** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **8/4/2011** SeqNo: **2220745**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	46.689	2.0	50.00	0	93.4	80	120				
Arsenic	47.606	1.0	50.00	0	95.2	80	120				
Barium	47.955	1.0	50.00	0	95.9	80	120				
Beryllium	47.149	1.0	50.00	0	94.3	80	120				
Cadmium	46.731	1.0	50.00	0	93.5	80	120				
Chromium	45.041	1.0	50.00	0	90.1	80	120				
Cobalt	48.752	1.0	50.00	0	97.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Ninyo & Moore
Work Order: 119242
Project: Clairemont H.S., 105338069

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **LCS-74718** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **8/4/2011** RunNo: **135588**
Client ID: **LCSS** Batch ID: **74718** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **8/4/2011** SeqNo: **2220745**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	48.389	2.0	50.00	0	96.8	80	120				
Lead	49.286	1.0	50.00	0	98.6	80	120				
Molybdenum	50.973	1.0	50.00	0	102	80	120				
Nickel	48.252	1.0	50.00	0	96.5	80	120				
Selenium	44.649	1.0	50.00	0	89.3	80	120				
Silver	47.007	1.0	50.00	0	94.0	80	120				
Thallium	47.439	1.0	50.00	0	94.9	80	120				
Vanadium	48.259	1.0	50.00	0	96.5	80	120				
Zinc	47.466	1.0	50.00	0.1429	94.6	80	120				

Sample ID: **119196-003A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **8/4/2011** RunNo: **135588**
Client ID: **ZZZZZZ** Batch ID: **74718** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **8/4/2011** SeqNo: **2220748**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	74.432	2.0	125.0	0.2578	59.3	32	105				
Arsenic	96.703	1.0	125.0	0.4413	77.0	49	106				
Barium	187.173	1.0	125.0	95.90	73.0	31	133				
Beryllium	95.056	1.0	125.0	0	76.0	56	106				
Cadmium	91.021	1.0	125.0	0.7573	72.2	51	103				
Chromium	111.011	1.0	125.0	19.67	73.1	45	114				
Cobalt	101.652	1.0	125.0	7.968	74.9	52	106				
Copper	122.228	2.0	125.0	22.44	79.8	54	125				
Lead	97.861	1.0	125.0	3.924	75.1	34	126				
Molybdenum	98.292	1.0	125.0	0.1803	78.5	54	106				
Nickel	103.958	1.0	125.0	16.62	69.9	45	111				
Selenium	92.424	1.0	125.0	0	73.9	47	104				
Silver	98.592	1.0	125.0	0	78.9	56	112				
Thallium	80.153	1.0	125.0	0	64.1	46	101				
Vanadium	130.658	1.0	125.0	30.02	80.5	54	114				
Zinc	140.622	1.0	125.0	50.49	72.1	28	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Ninyo & Moore
Work Order: 119242
Project: Clairemont H.S., 105338069

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **119196-003A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **8/4/2011** RunNo: **135588**
Client ID: **ZZZZZZ** Batch ID: **74718** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **8/4/2011** SeqNo: **2220749**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	75.811	2.0	125.0	0.2578	60.4	32	105	74.43	1.84	20	
Arsenic	98.790	1.0	125.0	0.4413	78.7	49	106	96.70	2.14	20	
Barium	190.888	1.0	125.0	95.90	76.0	31	133	187.2	1.97	20	
Beryllium	97.344	1.0	125.0	0	77.9	56	106	95.06	2.38	20	
Cadmium	92.143	1.0	125.0	0.7573	73.1	51	103	91.02	1.23	20	
Chromium	112.970	1.0	125.0	19.67	74.6	45	114	111.0	1.75	20	
Cobalt	105.147	1.0	125.0	7.968	77.7	52	106	101.7	3.38	20	
Copper	124.706	2.0	125.0	22.44	81.8	54	125	122.2	2.01	20	
Lead	99.685	1.0	125.0	3.924	76.6	34	126	97.86	1.85	20	
Molybdenum	100.581	1.0	125.0	0.1803	80.3	54	106	98.29	2.30	20	
Nickel	108.519	1.0	125.0	16.62	73.5	45	111	104.0	4.29	20	
Selenium	93.616	1.0	125.0	0	74.9	47	104	92.42	1.28	20	
Silver	100.496	1.0	125.0	0	80.4	56	112	98.59	1.91	20	
Thallium	81.180	1.0	125.0	0	64.9	46	101	80.15	1.27	20	
Vanadium	133.140	1.0	125.0	30.02	82.5	54	114	130.7	1.88	20	
Zinc	142.820	1.0	125.0	50.49	73.9	28	125	140.6	1.55	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 119242
Project: Clairemont H.S., 105338069

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: **MB-74716** SampType: **MBLK** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **8/4/2011** RunNo: **135583**
Client ID: **PBS** Batch ID: **74716** TestNo: **EPA 7471A** Analysis Date: **8/4/2011** SeqNo: **2220675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: **LCS-74716** SampType: **LCS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **8/4/2011** RunNo: **135583**
Client ID: **LCSS** Batch ID: **74716** TestNo: **EPA 7471A** Analysis Date: **8/4/2011** SeqNo: **2220676**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.674	0.10	0.8300	0	81.1	80	120				

Sample ID: **119196-003A-MS** SampType: **MS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **8/4/2011** RunNo: **135583**
Client ID: **ZZZZZZ** Batch ID: **74716** TestNo: **EPA 7471A** Analysis Date: **8/4/2011** SeqNo: **2220677**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.805	0.10	0.8300	0.09184	86.0	70	130				

Sample ID: **119196-003A-MSD** SampType: **MSD** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **8/4/2011** RunNo: **135583**
Client ID: **ZZZZZZ** Batch ID: **74716** TestNo: **EPA 7471A** Analysis Date: **8/4/2011** SeqNo: **2220678**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.774	0.10	0.8300	0.09184	82.2	70	130	0.8053	3.97	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CHAIN OF CUSTODY RECORD

Pg 1 of 1

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
(562) 989-4045 • Fax (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#:

Logged By: Date: 8/2/11

Method of Transport: Client ☐ ATL ☑ CA OverN ☐ FEDEX ☐ Other:

Sample Condition Upon Receipt: 1. CHILLED Y☑ N☐ 4. SEALED Y☐ N☑ 2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☑ N☐ 3. CONTAINER INTACT Y☑ N☐ 6. PRESERVED Y☐ N☐

Client: Ninyo + Moore
Attn: Lisa Bestard
Address: 5710 Ruffin Road
City: San Diego State: CA Zip Code: 92104
TEL: (858) 576-1000
FAX: (858) 576-9600

Project Name: Clairemont H.S. Project #: 105338069 Sampler: (Printed Name) Lisa Bestard (Signature) Lisa Bestard

Relinquished by: (Signature and Printed Name) Lisa Bestard Date: 8/2/11 Time: 1540 Received by: (Signature and Printed Name) [illegible] Date: 8/2/11 Time: 1540
Relinquished by: (Signature and Printed Name) [illegible] Date: 8/2/11 Time: 1742 Received by: (Signature and Printed Name) FPDIWA Date: 8/2/11 Time: 1742
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: Lisa Bestard 7/21/11 (Print Name / Date)
Lisa Bestard (Signature)

Send Report To: Attn: Co: Client Address City State Zip

Bill To: Attn: Co: Client Address City State Zip

Special Instructions/Comments: Additional analyses may be ordered based on initial results.
TAT: (F) >48 <72 Hours per rate sheet

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample : $2.00 / sample / mo (after 45 days)
- Records : $1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested: 8081A (Pesticides), 8082 (PCB), 8260B (Volatiles), 8270C (BNA), 6010B (Total Metal), 8015B (GRO) / 8020 (BTEX), 8015B (DRO), 8021 (BTEX), TITLE 22 / CAM 17 (6010 / 7000)

SPECIFY APPROPRIATE MATRIX: SOIL, WATER, GROUND WATER, WASTEWATER

QA/QC: RTNE ☐ CT ☐ SWRCB ☐ Logcode ____ OTHER ____

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D. / Location	Date	Time	8021 (BTEX)	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
	119242-01	SP1	7/21/2011	14:35	X	F	1	G J	C	
	-2	SP2		14:35						
	-3	T1		14:30						
	-4	T2		14:30						

• TAT starts 8 a.m. following day if samples received after 3 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

DISTRIBUTION: **White** with report, **Yellow** to folder, **Pink** to submitter.

August 11, 2011

Lisa Bestard
Ninyo & Moore
5710 Ruffin Road
San Diego, CA 92123
TEL: (858) 576-1000
FAX: (858) 576-9600

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 119242

RE: Clairemont H.S., 105338069

Attention: Lisa Bestard

Enclosed are the results for sample(s) received on August 02, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

for Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Project: Clairemont H.S., 105338069
Lab Order: 119242

CASE NARRATIVE

Analytical Comments for WET/EPA 6010B

Sample 119242-001A, dilution was necessary due to sample matrix.

Samples 119242-002A-MS and 119242-002A-MSD, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Advanced Technology Laboratories
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Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *11-Aug-11*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	SP1
Lab Order:	119242	**Collection Date:**	7/21/2011 2:35:00 PM
Project:	Clairemont H.S., 105338069	**Matrix:**	SOLID
Lab ID:	119242-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
WET/ EPA 6010B						
RunID: ICP8_110811B QC Batch: R135744 PrepDate: Analyst: **IL**						
Chromium	ND	1.0		mg/L	20	8/11/2011 12:03 PM
ICP METALS BY TCLP EXTRACTION						
EPA3010A				**EPA 1311/ 6010B**		
RunID: ICP8_110810E QC Batch: 74833 PrepDate: 8/10/2011 Analyst: **IL**						
Chromium	ND	0.050		mg/L	1	8/10/2011 01:29 PM
Lead	0.34	0.050		mg/L	1	8/10/2011 01:29 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *11-Aug-11*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	SP2
Lab Order:	119242	**Collection Date:**	7/21/2011 2:35:00 PM
Project:	Clairemont H.S., 105338069	**Matrix:**	SOLID
Lab ID:	119242-002A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
			WET/ EPA 6010B			
RunID: ICP8_110811D	QC Batch: R135762			PrepDate:		Analyst: **IL**
Lead	42	1.0		mg/L	20	8/11/2011 02:31 PM
Zinc	200	1.0		mg/L	20	8/11/2011 02:31 PM
ICP METALS BY TCLP EXTRACTION						
	EPA3010A		**EPA 1311/ 6010B**			
RunID: ICP8_110810E	QC Batch: 74833			PrepDate:	8/10/2011	Analyst: **IL**
Lead	0.20	0.050		mg/L	1	8/10/2011 01:33 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories

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Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *11-Aug-11*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	T1
Lab Order:	119242	**Collection Date:**	7/21/2011 2:30:00 PM
Project:	Clairemont H.S., 105338069	**Matrix:**	SOLID
Lab ID:	119242-003A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY TCLP EXTRACTION						
	EPA3010A			**EPA 1311/ 6010B**		
RunID: ICP8_110810E	QC Batch: 74833			PrepDate:	8/10/2011	Analyst: **IL**
Lead	0.36	0.050		mg/L	1	8/10/2011 01:36 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

Advanced Technology Laboratories

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ANALYTICAL RESULTS

Print Date: *11-Aug-11*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	T2
Lab Order:	119242	**Collection Date:**	7/21/2011 2:30:00 PM
Project:	Clairemont H.S., 105338069	**Matrix:**	SOLID
Lab ID:	119242-004A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY TCLP EXTRACTION						
	EPA3010A			**EPA 1311/ 6010B**		
RunID: ICP8_110810E	QC Batch: 74833			PrepDate:	8/10/2011	Analyst: **IL**
Lead	0.85	0.050		mg/L	1	8/10/2011 01:40 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: Ninyo & Moore
Work Order: 119242
Project: Clairemont H.S., 105338069

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_ST

Sample ID: **MB-74808** SampType: **MBLK** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **135744**
Client ID: **PBS** Batch ID: **R135744** TestNo: **WET/ EPA 60** Analysis Date: **8/11/2011** SeqNo: **2223411**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	0.050									

Sample ID: **MB-74808 ST** SampType: **MBLK** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **135744**
Client ID: **PBS** Batch ID: **R135744** TestNo: **WET/ EPA 60** Analysis Date: **8/11/2011** SeqNo: **2223412**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **LCS-74808** SampType: **LCS** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **135744**
Client ID: **LCSS** Batch ID: **R135744** TestNo: **WET/ EPA 60** Analysis Date: **8/11/2011** SeqNo: **2223413**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.913	1.0	1.000	0	91.3	85	115				

Sample ID: **119242-001A-MS** SampType: **MS** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **135744**
Client ID: **SP1** Batch ID: **R135744** TestNo: **WET/ EPA 60** Analysis Date: **8/11/2011** SeqNo: **2223416**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	2.688	1.0	2.500	0.5647	84.9	78	115				

Sample ID: **119242-001A-MSD** SampType: **MSD** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **135744**
Client ID: **SP1** Batch ID: **R135744** TestNo: **WET/ EPA 60** Analysis Date: **8/11/2011** SeqNo: **2223417**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	2.720	1.0	2.500	0.5647	86.2	78	115	2.688	1.20	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Ninyo & Moore
Work Order: 119242
Project: Clairemont H.S., 105338069

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_ST

Sample ID: **MB-74823** SampType: **MBLK** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **135762**
Client ID: **PBS** Batch ID: **R135762** TestNo: **WET/ EPA 60** Analysis Date: **8/11/2011** SeqNo: **2223721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.050									
Zinc	ND	0.050									

Sample ID: **MB-74823 ST** SampType: **MBLK** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **135762**
Client ID: **PBS** Batch ID: **R135762** TestNo: **WET/ EPA 60** Analysis Date: **8/11/2011** SeqNo: **2223722**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	1.0									
Zinc	ND	1.0									

Sample ID: **LCS-74823** SampType: **LCS** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **135762**
Client ID: **LCSS** Batch ID: **R135762** TestNo: **WET/ EPA 60** Analysis Date: **8/11/2011** SeqNo: **2223723**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.997	1.0	1.000	0	99.7	85	115				
Zinc	1.021	1.0	1.000	0	102	85	115				

Sample ID: **119242-002A-MS** SampType: **MS** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **135762**
Client ID: **SP2** Batch ID: **R135762** TestNo: **WET/ EPA 60** Analysis Date: **8/11/2011** SeqNo: **2223726**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	41.275	1.0	2.500	41.93	-26.3	80	118				S
Zinc	185.854	1.0	2.500	197.9	-480	75	122				S

Sample ID: **119242-002A-MSD** SampType: **MSD** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **135762**
Client ID: **SP2** Batch ID: **R135762** TestNo: **WET/ EPA 60** Analysis Date: **8/11/2011** SeqNo: **2223727**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	42.153	1.0	2.500	41.93	8.83	80	118	41.28	2.11	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Ninyo & Moore
Work Order: 119242
Project: Clairemont H.S., 105338069

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_ST

Sample ID: **119242-002A-MSD** SampType: **MSD** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **135762**
Client ID: **SP2** Batch ID: **R135762** TestNo: **WET/ EPA 60** Analysis Date: **8/11/2011** SeqNo: **2223727**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	189.020	1.0	2.500	197.9	-353	75	122	185.9	1.69	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Ninyo & Moore
Work Order: 119242
Project: Clairemont H.S., 105338069

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_TC

Sample ID: **MB-74833** SampType: **MBLK** TestCode: **6010_TC** Units: **mg/L** Prep Date: **8/10/2011** RunNo: **135724**
Client ID: **PBS** Batch ID: **74833** TestNo: **EPA 1311/ 60 EPA3010A** Analysis Date: **8/10/2011** SeqNo: **2222825**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	0.050									
Lead	ND	0.050									

Sample ID: **MB-74822A TCLP** SampType: **MBLK** TestCode: **6010_TC** Units: **mg/L** Prep Date: **8/10/2011** RunNo: **135724**
Client ID: **PBS** Batch ID: **74833** TestNo: **EPA 1311/ 60 EPA3010A** Analysis Date: **8/10/2011** SeqNo: **2222826**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	0.050									
Lead	ND	0.050									

Sample ID: **LCS-74833** SampType: **LCS** TestCode: **6010_TC** Units: **mg/L** Prep Date: **8/10/2011** RunNo: **135724**
Client ID: **LCSS** Batch ID: **74833** TestNo: **EPA 1311/ 60 EPA3010A** Analysis Date: **8/10/2011** SeqNo: **2222827**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.906	0.050	1.000	0	90.6	85	115				
Lead	0.995	0.050	1.000	0	99.5	85	115				

Sample ID: **119242-004A-MS** SampType: **MS** TestCode: **6010_TC** Units: **mg/L** Prep Date: **8/10/2011** RunNo: **135724**
Client ID: **T2** Batch ID: **74833** TestNo: **EPA 1311/ 60 EPA3010A** Analysis Date: **8/10/2011** SeqNo: **2222833**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	2.425	0.050	2.500	0.02175	96.1	78	115				
Lead	3.167	0.050	2.500	0.8459	92.9	80	118				

Sample ID: **119242-004A-MSD** SampType: **MSD** TestCode: **6010_TC** Units: **mg/L** Prep Date: **8/10/2011** RunNo: **135724**
Client ID: **T2** Batch ID: **74833** TestNo: **EPA 1311/ 60 EPA3010A** Analysis Date: **8/10/2011** SeqNo: **2222834**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	2.389	0.050	2.500	0.02175	94.7	78	115	2.425	1.52	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Ninyo & Moore
Work Order: 119242
Project: Clairemont H.S., 105338069

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_TC

Sample ID: **119242-004A-MSD** SampType: **MSD** TestCode: **6010_TC** Units: **mg/L** Prep Date: **8/10/2011** RunNo: **135724**
Client ID: **T2** Batch ID: **74833** TestNo: **EPA 1311/ 60 EPA3010A** Analysis Date: **8/10/2011** SeqNo: **2222834**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.051	0.050	2.500	0.8459	88.2	80	118	3.167	3.75	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Rachelle Arada

From: Lisa Bestard [lbestard@ninyoandmoore.com]
Sent: Friday, August 05, 2011 1:54 PM
To: Rachelle Arada
Subject: RE: Results for Clairemont H.S., 105338069 (ATL# 119242)

Importance: High

Rachelle-
Please run the following additional analyses on a "F" turnaround (<48, >72 hours):

- SP1: TCLP for Chromium and Lead; WET method for Chromium
- SP2: TCLP for Lead; WET method for Lead and Zinc
- T1 and T2: TCLP for Lead

Thank you,

Lisa Bestard
Senior Project Environmental Scientist
Ninyo & Moore
Geotechnical & Environmental Sciences Consultants
5710 Ruffin Road
San Diego, CA 92123
(858) 576-1000 (x1279)
(858) 576-9600 (Fax)
lbestard@ninyoandmoore.com
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-----Original Message-----
From: Rachelle Arada [mailto:rachelle@atlglobal.com]
Sent: Friday, August 05, 2011 10:14 AM
To: Lisa Bestard
Subject: Results for Clairemont H.S., 105338069 (ATL# 119242)

Hi Lisa,

Enclosed are the results for the above project. Please note, a final hard copy will not be mailed to your attention, therefore, we ask that you print the attached file and accept it as final. Please call with any questions or concerns.

Thanks,

Rachelle Arada
Project Manager

Advanced Technology Laboratories
www.atlglobal.com
Tel: (562) 989-4045 ext. 237
Fax: (562) 989-4040

Advanced Technology Laboratories is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, NELAP and State of Nevada and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates. *Advanced Technology Labs - Your Partner for Quality Environmental Testing*

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From: Christine Chiu
To: Chico Loren
CC: Lisa Bestard; Shahir Haddad; Watts Jim
Date: 8/30/2011 9:10 AM
Subject: RE: Technical Memorandum Work Plan - Burned Waste Assessment at Clairemont High School, San Diego

Chico,

DTSC reviewed the revised Technical Memorandum Work Plan (TM), Burned Waste Assessment, dated August 25, 2011, for the Clairemont High School site (Site). The TM was submitted as a follow up to our conference call on August 25, 2011; however, all significant issues discussed during the call were not satisfactorily addressed in the TM. The TM is acceptable provided the following revisions to the Scope of Work are implemented:

1. Regarding the two to three soil samples collected from each trench, the sample(s) with burned waste material should be analyzed for 1) polycyclic aromatic hydrocarbons (PAHs) via USEPA Method 8310, and 2) polychlorinated biphenyls (PCBs) via USEPA Method 8082 (as recommended by your consultant during the conference call). DTSC understands that samples from the trenches are for characterization purposes.

2. Regarding analysis of soil samples with the "highest lead or other metal concentrations....", the text indicates the proposed suite of analyses (including the WET and TCLP analyses) are required for disposal purposes. However, since such proposed samples are in-situ and from the highest lead or other metal concentrations, the analytical results may not be representative of the material to be disposed (i.e., the excess material stockpile) and may lead to unwarranted disposal costs. Rather, soil samples should be collected from the excess material stockpile and analyzed for the appropriate constituents as required by the disposal facility. DTSC understands that samples from the excess material stockpile are for disposal, not characterization, purposes. In addition, please confirm the profiling requirement (i.e., laboratory analyses required for disposal) of the disposal facility.

3. The TM indicates that the soil to be disposed at a disposal facility will be handled as California hazardous waste but the disposal facility was not indicated. The District should comply with all federal, state, and local disposal requirements regarding this impacted soil.

a. Ensure that the disposal facility will accept the impacted soil and submit an acceptance letter acknowledging this from the disposal facility to DTSC prior to disposal.

b. Ensure that the disposal facility is authorized to accept the impacted soil and submit documentation from the agency which permitted the disposal facility specifying the disposal facility is authorized to accept the impacted soil for DTSC review and concurrence prior to disposal.

Other Notes:

1. As discussed during the conference call, DTSC requested historic aerial photos of the Site to evaluate the historic land use. DTSC has not received this information yet; evaluation of this information may affect the Scope of Work.

2. The rationale for the locations of the background samples should be explained in the report.

3. Please provide DTSC a hard copy of the original TM.

4. As a follow up to our discussion of analytical laboratory results for dioxins, DTSC developed suggested remedial goals for dioxins and dioxin-like compounds in a short paper, Human Health Risk Assessment (HHRA) Note 2, dated May 2009. This paper may be found on DTSC's website at http://www.dtsc.ca.gov/AssessingRisk/upload/HHRA_Note2_dioxin-2.pdf. As indicated, the suggested remedial goal for the Residential Scenario is 50 ng/kg.
--

Christine Chiu, Project Manager
Schools Team -- Cypress Office
Department of Toxic Substances Control
714.484.5340

>>> On 8/25/2011 at 3:04 PM, Lisa Bestard <lbestard@ninyoandmoore.com> wrote:
> Shahir-

> As per our conference call today, please find attached the revised
> Technical Memorandum Work Plan. Please let me know if this electronic
> copy is sufficient or if you require a hard be mailed to your attention.
>
>
> Thank you,
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>
> Lisa Bestard
>
> Senior Project Environmental Scientist
>
> Ninyo & Moore
>
> Geotechnical & Environmental Sciences Consultants
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> 5710 Ruffin Road
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> San Diego, CA 92123
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> lbestard@ninyoandmoore.com
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>
>
>
> "Celebrating 25 Years"
>
> -----Original Message-----
> From: Shahir Haddad [mailto:shaddad@dtsc.ca.gov]
> Sent: Thursday, August 25, 2011 10:10 AM
> To: Lisa Bestard; Chico Loren
> Cc: Christine Chiu; Watts Jim
> Subject: RE: Technical Memorandum Work Plan - Burned Waste
> Assessment at Clairemont High School, San Diego
>
>
> Let us discuss at 1:00 p.m.
>
> Shahir Haddad, P.E.
> Supervising Engineer
> Schools and Brownfield cleanup Branch - Cypress
> 714-484-5368
>
>
> >>> Chico Loren <lchico@sandi.net> 8/25/2011 9:52 AM >>>
>
>
> I'm open at 1:00 PM if needed. However, I'll be out of the
> office at 2:00 due to personal reasons.
>
>
>
> From: Lisa Bestard [mailto:lbestard@ninyoandmoore.com]

> Sent: Thursday, August 25, 2011 9:44 AM
> To: Shahir Haddad
> Cc: Watts Jim; Chico Loren
> Subject: RE: Technical Memorandum Work Plan - Burned Waste
> Assessment at Clairemont High School, San Diego
>
>
>
> Shahir-
>
> I am available. Jim/Loren - Are either one or both of you
> available this afternoon?
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> Thank you,
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>
> Lisa Bestard
>
> Senior Project Environmental Scientist
>
> Ninyo & Moore
>
> Geotechnical & Environmental Sciences Consultants
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>
> "Celebrating 25 Years"
>
> -----Original Message-----
> From: Shahir Haddad [mailto:shaddad@dtsc.ca.gov]
> Sent: Thursday, August 25, 2011 9:44 AM
> To: Lisa Bestard
> Cc: Watts Jim; Chico Loren
> Subject: Re: Technical Memorandum Work Plan - Burned
> Waste Assessment at Clairemont High School, San Diego
>
> We are ready to discuss the scope of work. Are
> available early afternoon?
>
>
>
> Shahir Haddad, P.E.
> Supervising Engineer
> Schools and Brownfield cleanup Branch - Cypress

> 714-484-5368
>
>
>
> >>> Lisa Bestard <lbestard@ninyoandmoore.com> 8/23/2011
> 3:21 PM >>>
>
> Shahir-
>
> Please find attached our Technical Memorandum Work Plan
> for a Burned Waste Assessment at Clairemont High School, San Diego,
> California. A hard copy has been sent to you via overnight mail. Due to
> the very time sensitive nature of the project, we appreciated any
> assistance you can provide with expediting the review of the Technical
> Memorandum; however, as we understand from your previous e-mail, the
> maximum review time will be three days. If you need any additional
> information or would like to discuss the document, please feel free to
> contact me.
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> Thank you,
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>
> Lisa Bestard
>
> Senior Project Environmental Scientist
>
> Ninyo & Moore
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> Geotechnical & Environmental Sciences Consultants
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> "Celebrating 25 Years"

NINYO & MOORE
Site Specific Health and Safety Plan Short-Form

1. SITE DESCRIPTION

The site is located at 4150 Ute Drive, approximately 250 feet southwest of intersection of Modac Street and Ute Drive in the city and county of San Diego, California. The site is occupied by Clairemont High School. During upgrades to the school parking lot, burned waste was observed in a trench.

2. SCOPE OF WORK

The fieldwork to be performed for this project will include exploratory trenching within the school parking lot to depths of up to 15 feet below ground surface and collecting soil samples.

3. ORGANIZATION AND RESPONSIBILITIES

Personnel responsible for fieldwork are identified in Table 3-1.

Table 3-1 – Responsible Personnel for the Site

Title	Name	Daytime	After Hours
Project Manager	Lisa Bestard	(858) 576-1000x1279	(858) 361-0868
Field Team Leader	Beth Abramson-Beck	(858) 576-1000x1259	(858) 472-0539
Site Health and Safety Officer (SHSO)	Beth Abramson-Beck	(858) 576-1000x1259	(858) 472-0539
Ninyo & Moore Corporate Safety and Health Manager	Steve Waide	(858) 576-1000x1282	(858) 449-8619

4. HAZARD ANALYSIS

The significant hazards identified during the job-hazard analysis include road traffic and noise and hazards associated with heavy equipment/drilling. The following section(s) provide(s) more information.

4.1. Physical Hazards

The physical hazards associated with Ninyo & Moore projects may include noise; energized and rotating equipment; heavy equipment; steam-cleaning equipment; falling, slipping, and tripping; manual lifting; heat stress; working over or near water; and general physical hazards. These physical hazards are discussed in the following sections.

4.1.1. Noise

Working near a drill rig, heavy equipment, or a number of other site activities, can subject workers to noise exposures in excess of allowable limits. Nonessential personnel who do not need to be next to loud equipment should stay as far away as possible to lower the risk of noise-induced hearing loss. Personnel who operate or must work next to drill rigs or other loud equipment will be required to wear hearing protection (earplugs or muffs) to reduce their exposure to excessive noise. Persons who enter areas in excess of 85 decibels (dB) will be required to wear hearing protection.

Subcontractor personnel will implement equivalent effective hearing conservation programs in accordance with their program requirements.

4.1.2. Vehicle and Heavy Equipment Operation

Vehicles will only be operated in authorized areas. When moving equipment, caution should be exercised in order not to damage equipment or cause injury. When backing up heavy vehicles (larger than pickup trucks), passenger vehicles, or pickups with obscured rear vision, a guide will be used to direct the vehicle. Extra caution will be exercised during vehicle operation on dike roads, industrial areas, and other close spaces. Personnel directing traffic will wear orange vests. Each vehicle will be equipped with a minimum of one fire extinguisher rated 3A:40B:40C.

4.1.3. Subcontractor-Furnished Equipment

The subcontractor is responsible for proper and safe operation of all the equipment they bring to the site. Ninyo & Moore employees will not operate subcontractor-furnished

equipment unless that equipment is expressly provided for use of Ninyo & Moore personnel. This section does not prohibit use of power from subcontractor-provided generators or the handling of drilling tool components such as samplers.

Site personnel will not operate or handle heavy equipment owned by subcontractors. The subcontractors will maintain and implement safety procedures according to their safety and health plan. Only qualified subcontractor personnel will operate heavy equipment during field activities. Subcontractors will maintain in operating condition all appropriate safety devices on all machinery and rotating equipment (e.g., backup alarms, emergency stops, and guards) at all times. Subcontractors will implement effective safety programs for use of this type of equipment.

4.1.4. Falling, Slipping, and Tripping

Work zone surfaces will be maintained in a neat and orderly state. Foot traffic will avoid areas where materials are stored on the ground. Tools and materials will not be left randomly on surfaces where not in direct use. The contractor supervisor will assure that the work area around each drilling operation is maintained in a neat and orderly state. Hoses and cables will be grouped, routed to minimize hazards, and covered with a ramp or bridge or clearly marked with hazard tape or flags if such material will remain in place for more than one shift.

4.1.5. Manual Lifting Techniques

During any manual material-handling tasks, personnel will be trained to lift with the force of the load suspended on their legs and not on their backs. An adequate number of personnel or an appropriate mechanical device must be used to safely lift or handle heavy equipment. When heavy objects must be lifted manually, workers will keep the load close to the body and will avoid any twisting or turning motions to minimize stress on the lower back. The SHSO can provide a lifting orientation and specific back stretching and warm-up exercises to help minimize the potential for back injuries. Use of these

exercises by all field personnel at the start of each shift will be encouraged by the SHSO.

4.1.6. Extreme Heat and Heat Stress

Heat stress is an important health consideration. Weather conditions, characterized by high temperatures and low humidity, in conjunction with wearing personal protective clothing, may aggravate heat-stress problems. Standard measures, including designating a shaded rest area, taking frequent rest breaks, and performing heat-stress monitoring of workers, will be used to minimize heat-stress-related problems. A readily available supply of liquids, such as water and fluids containing electrolytes, will be available at the work site to replenish body fluids.

Visual observation of workers by the SHSO for heat-stress-related signs and symptoms, and body core temperature monitoring will be performed when outside temperatures exceed 70 degrees Fahrenheit (°F) and impermeable clothing is being worn, when outside temperatures exceed 90°F in street clothes, or whenever other conditions warrant. Signs and symptoms of heat stress include profuse sweating, headache, skin flushing, dizziness, confusion, and rapid heart rate. Workers exhibiting a body core temperature of 100.4°F or greater (measured at the eardrum) will be removed to a cooler area or activity until body core temperature returns to below 99°F.

If persons exhibiting heat-stress symptoms are left untreated, the condition can elevate to heat stroke. Heat stroke is typically manifested by hot, dry skin with a body core temperature of 104°F or greater. Heat stroke can be fatal if treatment is delayed. Therefore, persons exhibiting heat-stroke symptoms need to have their core temperature reduced immediately by use of cold packs, cold water wipes, or immersion. Heat-stroke victims need to be transported to a professional medical facility immediately after the victim’s core temperature has been reduced or while the victim’s core temperature is being reduced.

4.1.7. Solar Radiation

The SHSO will encourage personnel working out of doors to utilize protective coverings or sunblock to minimize the harmful effects of the sun's rays on the skin.

4.2. Industrial Hazards

Project activities at field sites may expose personnel to various industrial hazards. The following sections present a summary of the common industrial hazards anticipated and general methods that will be utilized by the SHSO to assure worker safety.

The SHSO or designee will observe all operations, particularly heavy equipment operations, to oversee industrial safety hazards such as pinch-points (areas on heavy equipment where limbs or extremities may become caught, mutilated, or dismembered). To prevent injuries from industrial hazards, engineering controls, administrative procedures (e.g., lockout-tagout procedures), and equipment-guarding techniques will be implemented. In addition, personal protective equipment (PPE) will be used when engineering controls alone cannot reduce the risk of exposure to hazards to acceptable limits.

The overall risks posed by industrial activities associated with decontamination, excavation, and vehicle operation are considered greater than the risks posed by potential exposure to chemicals that are the subject of investigation when proper PPE practices are followed; therefore, compliance with safety rules and procedures is of equal or greater importance than compliance with health rules.

4.2.1. Underground Cables

Because buried underground cables may be present at this site. An underground utility check will be performed before trenching. In addition, where records are inadequate or questionable, a utility search using specialized cable-detection equipment will be performed.

4.2.2. Soil Excavation/Trenching

Excavation of contaminated soil presents multiple hazards to workers including chemical exposure, fire and explosion hazards, confined space, and exposure to hazards of contacting unidentified energized utilities. A Competent Person will be on site during all excavation activities that will identify the numerous safety issues associated with trenching and excavation.

4.2.3. Confined Space Entry

Confined spaces, including but not limited to trenches, ditches, holes, culverts, structures, and tanks, present multiple hazards including oxygen deficiency, toxic agent exposure, heat stress, engulfment, and other hazards.

Any confined spaces found on worksites will be classified by a competent person prior to work at that site. Permit-required confined space entry is not generally authorized for Ninyo & Moore personnel. Permit-required confined space entries will be made in accordance with a specific confined space entry permit approved by the SHSO. A designated OSHA-competent person for confined space work will be on-site during all confined space entry activities.

4.2.4. Pipelines

Overhead and buried pipelines containing natural gas and petroleum fuels are commonly found in rights-of-way. These pipelines present a source for potential fire and explosion hazards. All work areas will be cleared by the SHSO or designated safety coordinator prior to soil-intrusive work or movement of heavy equipment into or through utility corridors. Project personnel will obtain clearances by notifying Underground Service Alert at least 48-hours prior to performing subsurface activities at the site and by having a geophysical survey preformed by a licensed geophysical surveyor. In addition, when locations of buried lines are uncertain, subsurface activities will always be performed by hand until the utility is located or the area is cleared.

4.2.5. `Suspended Loads

Work is not permitted under suspended loads during lifts. Accessible areas under suspended loads will be barricaded where feasible.

4.3. Chemical Hazards

This section describes the toxicological (health) hazards associated with exposure to organic and inorganic chemicals and metals during the project. Chemicals which are expected to be encountered are discussed in the following sections.

In dry, arid desert conditions, exposure may occur principally by inhalation of contaminated particulates. Exposure to vapors can occur if trapped volatiles are exposed to the high heat conditions once the material is exposed to the atmosphere.

4.3.1. Lead

Elevated lead concentrations have been found at the site in burned waste. Lead is a toxic heavy metal and a suspected carcinogen that may be encountered in inorganic or organic forms.

The primary routes of entry for metals, including lead, are through inhalation and ingestion via dermal contact. Most metals are relatively nontoxic if ingested and mildly toxic by inhalation and skin contact. Some metals such as lead and mercury can cause central and peripheral nervous system disorders and damage. Lead has been shown to cause damage the central and peripheral nervous system. Long-term exposure to lead can damage brain cells and nerve cells if ingested or inhaled. Acute toxic symptoms include ataxia, repeated vomiting, headache, stupor, hallucinations, tremors, convulsions, and coma.

Although significant levels of airborne lead is not expected during site operations, visible dust will be controlled by the usual engineering and administrative control methods including the use of water spray, keeping vehicular traffic to a minimum, and mandating a speed limit of 15 miles per hour or less in unpaved areas of the site.

Skin contact with potentially contaminated materials will be minimized by the use of personal protective clothing (as described in Section 8). Inhalation of particulates during the site activities will be minimized by air monitoring and the use of engineering controls, and respiratory protection will be used if the action level described in Section 7 is exceeded. Ingestion of contaminated materials will be minimized by the use of appropriate personal hygiene procedures during decontamination (i.e., thoroughly washing hands and face with soap and water after leaving the work area and prior to eating or drinking.

4.3.2. Petroleum Hydrocarbons

Total petroleum hydrocarbons (TPH) is a term used to describe a large family of several hundred chemical compounds that originally come from crude oil. TPH is a mixture of chemicals, but they are all made mainly from hydrocarbons. Some chemicals that may be found in TPH are hexane, jet fuels, mineral oils, benzene, toluene, xylenes, naphthalene, and fluorene, as well as other petroleum products and gasoline components. Some of the TPH compounds can affect your central nervous system. One compound can cause headaches and dizziness at high levels in the air. Another compound can cause a nerve disorder called "peripheral neuropathy," consisting of numbness in the feet and legs. Other TPH compounds can cause effects on the blood, immune system, lungs, skin, and eyes.

Animal studies have shown effects on the lungs, central nervous system, liver, and kidney from exposure to TPH compounds. Some TPH compounds have also been shown to affect reproduction and the developing fetus in animals. The International Agency for Research on Cancer (IARC) has determined that one TPH compound (benzene) is carcinogenic to humans. IARC has determined that other TPH compounds (benzo[a]pyrene and gasoline) are probably and possibly carcinogenic to humans. Most of the other TPH compounds are considered not to be classifiable by IARC.

4.3.3. Arsenic

Inorganic arsenic may be found in areas where certain industrial residue may have contaminated soils. Arsenic may also be found in areas where arsenic was used as an herbicide. Some arsenic compounds may release a toxic gas when in an acidic environment. Arsenic is a toxic heavy metal. Inorganic arsenic is regulated by OSHA as a carcinogen.

4.3.4. Polynuclear Aromatic Hydrocarbons

Polynuclear aromatic hydrocarbons (PAHs) are a group of over 100 chemicals formed during the incomplete combustion of coal, oil, gas, garbage, or other organic substances. PAHs are recognized human carcinogens. Exposure by any route to PAH and other recognized human carcinogens will be maintained at the absolute practicable minimum level.

PAHs can breakdown by reacting with sunlight and other chemicals in the air over a period of days to weeks and microorganisms in soil or water can break down PAHs after a period of weeks to months. However the predominant exposure route at hazardous waste or environmental sites is from soils or debris contaminated with PAHs. Exposure to PAHs is most likely to occur through inhalation of contaminated dust, although there is a possibility that PAHs may evaporate into the air when newly turned soil is uncovered.

Skin contact with potentially contaminated materials will be minimized by the use of personal protective clothing (as described in Section 9). Inhalation of particulates during the site activities will be minimized by monitoring the amount of dust in the air and the use of engineering controls. Engineering controls will be employed at this site to reduce potential worker exposure to PAHs and help to prevent off-site migration, as necessary

4.3.5. Other Heavy Metals

A variety of heavy metals are encountered as contaminants at burn sites. Some heavy metals are highly toxic; others are also recognized human carcinogens. Because these

materials are not volatile unless highly heated, control by proper use of PPE and personnel hygiene practices will prevent significant exposure to heavy metals.

4.3.6. Carcinogens

Carcinogens are any chemicals or products capable of causing or inducing cancer or leukemia in humans. For Program purposes, carcinogens are classified, based upon OSHA, American Conference of Governmental Industrial Hygienists (ACGIH), International Agency for the Research on Cancer (IARC) or National Toxicology Program (NTP) classifications, into recognized or confirmed human carcinogens (Class I), suspect human carcinogens (Class II), questionable carcinogens (Class III), or not recognized as carcinogenic. If recognized or suspect carcinogens (Class I or Class II) have been identified in work areas, they are identified as such in this plan. Exposure by any route to recognized human carcinogens without published exposure limits will be maintained at the absolute practicable minimum level.

4.3.7. Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs), also referred to as Aroclors, are synthetic industrial products that have been commonly used as cooling fluid and for electrical insulation. PCBs are common contaminants of oily type waste and are found around railroad tracks and in industrial areas and dumps. PCBs are recognized environmental pollutants and suspected human carcinogens. Work involving exposure to PCBs above the atmospheric action level or in contact materials exceeding 100 micrograms per gram may require special medical evaluation and approval of the SHSO.

4.3.8. Dioxins

Dioxins are produced in industrial processes as contaminants in production of herbicides and as by-products of combustion of chlorinated hydrocarbons, particularly PCBs and trichlorobenzene. Dioxins are considered highly toxic and are suspected carcinogens, even in trace quantities. Sites where dioxin is potentially present include waste dumps used to dispose pesticides, areas of ground that have experienced fires, and areas

of electrical equipment or electrical maintenance shops that have experienced fires. Project work where dioxins are present requires approval of the SHSO.

4.3.9. Pesticides

Pesticides potentially used or disposed at sites can range from relativity low-toxicity products to highly poisonous compounds. Exposure to extremely small quantities of some pesticides may result in serious bodily harm, even death. Identification of pesticide containers during field activity requires evaluation by the SHSO before work can proceed. Pesticide dumping at a site requires that protective clothing protocols be implemented during all intrusive activity. Presence of only residue following normal application may permit a reduced level of PPE.

4.4. Biological Hazards

The SHSO will screen the area for biological hazards during the initial site visit and will discuss any problems with field personnel during the pre-work review. The site is located in a highly-developed area and biological hazards are not anticipated; however, field personnel and subcontractor personnel with allergies to insect bites or anything else that may cause a severe allergic reaction should notify the SHSO at the start of the work day.

5. SITE CONTROL

For intrusive field activities such as trenching operations, precautions shall be taken to assure that only authorized personnel with the proper training and PPE enter work areas associated with the operation of heavy equipment and/or the potential for exposure to hazardous conditions/materials. In these areas, access is controlled with caution tape, cones, and/or barricades. At SHSO discretion, a three-zone controlled area system may also be established.

6. DECONTAMINATION

Decontamination procedures for the planned fieldwork are discussed below.

6.1. Personnel Decontamination

A minimal decontamination procedure (consisting of washing exposed skin with soap and water) should be performed prior to eating, drinking, or smoking.

6.2. Vehicle and Equipment Decontamination

During field activities, a variety of heavy equipment, vehicles, and small equipment may be used. The level of potential contamination for vehicles and equipment at this site is "low" for support vehicles used in uncontaminated areas and/or for non-intrusive field activities, and "medium" for intrusive activities in potentially contaminated sites. Visual inspections will be made of vehicles in contaminated areas and excess soil removed utilizing dry decontamination methods prior to the vehicles exiting the site.

7. MEDICAL SURVEILLANCE REQUIREMENTS

All site personnel will be required to participate in their employer's medical surveillance program before being permitted to work on location. The medical surveillance program for Ninyo & Moore employees is described in the Ninyo & Moore Injury and Illness Prevention Program. Teaming partner or subcontractor medical surveillance programs are described in respective company documents. Subcontractors will be required to demonstrate, by document submittal, their maintenance of OSHA-compliant programs and to maintain records as required by the applicable contract. Specific exceptions to the medical surveillance requirements may be granted by the SHSO for site access by specialty subcontractors performing non-intrusive activity.

8. HAZARD MONITORING

The primary mechanism for the transport of the contaminants at the site is dust; therefore, direct monitoring of dust will be performed to prevent exposure to lead or pesticides on site. In general, air monitoring described in this plan will be performed by the SHSO, or designee, unless otherwise noted, during activities that could potentially generate dust with results recorded at least every 30 minutes. These activities may include excavation, loading, transportation, decontami-

nation, and uncovered stockpiles of contaminated materials. The equipment will consist of a direct-reading instrument for dust (i.e., DataRAM dust monitors, or equivalent). Oxygen deficiency will be monitored with a 4-gas meter/combustible gas indicator (CGI) for trench entry. Calibration of the instruments will be performed in accordance with the manufacturer's specifications.

During field activities at the site, the following monitoring requirements will be mandated:

Table 8-1 – Chemical/Physical Agent Monitoring Requirements

Scope of Work Task	Chemical/ Hazard	Direct Reading Instrument	Responsible Party	Frequency
Moderate Hazard				
Excavation, soil handling, and subsurface soil sampling	Organic vapor	PID	SHSO	Start of task, hourly, continuous if zone of contamination encountered
	Dusts/metals	Mini-RAM or Visual	SHSO	At least every 30 minutes
Trench entry	CO from equipment; Oxygen deficiency	CGI	HSM/ Excavation Competent Person	Monitoring at Competent Person's Discretion

Notes:
PID – Photoionization detector
SHSO – Site health and safety officer
TPH – Total Petroleum Hydrocarbons

Table 8-2 – Monitoring Methods and Action Levels Using Screening Survey Instruments

Hazard	Method	Action Level[2]	Protection Action
Total Organic Vapors	PID	Background to 2 ppm above background	No action required
		> 2 ppm	Air purifying respirator, half or full face, Level C protection with appropriate cartridges
		> 5 ppm	Air purifying respirator, full face, Level C protection, personnel monitoring required to identify contaminants
		> 10 ppm	Stop work
Oxygen Concentration	CGI	< 19.5% O_2	Leave area, evaluate reason for deficiency, monitor again remotely or with IDLH[8] entry program
		19.5 to 20.5% O_2	Slight deficiency, continue continuous monitoring
		20.5 - 21.0% O_2	Normal range
		> 22.0% O_2	Elevated reading, check calibration, investigate cause, STOP any potential spark-producing activity
Carbon Monoxide	CGI	> 10 ppm CO	Perform continuous monitoring, evaluate reason for elevated reading, consider engineering controls
		> 25 ppm CO	Stop work until engineering controls can be implemented, remove personnel from excavation

Notes:
1 Carcinogenic and highly toxic materials not verified absent from atmosphere
2 All action levels are readings observed above background. Verify absence of highly toxic compounds as necessary, e.g. vinyl chloride, methylene chloride, benzene etc.
ppm - Parts per million
PID - Photoionization detector
CGI - combustible gas indicator

Table 8-3 – Action Levels for Heat Stress

Type Measurement	Action Level	Action
Ear insertable core temperature	100.4° F or greater	Remove from work
Ear insertable core temperature	<99° F	Return to work

Table 8-4 – Frequency of Physiological Monitoring for Fit and Acclimated Workers

Adjusted Temperature[1]	Normal Work Ensemble[2] After Each:	Impermeable Ensemble After Each:
90° F (32.2° C) or above	45 minutes of work	15 minutes of work
86.5° F - 90° F (30.8° C - 32.2° C)	60 minutes of work	30 minutes of work
82.5° F - 86.5° F (28.1° C - 30.8° C)	90 minutes of work	60 minutes of work
76.5° F - 82.5° F (25.3° C - 28.1° C)	120 minutes of work	90 minutes of work
72.5° F - 76.5° F (22.5° C - 25.3° C)	150 minutes of work	120 minutes of work

Notes:
1 Calculate the adjusted air temperature (Ta adj) with the following equation: Ta adj(°F) = Ta(°F) + (13 X percent sunshine/100) Measure air temperature (Ta) with a standard mercury-in-glass thermometer with the bulb shielded from radiant heat. Estimate the percent sunshine by judging what percent time the sun is not covered by clouds that are thick enough to attenuate shadow (100 percent sunshine = no cloud cover and a sharp, distinct shadow; 0 percent sunshine = no shadow).
2 A normal work ensemble consists of coveralls or other cotton clothing with long sleeves and pants.

9. PERSONAL PROTECTIVE EQUIPMENT

Based on analytical results for soil samples collected and tested during previous investigations, the following level of PPE will be mandated for the listed tasks:

Table 9-1 – Personal Protective Equipment (potential or actual chemical exposure)

Task	Hazard	Level	Body	Respirator	Skin	Other
Excavation and soil sampling	Minimal chemical exposure	D	Normal work clothes; Long pants	Half-face with HEPA ready for use	Nitrile gloves; work gloves	Hard hat Safety glasses Ear Plugs Work boots
Decontamination of equipment	Skin contact	D	Normal work clothes; Long pants	Half-face with HEPA ready for use	Nitrile gloves	Safety glasses

Notes:
HEPA – high-efficiency particulate air
N/A - not applicable

10. CONFINED SPACE ENTRY

Confined spaces, including but not limited to trenches, ditches, holes, culverts, structures, and tanks, present multiple hazards including oxygen deficiency, toxic agent exposure, heat stress, engulfment, and other hazards.

Confined space entry is not anticipated nor is it authorized for project personnel or subcontractors during this work activity. If it becomes necessary to enter a confined space during this project, appropriate training, equipment, and supervision will be put in place and the entry will be made in accordance with a specific confined space entry permit approved by the Corporate Safety Manager. A designated OSHA-competent person for confined space work will be on-site during all confined space entry activities. Detailed confined space entry procedures will be maintained for any permit-required confined space work.

11. SPILL PREVENTION AND CONTROL MEASURES

Liquids and other potentially spilled materials are not anticipated to be used during this fieldwork. In case unanticipated conditions are encountered and these types of materials are subsequently brought into the field, the following applies:

11.1. Preventive Measures

- Inspect all containers upon delivery to the site for visible defects and ensure that each drum or container includes a re-sealable lid.
- Set any 55-gallon drums on wooden pallets to facilitate transport via forklift.
- Perform weekly inspections of the storage area.
- Select flat areas for temporary storage away from high-traffic zones and storm or sewer drains.

11.2. Spill Containment Measures

The following actions will be taken by field personnel assigned to the field activities in the event of a spill:

- Immediately notify the SHSO;
- Workers not involved in spill containment and/or cleanup shall evacuate the immediate area and designated emergency response personnel attired in appropriate PPE (see Section 9), shall proceed to the spill area with a spill cleanup and control kit, including absorbent materials;

- Attempts shall be made to stop the source(s) of spillage immediately;
- The SHSO shall monitor for exposure to chemicals or hazardous substances during spill cleanup work and shall stay at the spill area until the area has been cleared, inspected, and readied for reentry. A spill incident report shall be prepared by the SHSO.

11.3. Record Keeping and Notifications

The SHSO shall thoroughly document the spill in an Incident Report which will be forwarded to the Corporate Safety and Health Manager. Records of all hazardous materials releases shall be maintained with the project files and the facility operating record. The SHSO will make any necessary notifications to off-site authorities, approve reentry to the site for routine use, and will issue a final release report pertaining to cleanup of the area.

12. EMPLOYEE TRAINING REQUIREMENTS

A matrix summarizing general training requirements for Ninyo & Moore personnel, subcontract supervisors and personnel, visitors, and vendors is presented in Table 12-1.

Table 12-1 – Training Assignment Matrix

Category	40-Hour Basic	8-Hour Refresher	24 Hours Supervised Experience	8-Hour Supervisor Refresher[4]	Site-Specific	N&M Safety Orientation	First Aid/CPR
N&M Employee	X	X	X		X	X	X[1]
N&M or Subcontractor Supervisor	X[3]	X[3]	X	X[4]	X[5]	X[5]	X[1]
Subcontractor	X[3]	X[3]	X		X[5]	X[5]	X[1]
Visitor	X[6]	X[6]	X[7]		X		
Vendor	X[6]	X[6]	X[7]		X		

Notes:

1 At remote locations, (emergency responders more than 10 minutes away) a minimum of two people will be on-site, during fieldwork, who have a valid certificate in basic first aid/CPR from the American Red Cross (or equivalent) documented training.

3 The requirement for 40-hour basic and 8-hour refresher training for certain non-intrusive work shall be made on a case-by-case basis by the Corporate Safety Manager.

4 Employees may take supervisor training in lieu of standard refresher training.

5 A site-specific safety orientation must be given to all visiting/working personnel.

6 For vendors/visitors requiring controlled area access to work on contaminated equipment.

7 Not required if escorted.

13. EMERGENCY RESPONSE

In the event of a medical emergency or fire during fieldwork at the site, the emergency telephone number shall be called from the on-site mobile phone or any landline phone. A mobile telephone will be available during all field activities. On a daily basis, and at each work location, the SHSO and/or field team leader will verify that mobile phones are operational.

Pertinent personnel phone numbers are listed in Section 3. Emergency facility locations and phone numbers are listed below. All project vehicles shall maintain a copy of this section (Section 13) together with the appropriate emergency maps at all times, in a readily accessible location.

The emergency facilities located in closest proximity to the work areas are Sharp Memorial Hospital as indicated in Table 13-1. The routes from the site to the hospital are included in Appendix A.

Table 13-1 – Emergency Phone Numbers

Emergency	Number	Contact	Notes
Medical, Fire or Police	911	Emergency Operator	
Hospital/Emergency Room	(858) 939-3400	Sharp Memorial Hospital 7901 Frost Street San Diego, CA 92123	

APPENDIX A

HOSPITAL ROUTE MAP

mapquest

Notes

Trip to:

7901 Frost St
San Diego, CA 92123-2701
4.84 miles / 9 minutes

4150 Ute Dr, San Diego, CA 92117-5853

1. Start out going **east** on **Ute Dr** toward **Modoc St**. Map	**0.04 Mi** *0.04 Mi Total*
2. Take the 2nd **left** onto **Clairemont Dr**. Map *Clairemont Dr is just past Modoc St* *Clairemont is on the corner* *If you reach Stacy Ave you've gone a little too far*	**0.2 Mi** *0.2 Mi Total*
3. Take the 1st **right** onto **Balboa Ave / CA-274 E**. Map *Mandarin Wok Restaurant is on the right* *If you reach Chippewa Ct you've gone about 0.1 miles too far*	**2.8 Mi** *3.0 Mi Total*
4. Turn **right** onto **Convoy St**. Map *Convoy St is 0.1 miles past Ruffner St* *Robert's Taco Shop is on the corner* *If you reach Mercury St you've gone about 0.3 miles too far*	**0.8 Mi** *3.8 Mi Total*
5. Turn **left** onto **Aero Dr**. Map *Aero Dr is 0.1 miles past Kearny Mesa Rd* *Emerald Chinese Seafood Restaurant is on the left* *If you are on Linda Vista Rd and reach Stalmer St you've gone about 0.2 miles too far*	**0.2 Mi** *4.0 Mi Total*
6. Take the 1st **right** onto **Kearny Villa Rd**. Map *If you reach Aero Ct you've gone about 0.1 miles too far*	**0.4 Mi** *4.4 Mi Total*
7. Turn **slight right** onto **Mesa College Dr**. Map	**0.3 Mi** *4.7 Mi Total*
8. Turn **slight left** onto **Health Center Dr**. Map *Health Center Dr is 0.1 miles past Berger Ave*	**0.03 Mi** *4.7 Mi Total*
9. Turn **right** to stay on **Health Center Dr**. Map	**0.2 Mi** *4.8 Mi Total*
10. Take the 1st **left** onto **Frost St**. Map *If you reach Vista Hill Ave you've gone about 0.3 miles too far*	**0.01 Mi** *4.8 Mi Total*
11. **7901 FROST ST** is on the **right**. Map *If you reach Childrens Way you've gone about 0.2 miles too far*	

7901 Frost St, San Diego, CA 92123-2701

Total Travel Estimate: **4.84 miles - about 9 minutes**

BOOK TRAVEL with mapquest (877) 577-5766

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ATTACHMENT 1

HEALTH AND SAFETY PLAN ACKNOWLEDGEMENT SHEET

ONSITE WORKING PERSONNEL SIGN IN

The personnel listed below have 40-hour HAZWOPER or 24-hour training with current refresher status and have read and understood this Health and Safety plan, and agree to abide by its provisions.

Onsite Personnel Name	Signature	Company	Date

E.22,
3/13/12

FIRST AMENDMENT TO AGREEMENT

This First Amendment to Agreement ("First Amendment") is entered into by and between the San Diego Unified School District, a public school district existing in the State of California having its principal business office located at 4100 Normal Street, San Diego, California 92103, hereinafter referred to as "SDUSD," and the Department of Toxic Substances Control, 5796 Corporate Avenue, Cypress, California 90630, hereinafter referred to as "DTSC."

RECITALS

WHEREAS, SDUSD entered into a Master Oversight Agreement ("Agreement") with DTSC that became effective on April 5, 2002, to perform all necessary Preliminary Endangerment Assessments, remedial investigations, and response actions in accordance with California Education Code sections 17210.1, 17213.1, and17213.2 and Health and Safety Code section 25355.5(a)(1)(c); and

WHEREAS, paragraph 3.8 of said Agreement provided that, among other things, (1) SDUSD agreed to pay all costs incurred by DTSC; (2) DTSC will provide SDUSD with quarterly invoices for costs incurred; (3) SDUSD shall pay all DTSC costs within sixty (60) days of receipt of the billing; and (4) that any disputed amount(s) will be reimbursed and/or resolved in accordance with paragraph 3.24 (referenced incorrectly as 3.24.3) of the Agreement; and

WHEREAS, on November 16, 2006, the SDUSD and DTSC informally revised Exhibit "B" of the Agreement to include additional sites that were found to contain hazardous materials in order to meet all State requirements; and

WHEREAS, on July 21, 2011, a contractor excavating utility trenches in a paved parking lot at Clairemont High School ("Clairemont") encountered a deposit of burn ash at the school site, and an environmental study at the site will be required to perform the response actions required. In order for response actions to be taken, Exhibit "B" will have to be updated to include the Clairemont site. Funding for the Clairemont project and additional sites, as they occur, is estimated at $1,000,000 over the term of the Agreement; and

WHEREAS, the term of the Agreement commenced on the effective date of April 5, 2002, and will be in effect until further notice; and

WHEREAS, various provisions in the Agreement need to be updated to reflect current administrative and contract requirements; and

WHEREAS, for the foregoing reasons, it is necessary to amend the Agreement;

NOW, THEREFORE, SDUSD and DTSC mutually agree as follows:

1. Article 3.3 is hereby amended in its entirety as follows:

   3.3 Agreement Managers. Mr. Thomas Cota, Branch Chief, Schools Evaluation and Brownfields Cleanup Branch, is designated by DTSC as its Manager for this Agreement. Mr. Lee Dulgeroff, Executive Director, Facilities Planning and Construction, San Diego Unified School SDUSD, is designated by SDUSD as its Manager for this Agreement. Each party to this Agreement shall provide at least ten (10) days advance written notice to the other of any change in its designated Manager or his designee.

2. Paragraphs 3.4.1 and 3.4.2 of Article 3.4 entitled "Notices and Submittals" are hereby amended as follows:

   3.4.1 To DTSC:

   Thomas Cota
   Branch Chief
   Schools Evaluation and Brownfields Cleanup Branch
   Department of Toxic Substances Control
   5796 Corporate Avenue
   Cypress, California 90630

   3.4.2 To SDUSD:

   Lee Dulgeroff, Executive Director
   Facilities Planning and Construction
   4860 Ruffner Street
   San Diego, California 92111-1522

3. Paragraph 3.8 is hereby amended in its entirety as follows:

   3.8 Payment. In accordance with the requirements of Education Code sections 17210.1 and 17213.1, SDUSD agrees to pay (1) all costs incurred by DTSC for review of documents and oversight performed prior to the effective date of the Agreement and/or the First Amendment; and (2) all costs incurred by DTSC in providing oversight pursuant to this Agreement and/or First Amendment, including review of the documents described in the Scope of Work (Exhibit C) and associated documents, and in providing oversight of field activities. An estimate of DTSC's oversight costs is attached as Exhibit E. It is understood by the parties that the Cost Estimate (Exhibit E) is an estimate and cannot be relied upon as the final cost figure. Commencing on the date this First Amendment is approved by SDUSD's Board of Education ("Board"), DTSC costs incurred during the term of the Agreement shall not exceed One Million and no/100

Dollars ($1,000,000). Actual DTSC costs incurred for a specific scope of work shall be identified on a project-by-project basis. SDUSD shall identify requested services by issuing written notices to proceed, hereinafter referred to as "NTPs." The NTP, once issued, is considered a part of this Agreement. Total compensation for DTSC incurred costs under this Agreement shall not exceed the aggregate value amounts established in the NTPS, and must not exceed the amount authorized by SDUSD. Tracking of all DTSC approved costs shall be the responsibility of SDUSD. SDUSD shall notify DTSC when the total compensation paid to DTSC reaches $900,000 to ensure the Agreement may be timely amended to avoid DTSC's costs incurred from exceeding the $1,000,000 approved by the SDUSD Board.

4. Paragraph 3.8.5 is hereby added as follows:

   3.8.5 DTSC will provide SDUSD with quarterly invoices which contain a detailed accounting and supporting documentation of all expenditures during the previous quarter. DTSC will assign a site specific CalStars Site Code for each site which is reviewed under this Agreement. In addition, an SDUSD "Master Agreement Code" shall be created to charge time spent on tracking and coordinating the review of all sites and to charge activities that would apply to multiple sites; i.e., the review and comment on a master generic Health and Safety Plan (HASP), Quality Assurance/Quality Control (QA/QC) Plan, and Public Participation Plan (PPP), as well as any routinely scheduled coordination meetings between DTSC and SDUSD where the status of a multitude of sites may be briefly discussed. SDUSD shall pay all DTSC costs within sixty days (60) days of receipt of the billing. Such billings will reflect any amounts that have been advanced to DTSC by SDUSD. DTSC will later reimburse SDUSD for any costs found to have been improperly billed pursuant to paragraph 3.24 herein. If required by a decision for a billing dispute made pursuant to paragraph 3.24, DTSC will reimburse SDUSD for any costs in accordance with that decision.

5. Paragraph 3.17 is hereby amended in its entirety as follows:

   3.17 Amendments. This Agreement cannot be modified, changed or revised, except by a written amendment executed by both parties. Any amendment hereto shall be in writing and shall set forth the date of the public Board meeting of SDUSD at which the Board approved such amendment. By delegation of authority from the Board to the Executive Director of Facilities or his designee, the sites identified in Exhibit "B" can be amended as necessary without Board approval. Additional sites shall be identified by the DTSC and SDUSD in writing on a project-by-project basis before work is commenced at a specific site.

6. Paragraph 3.24 is amended to have written requests sent to:

   Chief, Collections and Resolution Unit
   Department of Toxic Substances Control
   P.O. Box 806
   Sacramento, California 95812-0806

   Additionally, the last sentence of the paragraph is revised to change "Special Assistant for Cost Recovery and Reimbursement Policy" to "Chief, Collections and Resolution Unit."

7. Exhibit "B" titled "List of Existing School Sites," is hereby amended to include Clairemont. A copy of the revised Exhibit "B" is attached hereto and incorporated herein by this reference.

All other terms and conditions in said Agreement not expressly amended herein shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused this First Amendment to Agreement to be signed in their behalf by their duly authorized representatives.

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

By: _____
Thomas Cota
Branch Chief
Schools Evaluation & Brownfields Cleanup Branch

Date: 3/23/12

SAN DIEGO UNIFIED SCHOOL DISTRICT

By: _____
Arthur S. Hanby, Jr.
Strategic Sourcing & Contracts Officer

Date: 3/14/2012

LEGALITY AND FORM APPROVED:

_____ 3.6.12
Sandra T.M. Chong, Assistant General Counsel
San Diego Unified School District

Approved in public meeting of the Board of Education of the San Diego Unified School District on 3/13/12

_____
Cheryl Ward, Board Action Officer
Board of Education

Federal Tax I.D. # 68-0281381

EXHIBIT B

LIST OF EXISTING SCHOOL SITES

Lincoln Area High School

Burbank Elementary School

Mead Elementary School

Muirlands Middle School

Noah Webster Elementary School

Correia Middle School

Jefferson Elementary School

Mead Elementary School Expansion

Clairemont High School

June 28, 2012
Project No. 105338077

Ms. Christine Chiu
Department of Toxic Substances Control
Schools Evaluation and Brownfields Cleanup Branch
5796 Corporate Avenue
Cypress, California 90630

Subject: Technical Memorandum Work Plan
Additional Burned Waste Assessment
Clairemont High School
4150 Ute Drive
San Diego, California

References: Department of Toxic Substances Control, 2012, Review of Supplemental Site Investigation Report, Clairemont High School, 4150 Ute Drive, San Diego (Site Code: 404864-11): dated January 25.

Ninyo & Moore, 2011, Supplemental Site Investigation Report, Clairemont High School, 4150 Ute Drive, San Diego, California, Site Code: 404864: dated December 9.

Dear Ms. Chiu:

On behalf of the San Diego Unified School District (SDUSD), Ninyo & Moore has prepared this Technical Memorandum Work Plan (Work Plan) to perform additional assessment of burned wastes at a portion of Clairemont High School (site) (Figure 1). The area of concern (AOC) at the site is the main school parking lot located on the north side of Ute Drive, east of the baseball field, and south of the main campus buildings (Figure 2). Ninyo & Moore performed initial site assessment activities in September 2011, which were summarized in the above referenced Supplemental Site Investigation (SSI) Report. The SSI report concluded that additional assessment data are needed to evaluate the potential risks to human health in the unpaved portions of the AOC and contiguous areas.

SITE DESCRIPTION AND BACKGROUND

The site is located at 4150 Ute Drive in the city of San Diego, California (Figure 1) and has been occupied by Clairemont High School since its construction in approximately 1957. The site property is approximately 44 acres and consists of school and administration buildings located on the northern portion of the property and athletic fields, hard courts, parking lots, and an undeveloped area of land on the southern portion of the property. Ute Drive traverses the southern portion of the site with the structures and majority of the campus located north of the street and undeveloped land and a small parking lot located south of the street (Figure 2).

On July 21, 2011 a contractor excavating utility trenches in a paved parking lot at the southern end of the site along Ute Drive encountered burned wastes (trench OT on Figure 3). The materials in the excavation and stockpile were observed to be darkly colored and ashy and to contain broken glass/ceramics and some metal debris. Samples were collected from the excavation and stockpile. The analytical results indicated that the material contained elevated concentrations of cadmium, chromium, copper, lead, and zinc and was characterized as a California-hazardous waste for lead. Approximately 31 tons of excavated burned wastes/soils associated with utility trench OT was transported from the site and disposed of at the South Yuma County Landfill as California-hazardous, Arizona non-hazardous waste. Copies of the weigh tickets and waste manifests were forwarded to the Department of Toxic Substances Control (DTSC) via e-mail on December 12, 2011.

The DTSC and City of San Diego, Solid Waste Local Enforcement Agency were notified of the presence of burned wastes at the site. The DTSC requested additional assessment and a Technical Memorandum was prepared and approved by the DTSC with conditions. As part of the SSI, Ninyo & Moore performed a review of relevant historical information pertaining to the site. Based on the review, Ninyo & Moore concluded that wastes were disposed of at the site from around 1949 to 1957, prior to grading the site for the planned construction of the school.

As part of the SSI, in September 2011, Ninyo & Moore directed excavation and sampling of 11 exploratory trenches in areas outward of utility trench OT and also deepened utility trench OT to delineate the vertical extent of wastes. The extent of burned wastes and of minor wastes (<1%) were estimated as shown on Figure 3. The report concluded that it is possible that a small finger canyon was previously located on the site and that wastes were dumped into the canyon, burned in place, and covered over during grading and/or construction activities and that the minor amounts of burned wastes observed at relatively shallow depths (in T-5, T-6, and T-8) may be associated with subsequent grading of the site for the construction of the school as opposed to primary waste deposits observed at other locations.

Arsenic and lead were detected in burned wastes samples at concentrations exceeding their respective DTSC action levels. The contaminants of concern (COCs) at the site were identified as antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, vanadium, zinc, 4,4'-dichlorodiphenyldichloroethane, 4,4'-dichlorodiphenyldichloroethylene, 4,4'-dichlorodiphenyltrichloroethane, acenapthylene, and phenanthrene in burned wastes.

A human health screening evaluation (HHSE) was performed based on the data collected during the SSI and considered exposure to receptors (adult and child) in a residential setting. The only potentially complete exposure pathway identified was associated with the unpaved portions of the AOC and potentially the unpaved area on site located between the canyon and Ute Drive. The complete pathways associated with the unpaved portions are the inhalation of dust particulates, ingestion of dust particulates or burned wastes, or dermal absorption through direct contact with contaminants in the burned wastes or impacted surface run off. The HHSE concluded that there is not a significant risk to human health in the paved areas of the AOC as long as they remain paved, but that additional data was needed to evaluate the risks in the unpaved portions of the AOC and unpaved contiguous areas.

The California Environmental Protection Agency, DTSC reviewed the SSI report and concurred with the recommendation to perform additional assessment activities in the unpaved planter area in the AOC and the unpaved area southwest of Ute Drive. In addition, the DTSC requested that additional assessment be performed in the area northwest of exploratory trench T-3, on the main school campus, and to better identify the waste boundaries identified in the SSI as inferred (Figure 3).

The DTSC stated in the above referenced letter, that the vertical delineation of the burned wastes was not adequate in the areas of T-11 and OT because "formation was only observed in limited areas in the bottom of the trenches." However, it is the professional opinion of Ninyo & Moore that the vertical delineation in these trenches is adequate. Approximately 1.5 to 3 feet horizontally along the bottom of the trenches was excavated and formational soils (Scripps Formation) underlying wastes were observed in the excavation bucket. Additional excavation was attempted in both trenches but was not possible due to the instability of the burned wastes, which resulted in repeated caving of the trench excavation sidewalls. Based on this information, the vertical extent of wastes in the areas of trenches OT and T-11 is delineated and additional excavation is not necessary. An exploratory trench is proposed for the area southwest of T-11 and reasonable attempts will be made to excavate 1 foot into the formation across the majority of the trench bottom; however, if the sidewalls of the trench are unstable and significant caving occurs, additional excavation may not be feasible.

OBJECTIVES

The objective of the work proposed in this Work Plan is to further characterize and delineate the extent of burned wastes specifically limited to the AOC and contiguous areas.

SCOPE OF WORK

Specific tasks to be performed are listed below.

- Prepare a brief notification letter generally describing the planned assessment activities, dates the work will be performed and contact information; posted at the school; and distribute to residents of adjacent properties.

- Notify Underground Service Alert, a public utility locator, of the proposed excavation areas a minimum of 48 hours before field activities and provide a licensed geophysical surveyor to clear the proposed locations of the exploratory trenches and test pits for underground utility conflicts.

- Provide equipment and a licensed subcontractor to excavate and backfill exploratory trenches. The actual number of exploratory trenches is not known at this time; however, for purposes of this Work Plan, we have assumed that 12 areas will be explored as indicated on Figure 3. The exploratory trenches are located in areas outward from known burned wastes

to further delineate the extent of burned wastes at the site and in areas requested by the DTSC in the above-referenced letter. Due to the proximity of the canyon slope in the area on the southwest side of Ute Drive, the use of a backhoe to excavate trenches is not recommended; therefore, test pits at these two locations will be hand excavated (Figure 3). Trenches will be excavated 1 foot into formation, if possible.

- Collect two to three burned wastes/soils/formation samples from each exploratory trench based upon observations made in the field. If possible, one sample will be collected within the burned wastes and one sample will be collected in the native soils/formation underlying the wastes.

- Analyze one sample from each exploratory trench for Title 22 metals by United States Environmental Protection Agency (USEPA) test method 6010B/7471A and one to two additional samples from each trench will be analyzed for total lead by USEPA test method 6010B. The two samples with the highest total lead concentrations will be additionally analyzed for dioxins by USEPA test method 8290.

- Additionally analyze samples known or suspected of containing the highest lead or other metal concentrations, for total petroleum hydrocarbons extended range (TPH C_8-C_{40}) by USEPA test method 8015(M)B, polynuclear aromatic hydrocarbons (PAHs) by USEPA test method 8270C, and organochlorine pesticides (OCPs) by USEPA test method 8081A. Analyses were selected based upon the site COCs identified in the SSI.

- Analyze two duplicate samples and one equipment blank sample for Title 22 metals, TPH C_8-C_{40}, PAHs, and OCPs by the test methods described above.

- Backfill each exploratory trench with excavated materials from that location in the approximate reverse order excavated.

- Temporarily stockpile excess excavated materials that cannot be placed back into the trenches.

- Collect soil samples from the stockpile and submit the samples to a laboratory for analysis. The number of samples and analyses requested will be performed in accordance with the requirements of the accepting facility.

- Provide transportation and disposal for excavated materials generated during this assessment to the appropriate accepting facility based upon the results of the stockpile sampling and analysis.

- Prepare a Preliminary Endangerment Assessment report that documents field methodologies and summarizes findings from this assessment as well as the SSI activities. The report will include tabulated analytical data, analytical reports accompanied with chain of custody and quality assurance/quality control documentation, appropriate figures and tables, provide conclusions and recommendations, and include a response to the comments provided by the DTSC in their above-referenced letter.

SCHEDULE

Ninyo & Moore anticipates requiring six to eight weeks to complete the scope of work described herein. Project activities will be initiated upon receipt of approval of this Work Plan and a Notice to Proceed from the District.

We trust that this work plan satisfies your current requirements.

Sincerely,
NINYO & MOORE

Lisa Bestard, REA
Senior Project Environmental Scientist

Beth S. Abramson-Beck, PG 4580
Principal Geologist

LB/BAB/mmd

Attachments: Figure 1 – Site Location
Figure 2 – Site and Vicinity
Figure 3 – Proposed Exploratory Trench and Test Pit Locations

Distribution: (1) Addressee
(1) Mr. Loren Chico, San Diego Unified School District
(1) Ms. Jaquelyn Adams, City of San Diego Solid Waste Local Enforcement Agency, 1010 Second Avenue, Suite 600, MS 606L, San Diego, California 92101-4998

SOURCE: 2008 Thomas Guide for San Diego County, Street Guide and Directory; Map © Rand McNally, R.L.07-S-129

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE

SCALE IN FEET

0 1,200 2,400 4,800

Ninyo & Moore		SITE LOCATION	FIGURE
PROJECT NO.	DATE	CLAIREMONT HIGH SCHOOL 4150 UTE DRIVE SAN DIEGO, CALIFORNIA	1
105338077	6/12		

fig1_105338077_sl.mxd 6/21/2012 3:55:10 PM JDL

SOURCE: Aerial Imagery - Photo Date: August, 2010; (c) Google Earth, 2011

LEGEND

SITE BOUNDARY

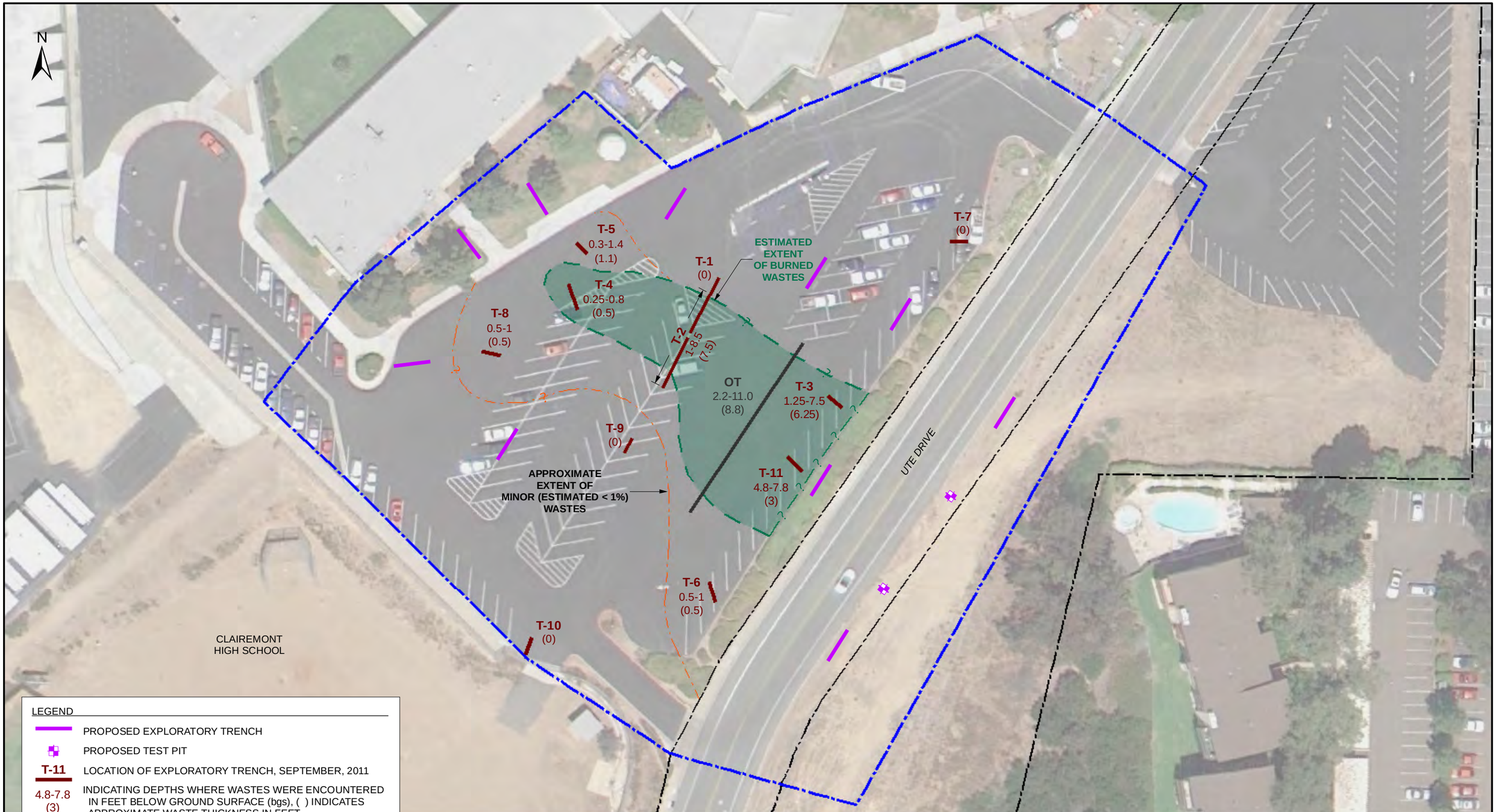
SCALE IN FEET

0 140 280 560

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore	SITE AND VICINITY	FIGURE
PROJECT NO. / DATE	CLAIREMONT HIGH SCHOOL 4150 UTE DRIVE SAN DIEGO, CALIFORNIA	2
105338077 / 6/12		

fig2_105338077_sv.mxd 6/27/2012 2:00:30 PM JDL



SOURCE: Aerial Imagery - Photo Date: August, 2010; (c) Google Earth, 2011

LEGEND

- PROPOSED EXPLORATORY TRENCH
- PROPOSED TEST PIT
- T-11 — LOCATION OF EXPLORATORY TRENCH, SEPTEMBER, 2011
- 4.8-7.8 (3) — INDICATING DEPTHS WHERE WASTES WERE ENCOUNTERED IN FEET BELOW GROUND SURFACE (bgs), ( ) INDICATES APPROXIMATE WASTE THICKNESS IN FEET
- OT — LOCATION OF UTILITY TRENCH, AUGUST 2011
- 2.2-11.0 (8.8) — INDICATING DEPTHS WHERE WASTES WERE ENCOUNTERED IN FEET bgs, ( ) INDICATES APPROXIMATE WASTE THICKNESS IN FEET
- AREA OF CONCERN
- SITE BOUNDARY

SCALE IN FEET

0 25 50 100

NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore		PROPOSED EXPLORATORY TRENCH AND TEST PIT LOCATIONS	FIGURE
PROJECT NO.	DATE	CLAIREMONT HIGH SCHOOL 4150 UTE DRIVE SAN DIEGO, CALIFORNIA	3
105338077	6/12		

fig3_105338077_prop_ext_tp.mxd 6/27/2012 1:59:55 PM JDL

Matthew Rodriquez
Secretary for
Environmental Protection

Department of Toxic Substances Control

Deborah O. Raphael, Director
5796 Corporate Avenue
Cypress, California 90630

Edmund G. Brown Jr.
Governor

August 9, 2012

Mr. Lee Dulgeroff
Executive Director
Facilities Planning and Construction
San Diego Unified School District
4860 Ruffner Street
San Diego, California 92111-1522

APPROVAL OF PRELIMINARY ENVIRONMENTAL ASSESSMENT WORK PLAN, AREA OF CONCERN (AOC) OF CLAIREMONT HIGH SCHOOL, 4150 UTE DRIVE, SAN DIEGO (SITE CODE: 404864)

Dear Mr. Dulgeroff:

The Department of Toxic Substances Control (DTSC) reviewed the "Technical Memorandum Work Plan" (Workplan) (Ninyo & Moore, June 28, 2012) received on June 28, 2012, regarding the 44-acre Clairemont High School site (Site). The Workplan was provided in response to DTSC comments on the Preliminary Environmental Assessment (PEA) Equivalent Report forwarded in a letter, dated January 25, 2012. The Workplan includes background information and proposed investigation activities of the "Area of Concern" (AOC) of the Site.

According to the PEA Equivalent Report and Workplan, the AOC is a portion of the Site and is the main school parking lot. The Site was undeveloped until sometime between 1949 and 1953 when grading and filling operations appear to have occurred along the southern portion of the property adjacent to the canyon. These activities appeared to continue until 1957 when grading for construction of the school began. In July 2011, during the excavation of utility trenches by the San Diego Unified School District (District), burned waste was encountered and an initial assessment was conducted in September 2011. The Workplan includes additional activities to further characterize and delineate the extent of burned waste specifically limited to the AOC. The District requests DTSC provide a determination on the AOC.

Printed on Recycled Paper

DTSC comments have been adequately addressed and the Workplan is hereby approved. If Site conditions differ from those in the approved Workplan, additional work may be necessary. In accordance with Education Code section 17210.1, subdivision (b), the District should provide notice to residents in the immediate area, approved in form by DTSC, in advance of field investigation activities. Please notify DTSC a minimum of 48 hours in advance of field work or schedule changes.

Upon submittal of the Draft PEA Report, the District should advise DTSC of its intention to make the PEA available for public review by either Option A (Ed. Code § 17213.1, subd. (a)(6)(A)) or Option B (Ed. Code § 17213.1, subd. (a)(6)(B)).

If you have any questions regarding the project, please contact Christine Chiu, Project Manager, at 714.484.5340 or cchiu@dtsc.ca.gov, or me at 714.484.5368 or shaddad@dtsc.ca.gov.

Sincerely,

Shahir Haddad, P.E.
Supervising Engineer
Schools Evaluation and Brownfields Cleanup Branch
Brownfields and Environmental Restoration Program

ed/cc/ap

cc: Mr. Loren Chico (via e-mail)
Civil/Environmental Engineering Coordinator
San Diego Unified School District
lchico@sandi.net

Ms. Lisa Bestard (via e-mail)
Senior Project Environmental Scientist
Ninyo & Moore
lbestard@ninyoandmoore.com

Ms. Christine Chiu (via e-mail)
Project Manager
Schools Evaluation and Brownfields Cleanup Branch
cchiu@dtsc.ca.gov

cc: Mr. Joe Hwong (via e-mail)
Engineering Geologist
Schools Evaluation and Brownfields Cleanup Branch
jhwong@dtsc.ca.gov

Dr. Shukla Roy-Semmen (via e-mail)
Staff Toxicologist
Human and Ecological Risk Office – Cypress Office
sroysemm@dtsc.ca.gov

Schools Evaluation and Brownfields Cleanup Branch Reading File

San Diego Unified
SCHOOL DISTRICT

Facilities Planning and Construction
Physical Plant Operations Center Annex
4860 Ruffner Street, San Diego, CA 92111-1522

August 19, 2013

Dear Neighbor:

Subject: Notice of Environmental Soil Investigation
Clairemont High School
4150 Ute Drive
San Diego, California

An environmental soil investigation will be conducted at Clairemont High School, 4150 Ute Drive, San Diego, CA, on Tuesday, August 20, Wednesday August 21, and Thursday August 22, 2013.

Background: During trenching activities related to the installation of utility lines in the main parking lot at the school, burned waste materials were observed. The California Department of Toxic Substances Control (DTSC) was notified and required soil investigations be performed. Historical information has suggested that prior to, or during, the construction of the school in the late 1950s, burned waste materials may have been used as fill material. The soil investigation will sample the waste and surrounding soil for hazardous materials. The burned waste materials are buried and covered; thus, it appears there is no exposure to school occupants.

What to Expect: The soil investigation is scheduled during normal business hours on Tuesday, August 20, Wednesday August 21, and Thursday August 22, 2013. The activities will consist of asphalt cutting, excavating trenches utilizing a backhoe and/or excavator, collecting soil samples, backfilling of trenches, and temporary paving activities. Dust and noise will be kept to a minimum and street closures will not be required. Please note that the work is scheduled during the summer break so that school activities will not be disturbed.

What's Next: SDUSD will incorporate the results into a Preliminary Environmental Assessment report and submit the report to DTSC and the City of San Diego Solid Waste Local Enforcement Agency (LEA) for review and approval. The report will include an assessment of the area with buried waste and hazardous materials in the waste or soil, evaluate potential risks to human health and the environment, and recommend further action, if necessary.

Contact: If you have any questions concerning the upcoming soil investigation, please contact Loren Chico at (858) 573-5731.

CC: Ms. Christine Chiu, DTSC
Ms. Jacqueline Adams, City of San Diego LEA
Ms. Jennifer Roberson, Principal, Clairemont High School

Department of Toxic Substances Control
Site Visit Report

To:	Christine Chiu	**Date(s) of Visit:**	August 21, 2013
From:	Christine Bucklin	**Weather:**	Sunny/Hot

Site/Project Name:	Clairemont High School, San Diego
PCA/SiteCode/WR#:	404864
Purpose of Visit:	Observe site conditions & oversee PEA fieldwork activities

Summary of Activities:

- Observation of ongoing trenching activities to investigate extent of burned waste material at the site

Personnel Onsite	Title
Beth Abramson-Beck	Geologist - Ninyo & Moore
Brianna	Geologist - Ninyo & Moore
Various earthmoving crew	

Field Notes/Details:

- Arrive at project site at approximately 11:00 am
- Met with Beth of NM for escort of site
- Walked limits of site where excavation and sampling had occurred - test pits etc
- Burned waste material (melted glass, broken colored and clear glass) was observed in the test pit T-16 - there was fill on top (cobbles and loose sand), approx. 5 feet of waste material, and then it appeared to grade into the native formation at 11 or 12 ft bgs
- Observed broken glass and stained dirt [similar to waste material in test pit T-16 and other described test pits] within open shrubbery area physically downslope from the school ‘s asphalt parking lot. It seems that the waste layer beneath the asphalt parking lot is likely able to erode off, and it appears that burrowing animals may have brought up material from beneath the asphalt parking lot. Bushes in this area appear distressed/dying.
- Discussed that we don’t know if this material is contaminated and how it might be impacting nearby residents (exposure) -
- Left site at approximately 12:45 pm

Comments:

- Recommend testing and removal of the debris that is daylighting at the shrubbery area -

Attachment(s):

- Photo log

1	View of the area across the street from the HS, canyon is to the right, test pits were done in this bare area – we are standing on the asphalt parking lot looking down in elevation
2	waste material taken from the test pit T16

3	Waste material from T16
4	Demarcation from fill to top of waste layer T16

5	View of end of asphalt and elevation drop, exposed soils in bush area, eroded bush area
6	View of waste material daylighting from edge of soil horizon

7	Photo of broken glass in shrubbery area similar to old glass type waste material found at other test pits- along cut through walking paths to school
8	as above, waste material is daylighting here from layers which have been cut open to create slope and animal burrowing

9	Typical path cut and exposed soils , parking lot above is built on cut and fill of waste debris
10	

11	
12	

APPENDIX F

PHOTOGRAPHS

Photograph 1: **T-12**

Photograph 2: **T-12**

Photograph 3: **T-12**

Photograph 4: **T-12**

Photograph 5: **T-13**

Photograph 6: **T-13**

Photograph 7: **T-14**

Photograph 8: **T-14**

Photograph 9: **T-14**

Photograph 10: **T-14**

Photograph 11: **T-15**

Photograph 12: **T-15**

Photograph 13: **T-15**

Photograph 14: **T-15**

Photograph 15: **T-16**

Photograph 16: **T-16**

Photograph 17: **T-17**

Photograph 18: **T-17**

Photograph 19: **T-18**

Photograph 20: **T-18**

Photograph 21: **T-19**

Photograph 22: **T-19**

Photograph 23: **T-20**

Photograph 24: **T-20**

Photograph 25: **T-21**

Photograph 26: **T-21**

Photograph 27: **T-22**

Photograph 28: **T-22**

Photograph 29: **T-23**

Photograph 30: **T-23**

Photograph 31: **Temporary fencing around the landscaped planter.**

Photograph 32: **Temporary fencing around the landscaped planter.**

APPENDIX G

LABORATORY REPORTS

Ninyo & Moore

Project: Clairmont H.S., 105338088

ATL Work Order: 1302545, 1302547, 1302581

PRIVILEGED AND CONFIDENTIAL

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

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ATL Work Order: **1302545, 1302547, 1302581**

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ADVANCED TECHNOLOGY
LABORATORIES

September 25, 2013

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Lisa Bestard
Ninyo & Moore
5710 Ruffin Road
San Diego, CA 92123
Tel: (858) 576-1000
Fax:(858) 576-9600

Re: ATL #1302545 : Project CLAIREMONT H.S., 105338071 & 105338088 - Received 08/21/2013
ATL #1302547 : Project CLAIREMONT H.S., 105338071 & 105338088 - Received 08/21/2013
ATL #1302581 : Project CLAIREMONT H.S., 105338071 & 105338088 - Received 08/23/2013

Enclosed are the results for sample(s) received by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez

Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of the National Environmental Laboratory

3275 Walnut Avenue, Signal Hill, CA 90755 • Tel: 562-989-4045 • Fax: 562-989-4040
www.atlglobal.com

Ninyo & Moore	Project Number : Clairmont H.S., 105338088
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

CASE NARRATIVE

The sample for EPA 8290 (Dioxin & Furan) analysis was subcontracted to Pace Analytical Lab with DOHS Cert. 2155.

Sample Receiving/General Comments:

1. All sample containers were received intact with proper chain of custody documentation.
2. Information on sample receipt conditions including discrepancies can be found in the attached Sample Receipt Acknowledgment Form.
3. Sample preservation was verified upon receipt of samples, if applicable.
4. All samples were analyzed with method holding times.

Ninyo & Moore	Project Number : Clairmont H.S., 105338088
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T-12-S	1302545-01	Soil	8/20/13 0:00	8/21/13 13:20
T-12-2	1302545-03	Soil	8/20/13 0:00	8/21/13 13:20
T-12-9.5	1302545-05	Soil	8/20/13 0:00	8/21/13 13:20
T-13-S	1302545-09	Soil	8/20/13 0:00	8/21/13 13:20
T-13-2	1302545-10	Soil	8/20/13 0:00	8/21/13 13:20
T-13-4	1302545-11	Soil	8/20/13 0:00	8/21/13 13:20
T-14-0.5	1302545-13	Soil	8/20/13 0:00	8/21/13 13:20
T-14-5.5	1302545-14	Soil	8/20/13 0:00	8/21/13 13:20
T-14-21	1302545-17	Soil	8/20/13 16:30	8/21/13 13:20

Ninyo & Moore	Project Number : Clairmont H.S., 105338088
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T-15-4	1302547-02	Soil	8/21/13 7:40	8/21/13 13:20
T-15-14	1302547-05	Soil	8/21/13 8:45	8/21/13 13:20
T-15-2	1302547-07	Soil	8/21/13 10:04	8/21/13 13:20
T-16-S	1302547-08	Soil	8/21/13 10:45	8/21/13 13:20
T-16-2	1302547-09	Soil	8/21/13 10:50	8/21/13 13:20
T-16-9	1302547-11	Soil	8/21/13 11:07	8/21/13 13:20
T-16-12	1302547-12	Soil	8/21/13 11:40	8/21/13 13:20

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T-17-0.5	1302581-01	Soil	8/22/13 13:50	8/23/13 11:25
T-17-1.5	1302581-02	Soil	8/22/13 14:05	8/23/13 11:25
T-17-5	1302581-03	Soil	8/22/13 14:30	8/23/13 11:25
T-18-0.5	1302581-04	Soil	8/22/13 15:15	8/23/13 11:25
T-18-3	1302581-05	Soil	8/22/13 15:30	8/23/13 11:25
T-18-5.5	1302581-06	Soil	8/22/13 15:50	8/23/13 11:25
T-19-1	1302581-07	Soil	8/22/13 8:29	8/23/13 11:25
T-19-3.5	1302581-08	Soil	8/22/13 8:46	8/23/13 11:25
T-19-7	1302581-09	Soil	8/22/13 9:00	8/23/13 11:25
T-20-1	1302581-10	Soil	8/22/13 10:05	8/23/13 11:25
T-20-3.5	1302581-11	Soil	8/22/13 10:20	8/23/13 11:25
T-20-6.5	1302581-12	Soil	8/22/13 10:35	8/23/13 11:25
T-21-1	1302581-13	Soil	8/22/13 12:09	8/23/13 11:25
T-21-2	1302581-14	Soil	8/22/13 12:50	8/23/13 11:25
T-22-1	1302581-15	Soil	8/22/13 14:50	8/23/13 11:25
T-22-4.5	1302581-16	Soil	8/22/13 15:22	8/23/13 11:25
T-22-7	1302581-17	Soil	8/22/13 15:40	8/23/13 11:25
T-23-1	1302581-18	Soil	8/22/13 16:37	8/23/13 11:25
T-23-3	1302581-19	Soil	8/22/13 16:47	8/23/13 11:25
T-23-8	1302581-20	Soil	8/22/13 17:00	8/23/13 11:25
Dup-2	1302581-21	Soil	8/22/13 0:00	8/23/13 11:25
Dup-1	1302581-22	Soil	8/22/13 0:00	8/23/13 11:25

Ninyo & Moore 5710 Ruffin Road San Diego , CA 92123	Project Number : Clairmont H.S., 105338088 Report To : Lisa Bestard Reported : 9/25/2013

Client Sample ID T-12-S

Lab ID: 1302545-01

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**3.9**	2.0	0.22	1	B3H0462	08/24/2013	08/24/13 10:27	
Arsenic	**6.0**	1.0	0.38	1	B3H0462	08/24/2013	08/24/13 10:27	
Barium	**220**	1.0	0.08	1	B3H0462	08/24/2013	08/24/13 10:26	
Beryllium	ND	1.0	0.02	1	B3H0462	08/24/2013	08/24/13 10:26	
Cadmium	**2.1**	1.0	0.02	1	B3H0462	08/24/2013	08/24/13 10:27	
Chromium	**12**	1.0	0.04	1	B3H0462	08/24/2013	08/24/13 10:27	
Cobalt	**3.6**	1.0	0.06	1	B3H0462	08/24/2013	08/24/13 10:27	
Copper	**81**	2.0	0.11	1	B3H0462	08/24/2013	08/24/13 10:26	
Lead	**190**	1.0	0.14	1	B3H0462	08/24/2013	08/24/13 10:27	
Molybdenum	**2.7**	1.0	0.04	1	B3H0462	08/24/2013	08/24/13 10:27	
Nickel	**11**	1.0	0.04	1	B3H0462	08/24/2013	08/24/13 10:27	
Selenium	ND	1.0	0.24	1	B3H0462	08/24/2013	08/24/13 10:27	
Silver	ND	1.0	0.06	1	B3H0462	08/24/2013	08/24/13 10:26	
Thallium	ND	1.0	0.29	1	B3H0462	08/24/2013	08/24/13 10:27	
Vanadium	**20**	1.0	0.17	1	B3H0462	08/24/2013	08/24/13 10:26	
Zinc	**330**	1.0	0.50	1	B3H0462	08/24/2013	08/24/13 10:26	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0471	08/26/2013	08/26/13 13:10	

Hydrocarbon Chain Distribution by EPA 8015B (Modified) — **Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C8-C10	ND	10	10	1	B3I0015	09/03/2013	09/04/13 13:19	
T/R Hydrocarbons: C10-C18	ND	10	10	1	B3I0015	09/03/2013	09/04/13 13:19	
T/R Hydrocarbons: C18-C28	**33**	10	10	1	B3I0015	09/03/2013	09/04/13 13:19	
T/R Hydrocarbons: C28-C36	**140**	10	10	1	B3I0015	09/03/2013	09/04/13 13:19	
T/R Hydrocarbons: C36-C40	**54**	10	10	1	B3I0015	09/03/2013	09/04/13 13:19	
T/R Hydrocarbons: C8-C40 Total (HS	230	10	10	1	B3I0015	09/03/2013	09/04/13 13:19	
Surrogate: p-Terphenyl	*139 %*		*55 - 153*		B3I0015	09/03/2013	*09/04/13 13:19*	

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Client Sample ID T-12-S

Lab ID: 1302545-01

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.12	1	B3I0018	09/03/2013	09/04/13 10:26	
4,4'-DDE	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:26	
4,4'-DDT	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:26	
Aldrin	ND	1.0	0.09	1	B3I0018	09/03/2013	09/04/13 10:26	
alpha-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:26	
alpha-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:26	
beta-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:26	
Chlordane	ND	8.5	1.5	1	B3I0018	09/03/2013	09/04/13 10:26	
delta-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:26	
Dieldrin	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:26	
Endosulfan I	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 10:26	
Endosulfan II	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:26	
Endosulfan sulfate	ND	2.0	0.12	1	B3I0018	09/03/2013	09/04/13 10:26	
Endrin	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:26	
Endrin aldehyde	ND	2.0	0.19	1	B3I0018	09/03/2013	09/04/13 10:26	
Endrin ketone	ND	2.0	0.14	1	B3I0018	09/03/2013	09/04/13 10:26	
gamma-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:26	
gamma-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:26	
Heptachlor	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:26	
Heptachlor epoxide	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 10:26	
Methoxychlor	ND	5.0	0.13	1	B3I0018	09/03/2013	09/04/13 10:26	
Toxaphene	ND	50	11	1	B3I0018	09/03/2013	09/04/13 10:26	
Surrogate: Decachlorobiphenyl	*65.3 %*		*32 - 113*		B3I0018	09/03/2013	*09/04/13 10:26*	
Surrogate: Tetrachloro-m-xylene	*83.8 %*		*32 - 101*		B3I0018	09/03/2013	*09/04/13 10:26*	

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Lab ID: 1302545-01

Semivolatile Organic Compounds by EPA 8270/SIM

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Methylnaphthalene	ND	50	7.5	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Acenaphthene	ND	50	4.3	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Acenaphthylene	ND	50	3.5	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Anthracene	ND	50	5.0	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Benzo(a)anthracene	ND	50	7.1	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Benzo(a)pyrene	ND	50	9.7	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Benzo(b)fluoranthene	ND	50	3.8	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Benzo(g,h,i)perylene	ND	50	16	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Benzo(k)fluoranthene	ND	50	11	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Chrysene	ND	50	7.6	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Dibenz(a,h)anthracene	ND	50	16	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Fluoranthene	ND	50	5.3	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Fluorene	ND	50	4.7	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Indeno(1,2,3-cd)pyrene	ND	50	15	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Naphthalene	ND	50	5.4	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Phenanthrene	ND	50	6.3	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Pyrene	ND	50	4.9	10	B3I0021	09/03/2013	09/10/13 02:32	D1
Surrogate: 1,2-Dichlorobenzene-d4	*56.1 %*	*28 - 96*			B3I0021	09/03/2013	*09/10/13 02:32*	D1
Surrogate: 2-Fluorobiphenyl	*63.3 %*	*36 - 113*			B3I0021	09/03/2013	*09/10/13 02:32*	D1
Surrogate: Nitrobenzene-d5	*42.9 %*	*29 - 106*			B3I0021	09/03/2013	*09/10/13 02:32*	D1
Surrogate: 4-Terphenyl-d14	*67.3 %*	*39 - 138*			B3I0021	09/03/2013	*09/10/13 02:32*	D1

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Client Sample ID T-12-2

Lab ID: 1302545-03

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	14	1.0	0.14	1	B3H0462	08/24/2013	08/26/13 13:08	

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Client Sample ID T-12-9.5

Lab ID: 1302545-05

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3500**	5.0	0.70	5	B3H0462	08/24/2013	08/26/13 13:51	D6

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0060	09/05/2013	09/05/13 13:20	

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C8-C10	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:04	
T/R Hydrocarbons: C10-C18	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:04	
T/R Hydrocarbons: C18-C28	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:04	
T/R Hydrocarbons: C28-C36	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:04	
T/R Hydrocarbons: C36-C40	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:04	
T/R Hydrocarbons: C8-C40 Total (HS)	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:04	
Surrogate: p-Terphenyl	*118 %*	*55 - 153*			B3I0015	09/03/2013	*09/04/13 11:04*	

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.12	1	B3I0018	09/03/2013	09/04/13 10:13	
4,4'-DDE	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:13	
4,4'-DDT	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:13	
Aldrin	ND	1.0	0.09	1	B3I0018	09/03/2013	09/04/13 10:13	
alpha-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:13	
alpha-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:13	
beta-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:13	
Chlordane	ND	8.5	1.5	1	B3I0018	09/03/2013	09/04/13 10:13	
delta-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:13	
Dieldrin	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:13	
Endosulfan I	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 10:13	

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Client Sample ID T-12-9.5

Lab ID: 1302545-05

Organochlorine Pesticides by EPA 8081 **Analyst: BB**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Endosulfan II	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:13	
Endosulfan sulfate	ND	2.0	0.12	1	B3I0018	09/03/2013	09/04/13 10:13	
Endrin	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:13	
Endrin aldehyde	ND	2.0	0.19	1	B3I0018	09/03/2013	09/04/13 10:13	
Endrin ketone	ND	2.0	0.14	1	B3I0018	09/03/2013	09/04/13 10:13	
gamma-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:13	
gamma-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:13	
Heptachlor	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:13	
Heptachlor epoxide	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 10:13	
Methoxychlor	ND	5.0	0.13	1	B3I0018	09/03/2013	09/04/13 10:13	
Toxaphene	ND	50	11	1	B3I0018	09/03/2013	09/04/13 10:13	
Surrogate: Decachlorobiphenyl	*72.6 %*	*32 - 113*			B3I0018	09/03/2013	*09/04/13 10:13*	
Surrogate: Tetrachloro-m-xylene	*89.8 %*	*32 - 101*			B3I0018	09/03/2013	*09/04/13 10:13*	

Semivolatile Organic Compounds by EPA 8270/SIM **Analyst: BB**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Methylnaphthalene	ND	5.0	0.75	1	B3I0021	09/03/2013	09/10/13 00:17	
Acenaphthene	ND	5.0	0.43	1	B3I0021	09/03/2013	09/10/13 00:17	
Acenaphthylene	ND	5.0	0.35	1	B3I0021	09/03/2013	09/10/13 00:17	
Anthracene	ND	5.0	0.50	1	B3I0021	09/03/2013	09/10/13 00:17	
Benzo(a)anthracene	ND	5.0	0.71	1	B3I0021	09/03/2013	09/10/13 00:17	
Benzo(a)pyrene	ND	5.0	0.97	1	B3I0021	09/03/2013	09/10/13 00:17	
Benzo(b)fluoranthene	ND	5.0	0.38	1	B3I0021	09/03/2013	09/10/13 00:17	
Benzo(g,h,i)perylene	ND	5.0	1.6	1	B3I0021	09/03/2013	09/10/13 00:17	
Benzo(k)fluoranthene	ND	5.0	1.1	1	B3I0021	09/03/2013	09/10/13 00:17	
Chrysene	ND	5.0	0.76	1	B3I0021	09/03/2013	09/10/13 00:17	
Dibenz(a,h)anthracene	ND	5.0	1.6	1	B3I0021	09/03/2013	09/10/13 00:17	
Fluoranthene	ND	5.0	0.53	1	B3I0021	09/03/2013	09/10/13 00:17	
Fluorene	ND	5.0	0.47	1	B3I0021	09/03/2013	09/10/13 00:17	
Indeno(1,2,3-cd)pyrene	ND	5.0	1.5	1	B3I0021	09/03/2013	09/10/13 00:17	
Naphthalene	ND	5.0	0.54	1	B3I0021	09/03/2013	09/10/13 00:17	
Phenanthrene	ND	5.0	0.63	1	B3I0021	09/03/2013	09/10/13 00:17	
Pyrene	ND	5.0	0.49	1	B3I0021	09/03/2013	09/10/13 00:17	

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Lab ID: 1302545-05

Semivolatile Organic Compounds by EPA 8270/SIM **Analyst: BB**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: 1,2-Dichlorobenzene-d4	*71.2 %*		*28 - 96*		B3I0021	09/03/2013	*09/10/13 00:17*	
Surrogate: 2-Fluorobiphenyl	*80.9 %*		*36 - 113*		B3I0021	09/03/2013	*09/10/13 00:17*	
Surrogate: Nitrobenzene-d5	*61.9 %*		*29 - 106*		B3I0021	09/03/2013	*09/10/13 00:17*	
Surrogate: 4-Terphenyl-d14	*82.8 %*		*39 - 138*		B3I0021	09/03/2013	*09/10/13 00:17*	

Ninyo & Moore	Project Number : Clairmont H.S., 105338088
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Client Sample ID T-13-S

Lab ID: 1302545-09

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**9.1**	1.0	0.14	1	B3H0462	08/24/2013	08/26/13 13:11	

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Lab ID: 1302545-10

Title 22 Metals by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3H0462	08/24/2013	08/26/13 13:13	
Arsenic	**7.0**	1.0	0.38	1	B3H0462	08/24/2013	08/26/13 13:13	
Barium	**28**	1.0	0.08	1	B3H0462	08/24/2013	08/26/13 13:13	
Beryllium	ND	1.0	0.02	1	B3H0462	08/24/2013	08/26/13 13:13	
Cadmium	ND	1.0	0.02	1	B3H0462	08/24/2013	08/26/13 13:13	
Chromium	**7.0**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:13	
Cobalt	**2.0**	1.0	0.06	1	B3H0462	08/24/2013	08/26/13 13:13	
Copper	**8.8**	2.0	0.11	1	B3H0462	08/24/2013	08/26/13 13:13	
Lead	**8.9**	1.0	0.14	1	B3H0462	08/24/2013	08/26/13 13:13	
Molybdenum	ND	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:13	
Nickel	**4.2**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:13	
Selenium	ND	1.0	0.24	1	B3H0462	08/24/2013	08/26/13 13:13	
Silver	ND	1.0	0.06	1	B3H0462	08/24/2013	08/26/13 13:13	
Thallium	ND	1.0	0.29	1	B3H0462	08/24/2013	08/26/13 13:13	
Vanadium	**21**	1.0	0.17	1	B3H0462	08/24/2013	08/26/13 13:13	
Zinc	**28**	1.0	0.50	1	B3H0462	08/24/2013	08/26/13 13:13	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0471	08/26/2013	08/26/13 13:12	

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Client Sample ID T-13-4

Lab ID: 1302545-11

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1100**	1.0	0.14	1	B3H0462	08/24/2013	08/26/13 13:14	

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C8-C10	ND	10	10	1	B3I0015	09/03/2013	09/04/13 12:12	
T/R Hydrocarbons: C10-C18	ND	10	10	1	B3I0015	09/03/2013	09/04/13 12:12	
T/R Hydrocarbons: C18-C28	ND	10	10	1	B3I0015	09/03/2013	09/04/13 12:12	
T/R Hydrocarbons: C28-C36	**18**	10	10	1	B3I0015	09/03/2013	09/04/13 12:12	
T/R Hydrocarbons: C36-C40	ND	10	10	1	B3I0015	09/03/2013	09/04/13 12:12	
T/R Hydrocarbons: C8-C40 Total (HS	18	10	10	1	B3I0015	09/03/2013	09/04/13 12:12	
Surrogate: p-Terphenyl	*100 %*		*55 - 153*		B3I0015	09/03/2013	*09/04/13 12:12*	

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.12	1	B3I0018	09/03/2013	09/04/13 10:00	
4,4'-DDE	**8.1**	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:00	
4,4'-DDT	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:00	
Aldrin	ND	1.0	0.09	1	B3I0018	09/03/2013	09/04/13 10:00	
alpha-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:00	
alpha-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:00	
beta-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:00	
Chlordane	ND	8.5	1.5	1	B3I0018	09/03/2013	09/04/13 10:00	
delta-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:00	
Dieldrin	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:00	
Endosulfan I	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 10:00	
Endosulfan II	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:00	
Endosulfan sulfate	ND	2.0	0.12	1	B3I0018	09/03/2013	09/04/13 10:00	
Endrin	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:00	
Endrin aldehyde	ND	2.0	0.19	1	B3I0018	09/03/2013	09/04/13 10:00	
Endrin ketone	ND	2.0	0.14	1	B3I0018	09/03/2013	09/04/13 10:00	
gamma-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 10:00	
gamma-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:00	

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Client Sample ID T-13-4

Lab ID: 1302545-11

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Heptachlor	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 10:00	
Heptachlor epoxide	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 10:00	
Methoxychlor	ND	5.0	0.13	1	B3I0018	09/03/2013	09/04/13 10:00	
Toxaphene	ND	50	11	1	B3I0018	09/03/2013	09/04/13 10:00	
Surrogate: Decachlorobiphenyl	*80.0 %*	*32 - 113*			B3I0018	09/03/2013	*09/04/13 10:00*	
Surrogate: Tetrachloro-m-xylene	*90.3 %*	*32 - 101*			B3I0018	09/03/2013	*09/04/13 10:00*	

Semivolatile Organic Compounds by EPA 8270/SIM

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Methylnaphthalene	ND	5.0	0.75	1	B3I0021	09/03/2013	09/10/13 01:12	
Acenaphthene	ND	5.0	0.43	1	B3I0021	09/03/2013	09/10/13 01:12	
Acenaphthylene	ND	5.0	0.35	1	B3I0021	09/03/2013	09/10/13 01:12	
Anthracene	ND	5.0	0.50	1	B3I0021	09/03/2013	09/10/13 01:12	
Benzo(a)anthracene	ND	5.0	0.71	1	B3I0021	09/03/2013	09/10/13 01:12	
Benzo(a)pyrene	ND	5.0	0.97	1	B3I0021	09/03/2013	09/10/13 01:12	
Benzo(b)fluoranthene	ND	5.0	0.38	1	B3I0021	09/03/2013	09/10/13 01:12	
Benzo(g,h,i)perylene	ND	5.0	1.6	1	B3I0021	09/03/2013	09/10/13 01:12	
Benzo(k)fluoranthene	ND	5.0	1.1	1	B3I0021	09/03/2013	09/10/13 01:12	
Chrysene	ND	5.0	0.76	1	B3I0021	09/03/2013	09/10/13 01:12	
Dibenz(a,h)anthracene	ND	5.0	1.6	1	B3I0021	09/03/2013	09/10/13 01:12	
Fluoranthene	ND	5.0	0.53	1	B3I0021	09/03/2013	09/10/13 01:12	
Fluorene	ND	5.0	0.47	1	B3I0021	09/03/2013	09/10/13 01:12	
Indeno(1,2,3-cd)pyrene	ND	5.0	1.5	1	B3I0021	09/03/2013	09/10/13 01:12	
Naphthalene	ND	5.0	0.54	1	B3I0021	09/03/2013	09/10/13 01:12	
Phenanthrene	ND	5.0	0.63	1	B3I0021	09/03/2013	09/10/13 01:12	
Pyrene	ND	5.0	0.49	1	B3I0021	09/03/2013	09/10/13 01:12	
Surrogate: 1,2-Dichlorobenzene-d4	*66.7 %*	*28 - 96*			B3I0021	09/03/2013	*09/10/13 01:12*	
Surrogate: 2-Fluorobiphenyl	*79.7 %*	*36 - 113*			B3I0021	09/03/2013	*09/10/13 01:12*	
Surrogate: Nitrobenzene-d5	*57.8 %*	*29 - 106*			B3I0021	09/03/2013	*09/10/13 01:12*	
Surrogate: 4-Terphenyl-d14	*81.8 %*	*39 - 138*			B3I0021	09/03/2013	*09/10/13 01:12*	

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Lab ID: 1302545-13

Title 22 Metals by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3H0462	08/24/2013	08/26/13 13:16	
Arsenic	**3.2**	1.0	0.38	1	B3H0462	08/24/2013	08/26/13 13:16	
Barium	**36**	1.0	0.08	1	B3H0462	08/24/2013	08/26/13 13:16	
Beryllium	ND	1.0	0.02	1	B3H0462	08/24/2013	08/26/13 13:16	
Cadmium	ND	1.0	0.02	1	B3H0462	08/24/2013	08/26/13 13:16	
Chromium	**9.6**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:16	
Cobalt	**2.3**	1.0	0.06	1	B3H0462	08/24/2013	08/26/13 13:16	
Copper	**5.9**	2.0	0.11	1	B3H0462	08/24/2013	08/26/13 13:16	
Lead	**6.3**	1.0	0.14	1	B3H0462	08/24/2013	08/26/13 13:16	
Molybdenum	ND	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:16	
Nickel	**3.0**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:16	
Selenium	ND	1.0	0.24	1	B3H0462	08/24/2013	08/26/13 13:16	
Silver	ND	1.0	0.06	1	B3H0462	08/24/2013	08/26/13 13:16	
Thallium	ND	1.0	0.30	1	B3H0462	08/24/2013	08/26/13 13:16	
Vanadium	**26**	1.0	0.17	1	B3H0462	08/24/2013	08/26/13 13:16	
Zinc	**17**	1.0	0.51	1	B3H0462	08/24/2013	08/26/13 13:16	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0471	08/26/2013	08/26/13 13:14	

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Client Sample ID T-14-5.5

Lab ID: 1302545-14

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**5.5**	1.0	0.14	1	B3H0462	08/24/2013	08/26/13 13:18	

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Client Sample ID T-14-21

Lab ID: 1302545-17

Title 22 Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**6.6**	2.0	0.22	1	B3H0462	08/24/2013	08/26/13 13:19	
Arsenic	**18**	1.0	0.38	1	B3H0462	08/24/2013	08/26/13 13:19	
Barium	**860**	5.0	0.42	5	B3H0462	08/24/2013	08/26/13 13:52	D6
Beryllium	ND	1.0	0.02	1	B3H0462	08/24/2013	08/26/13 13:19	
Cadmium	**17**	1.0	0.02	1	B3H0462	08/24/2013	08/26/13 13:19	
Chromium	**60**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:19	
Cobalt	**7.1**	1.0	0.06	1	B3H0462	08/24/2013	08/26/13 13:19	
Copper	**640**	2.0	0.11	1	B3H0462	08/24/2013	08/26/13 13:19	
Lead	**1400**	1.0	0.14	1	B3H0462	08/24/2013	08/26/13 13:19	
Molybdenum	**8.5**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:19	
Nickel	**56**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:19	
Selenium	ND	1.0	0.24	1	B3H0462	08/24/2013	08/26/13 13:19	
Silver	**9.3**	1.0	0.06	1	B3H0462	08/24/2013	08/26/13 13:19	
Thallium	ND	1.0	0.30	1	B3H0462	08/24/2013	08/26/13 13:19	
Vanadium	**21**	1.0	0.17	1	B3H0462	08/24/2013	08/26/13 13:19	
Zinc	**3200**	5.0	2.5	5	B3H0462	08/24/2013	08/26/13 13:52	D6

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0060	09/05/2013	09/05/13 13:24	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**43**	4.0	0.33	40	B3H0471	08/26/2013	08/26/13 13:28	

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C8-C10	ND	10	10	1	B3I0015	09/03/2013	09/04/13 12:29	
T/R Hydrocarbons: C10-C18	ND	10	10	1	B3I0015	09/03/2013	09/04/13 12:29	
T/R Hydrocarbons: C18-C28	ND	10	10	1	B3I0015	09/03/2013	09/04/13 12:29	
T/R Hydrocarbons: C28-C36	ND	10	10	1	B3I0015	09/03/2013	09/04/13 12:29	

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Lab ID: 1302545-17

Hydrocarbon Chain Distribution by EPA 8015B (Modified) **Analyst: CR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C36-C40	ND	10	10	1	B3I0015	09/03/2013	09/04/13 12:29	
T/R Hydrocarbons: C8-C40 Total (HS)	ND	10	10	1	B3I0015	09/03/2013	09/04/13 12:29	
Surrogate: p-Terphenyl	*104 %*	*55 - 153*			B3I0015	09/03/2013	*09/04/13 12:29*	

Organochlorine Pesticides by EPA 8081 **Analyst: BB**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	**ND**	2.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:46	
4,4'-DDE	**20**	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:46	
4,4'-DDT	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:46	
Aldrin	ND	1.0	0.09	1	B3I0018	09/03/2013	09/04/13 09:46	
alpha-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:46	
alpha-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:46	
beta-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:46	
Chlordane	ND	8.5	1.5	1	B3I0018	09/03/2013	09/04/13 09:46	
delta-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:46	
Dieldrin	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:46	
Endosulfan I	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:46	
Endosulfan II	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:46	
Endosulfan sulfate	ND	2.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:46	
Endrin	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:46	
Endrin aldehyde	ND	2.0	0.19	1	B3I0018	09/03/2013	09/04/13 09:46	
Endrin ketone	ND	2.0	0.14	1	B3I0018	09/03/2013	09/04/13 09:46	
gamma-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:46	
gamma-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:46	
Heptachlor	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:46	
Heptachlor epoxide	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:46	
Methoxychlor	ND	5.0	0.13	1	B3I0018	09/03/2013	09/04/13 09:46	
Toxaphene	ND	50	11	1	B3I0018	09/03/2013	09/04/13 09:46	
Surrogate: Decachlorobiphenyl	*77.7 %*	*32 - 113*			B3I0018	09/03/2013	*09/04/13 09:46*	
Surrogate: Tetrachloro-m-xylene	*84.9 %*	*32 - 101*			B3I0018	09/03/2013	*09/04/13 09:46*	

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Lab ID: 1302545-17

Semivolatile Organic Compounds by EPA 8270/SIM **Analyst: BB**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Methylnaphthalene	ND	5.0	0.75	1	B3I0021	09/03/2013	09/10/13 01:38	
Acenaphthene	ND	5.0	0.43	1	B3I0021	09/03/2013	09/10/13 01:38	
Acenaphthylene	ND	5.0	0.35	1	B3I0021	09/03/2013	09/10/13 01:38	
Anthracene	ND	5.0	0.50	1	B3I0021	09/03/2013	09/10/13 01:38	
Benzo(a)anthracene	ND	5.0	0.71	1	B3I0021	09/03/2013	09/10/13 01:38	
Benzo(a)pyrene	ND	5.0	0.97	1	B3I0021	09/03/2013	09/10/13 01:38	
Benzo(b)fluoranthene	ND	5.0	0.38	1	B3I0021	09/03/2013	09/10/13 01:38	
Benzo(g,h,i)perylene	ND	5.0	1.6	1	B3I0021	09/03/2013	09/10/13 01:38	
Benzo(k)fluoranthene	ND	5.0	1.1	1	B3I0021	09/03/2013	09/10/13 01:38	
Chrysene	ND	5.0	0.76	1	B3I0021	09/03/2013	09/10/13 01:38	
Dibenz(a,h)anthracene	ND	5.0	1.6	1	B3I0021	09/03/2013	09/10/13 01:38	
Fluoranthene	ND	5.0	0.53	1	B3I0021	09/03/2013	09/10/13 01:38	
Fluorene	ND	5.0	0.47	1	B3I0021	09/03/2013	09/10/13 01:38	
Indeno(1,2,3-cd)pyrene	ND	5.0	1.5	1	B3I0021	09/03/2013	09/10/13 01:38	
Naphthalene	ND	5.0	0.54	1	B3I0021	09/03/2013	09/10/13 01:38	
Phenanthrene	ND	5.0	0.63	1	B3I0021	09/03/2013	09/10/13 01:38	
Pyrene	ND	5.0	0.49	1	B3I0021	09/03/2013	09/10/13 01:38	
Surrogate: 1,2-Dichlorobenzene-d4	*62.6 %*	*28 - 96*			B3I0021	09/03/2013	*09/10/13 01:38*	
Surrogate: 2-Fluorobiphenyl	*80.6 %*	*36 - 113*			B3I0021	09/03/2013	*09/10/13 01:38*	
Surrogate: Nitrobenzene-d5	*56.9 %*	*29 - 106*			B3I0021	09/03/2013	*09/10/13 01:38*	
Surrogate: 4-Terphenyl-d14	*84.5 %*	*39 - 138*			B3I0021	09/03/2013	*09/10/13 01:38*	

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QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0462 - EPA 3050B									
Blank (B3H0462-BLK1)				Prepared: 8/24/2013 Analyzed: 8/24/2013					
Lead	ND	1.0			NR				
LCS (B3H0462-BS1)				Prepared: 8/24/2013 Analyzed: 8/24/2013					
Lead	52.0702	1.0	50.0000		104	80 - 120			
Matrix Spike (B3H0462-MS1)		**Source: 1302545-01**		Prepared: 8/24/2013 Analyzed: 8/24/2013					
Lead	365.129	1.0	125.000	192.932	138	51 - 106			M1
Matrix Spike Dup (B3H0462-MSD1)		**Source: 1302545-01**		Prepared: 8/24/2013 Analyzed: 8/24/2013					
Lead	222.517	1.0	125.000	192.932	23.7	51 - 106	48.5	20	M1, R

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QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0462 - EPA 3050B									
Blank (B3H0462-BLK1)				Prepared: 8/24/2013 Analyzed: 8/24/2013					
Antimony	ND	2.0			NR				
Arsenic	ND	1.0			NR				
Barium	ND	1.0			NR				
Beryllium	ND	1.0			NR				
Cadmium	ND	1.0			NR				
Chromium	ND	1.0			NR				
Cobalt	ND	1.0			NR				
Copper	ND	2.0			NR				
Lead	ND	1.0			NR				
Molybdenum	ND	1.0			NR				
Nickel	ND	1.0			NR				
Selenium	ND	1.0			NR				
Silver	ND	1.0			NR				
Thallium	ND	1.0			NR				
Vanadium	ND	1.0			NR				
Zinc	ND	1.0			NR				
LCS (B3H0462-BS1)				Prepared: 8/24/2013 Analyzed: 8/24/2013					
Antimony	51.3548	2.0	50.0000		103	80 - 120			
Arsenic	50.4178	1.0	50.0000		101	80 - 120			
Barium	53.9127	1.0	50.0000		108	80 - 120			
Beryllium	56.6674	1.0	50.0000		113	80 - 120			
Cadmium	50.5566	1.0	50.0000		101	80 - 120			
Chromium	54.3394	1.0	50.0000		109	80 - 120			
Cobalt	52.1474	1.0	50.0000		104	80 - 120			
Copper	54.0990	2.0	50.0000		108	80 - 120			
Lead	52.0702	1.0	50.0000		104	80 - 120			
Molybdenum	51.8474	1.0	50.0000		104	80 - 120			
Nickel	50.2858	1.0	50.0000		101	80 - 120			
Selenium	47.5461	1.0	50.0000		95.1	80 - 120			
Silver	47.0613	1.0	50.0000		94.1	80 - 120			
Thallium	52.2978	1.0	50.0000		105	80 - 120			
Vanadium	53.9608	1.0	50.0000		108	80 - 120			
Zinc	47.6911	1.0	50.0000		95.4	80 - 120			
Matrix Spike (B3H0462-MS1)		**Source: 1302545-01**		Prepared: 8/24/2013 Analyzed: 8/24/2013					
Antimony	338.881	2.0	125.000	3.86908	268	21 - 109			M1
Arsenic	120.144	1.0	125.000	6.00210	91.3	55 - 102			
Barium	210.352	1.0	125.000	220.820	-8.37	40 - 130			M1
Beryllium	117.800	1.0	125.000	ND	94.2	60 - 104			

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QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0462 - EPA 3050B (continued)									
Matrix Spike (B3H0462-MS1) - Continued		**Source: 1302545-01**		Prepared: 8/24/2013 Analyzed: 8/24/2013					
Cadmium	106.956	1.0	125.000	2.14439	83.8	52 - 100			
Chromium	126.551	1.0	125.000	11.9870	91.7	53 - 113			
Cobalt	117.041	1.0	125.000	3.56592	90.8	53 - 104			
Copper	237.894	2.0	125.000	81.2562	125	51 - 122			M1
Lead	365.129	1.0	125.000	192.932	138	51 - 106			M1
Molybdenum	115.596	1.0	125.000	2.67000	90.3	55 - 103			
Nickel	117.480	1.0	125.000	10.7080	85.4	48 - 112			
Selenium	106.643	1.0	125.000	ND	85.3	53 - 104			
Silver	115.347	1.0	125.000	ND	92.3	61 - 109			
Thallium	103.791	1.0	125.000	ND	83.0	44 - 103			
Vanadium	141.396	1.0	125.000	20.3254	96.9	55 - 115			
Zinc	1169.03	1.0	125.000	332.013	670	24 - 130			M1
Matrix Spike Dup (B3H0462-MSD1)		**Source: 1302545-01**		Prepared: 8/24/2013 Analyzed: 8/24/2013					
Antimony	102.774	2.0	125.000	3.86908	79.1	21 - 109	107	20	R
Arsenic	121.887	1.0	125.000	6.00210	92.7	55 - 102	1.44	20	
Barium	218.046	1.0	125.000	220.820	-2.22	40 - 130	3.59	20	M1
Beryllium	120.454	1.0	125.000	ND	96.4	60 - 104	2.23	20	
Cadmium	109.919	1.0	125.000	2.14439	86.2	52 - 100	2.73	20	
Chromium	128.364	1.0	125.000	11.9870	93.1	53 - 113	1.42	20	
Cobalt	118.950	1.0	125.000	3.56592	92.3	53 - 104	1.62	20	
Copper	216.700	2.0	125.000	81.2562	108	51 - 122	9.32	20	
Lead	222.517	1.0	125.000	192.932	23.7	51 - 106	48.5	20	M1, R
Molybdenum	118.560	1.0	125.000	2.67000	92.7	55 - 103	2.53	20	
Nickel	120.387	1.0	125.000	10.7080	87.7	48 - 112	2.44	20	
Selenium	111.332	1.0	125.000	ND	89.1	53 - 104	4.30	20	
Silver	117.546	1.0	125.000	ND	94.0	61 - 109	1.89	20	
Thallium	105.557	1.0	125.000	ND	84.4	44 - 103	1.69	20	
Vanadium	140.845	1.0	125.000	20.3254	96.4	55 - 115	0.391	20	
Zinc	370.078	1.0	125.000	332.013	30.5	24 - 130	104	20	R

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QUALITY CONTROL SECTION

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0060 - STLC DI Extraction									
Blank (B3I0060-BLK1)				Prepared: 9/5/2013 Analyzed: 9/5/2013					
Lead	ND	1.0			NR				
LCS (B3I0060-BS1)				Prepared: 9/5/2013 Analyzed: 9/5/2013					
Lead	2.23246	1.0	2.00000		112	80 - 120			
Duplicate (B3I0060-DUP1)		**Source: 1302547-11**		Prepared: 9/5/2013 Analyzed: 9/5/2013					
Lead	0.246635	1.0		ND	NR			20	
Matrix Spike (B3I0060-MS1)		**Source: 1302547-11**		Prepared: 9/5/2013 Analyzed: 9/5/2013					
Lead	2.70088	1.0	2.50000	ND	108	70 - 130			
Matrix Spike Dup (B3I0060-MSD1)		**Source: 1302547-11**		Prepared: 9/5/2013 Analyzed: 9/5/2013					
Lead	2.70566	1.0	2.50000	ND	108	70 - 130	0.177	20	

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QUALITY CONTROL SECTION

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0471 - EPA 7471									
Blank (B3H0471-BLK1)				Prepared: 8/26/2013 Analyzed: 8/26/2013					
Mercury	ND	0.10			NR				
LCS (B3H0471-BS1)				Prepared: 8/26/2013 Analyzed: 8/26/2013					
Mercury	0.964349	0.10	0.833333		116	80 - 120			
Matrix Spike (B3H0471-MS1)		**Source: 1302514-01**		Prepared: 8/26/2013 Analyzed: 8/26/2013					
Mercury	0.992497	0.10	0.819672	0.028358	118	70 - 130			
Matrix Spike Dup (B3H0471-MSD1)		**Source: 1302514-01**		Prepared: 8/26/2013 Analyzed: 8/26/2013					
Mercury	0.972738	0.10	0.819672	0.028358	115	70 - 130	2.01	20	
Post Spike (B3H0471-PS1)		**Source: 1302514-01**		Prepared: 8/26/2013 Analyzed: 8/26/2013					
Mercury	0.006196		5.00000E-3	0.000340	117	85 - 115			M1

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QUALITY CONTROL SECTION

Hydrocarbon Chain Distribution by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0015 - GCSEMI_DRO									
Blank (B3I0015-BLK1)				Prepared: 9/3/2013 Analyzed: 9/4/2013					
T/R Hydrocarbons: C8-C10	ND	10			NR				
T/R Hydrocarbons: C10-C18	ND	10			NR				
T/R Hydrocarbons: C18-C28	ND	10			NR				
T/R Hydrocarbons: C28-C36	ND	10			NR				
T/R Hydrocarbons: C36-C40	ND	10			NR				
T/R Hydrocarbons: C8-C40 Total (HS)	ND	10			NR				
Surrogate: p-Terphenyl	*86.46*		*80.0000*		*108*	*55 - 153*			
LCS (B3I0015-BS1)				Prepared: 9/3/2013 Analyzed: 9/4/2013					
DRO	1024.54	10	1000.00		102	65 - 151			
Surrogate: p-Terphenyl	*83.83*		*80.0000*		*105*	*55 - 153*			
Matrix Spike (B3I0015-MS1)		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/4/2013					
DRO	1007.07	10	1000.00	ND	101	45 - 168			
Surrogate: p-Terphenyl	*89.78*		*80.0000*		*112*	*55 - 153*			
Matrix Spike Dup (B3I0015-MSD1)		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/4/2013					
DRO	975.430	10	1000.00	ND	97.5	45 - 168	3.19	20	
Surrogate: p-Terphenyl	*82.08*		*80.0000*		*103*	*55 - 153*			

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Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0018 - GCSEMI_PCB/PEST									
Blank (B3I0018-BLK1)				Prepared: 9/3/2013 Analyzed: 9/4/2013					
4,4'-DDD	ND	2.0			NR				
4,4'-DDD [2C]	ND	2.0			NR				
4,4'-DDE	ND	2.0			NR				
4,4'-DDE [2C]	ND	2.0			NR				
4,4'-DDT	ND	2.0			NR				
4,4'-DDT [2C]	ND	2.0			NR				
Aldrin	ND	1.0			NR				
Aldrin [2C]	ND	1.0			NR				
alpha-BHC	ND	1.0			NR				
alpha-BHC [2C]	ND	1.0			NR				
alpha-Chlordane	ND	1.0			NR				
alpha-Chlordane [2C]	ND	1.0			NR				
beta-BHC	ND	1.0			NR				
beta-BHC [2C]	ND	1.0			NR				
Chlordane	ND	8.5			NR				
Chlordane [2C]	ND	8.5			NR				
delta-BHC	ND	1.0			NR				
delta-BHC [2C]	ND	1.0			NR				
Dieldrin	ND	2.0			NR				
Dieldrin [2C]	ND	2.0			NR				
Endosulfan I	ND	1.0			NR				
Endosulfan I [2C]	ND	1.0			NR				
Endosulfan II	ND	2.0			NR				
Endosulfan II [2C]	ND	2.0			NR				
Endosulfan sulfate	ND	2.0			NR				
Endosulfan Sulfate [2C]	ND	2.0			NR				
Endrin	ND	2.0			NR				
Endrin [2C]	ND	2.0			NR				
Endrin aldehyde	ND	2.0			NR				
Endrin aldehyde [2C]	ND	2.0			NR				
Endrin ketone	ND	2.0			NR				
Endrin ketone [2C]	ND	2.0			NR				
gamma-BHC	ND	1.0			NR				
gamma-BHC [2C]	ND	1.0			NR				
gamma-Chlordane	ND	1.0			NR				
gamma-Chlordane [2C]	ND	1.0			NR				
Heptachlor	ND	1.0			NR				
Heptachlor [2C]	ND	1.0			NR				
Heptachlor epoxide	ND	1.0			NR				
Heptachlor epoxide [2C]	ND	1.0			NR				

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QUALITY CONTROL SECTION

Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0018 - GCSEMI_PCB/PEST (continued)									
Blank (B3I0018-BLK1) - Continued				Prepared: 9/3/2013 Analyzed: 9/4/2013					
Methoxychlor	ND	5.0			NR				
Methoxychlor [2C]	ND	5.0			NR				
Toxaphene	ND	50			NR				
Toxaphene [2C]	ND	50			NR				
Surrogate: Decachlorobiphenyl	*11.93*		*16.6667*		*71.6*	*32 - 113*			
Surrogate: Decachlorobiphenyl [2C]	*12.71*		*16.6667*		*76.3*	*32 - 113*			
Surrogate: Tetrachloro-m-xylene	*12.99*		*16.6667*		*77.9*	*32 - 101*			
Surrogate: Tetrachloro-m-xylene [2C]	*12.69*		*16.6667*		*76.1*	*32 - 101*			
LCS (B3I0018-BS1)				Prepared: 9/3/2013 Analyzed: 9/4/2013					
4,4'-DDT	12.5252	2.0	16.6667		75.2	60 - 108			
4,4'-DDT [2C]	14.4887	2.0	16.6667		86.9	60 - 108			
Aldrin	13.6718	1.0	16.6667		82.0	57 - 111			
Aldrin [2C]	13.0053	1.0	16.6667		78.0	57 - 111			
Dieldrin	12.9073	2.0	16.6667		77.4	61 - 106			
Dieldrin [2C]	12.6792	2.0	16.6667		76.1	61 - 106			
Endrin	12.1877	2.0	16.6667		73.1	57 - 97			
Endrin [2C]	12.3100	2.0	16.6667		73.9	57 - 97			
gamma-BHC	14.0502	1.0	16.6667		84.3	61 - 109			
gamma-BHC [2C]	13.7977	1.0	16.6667		82.8	61 - 109			
Heptachlor	14.6188	1.0	16.6667		87.7	58 - 115			
Heptachlor [2C]	15.5230	1.0	16.6667		93.1	58 - 115			
Surrogate: Decachlorobiphenyl	*12.80*		*16.6667*		*76.8*	*32 - 113*			
Surrogate: Decachlorobiphenyl [2C]	*13.77*		*16.6667*		*82.6*	*32 - 113*			
Surrogate: Tetrachloro-m-xylene	*13.11*		*16.6667*		*78.6*	*32 - 101*			
Surrogate: Tetrachloro-m-xylene [2C]	*13.49*		*16.6667*		*80.9*	*32 - 101*			
Matrix Spike (B3I0018-MS1)		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/4/2013					
4,4'-DDT	16.0780	2.0	16.6667	ND	96.5	26 - 133			
4,4'-DDT [2C]	18.3302	2.0	16.6667	ND	110	26 - 133			
Aldrin	15.0963	1.0	16.6667	ND	90.6	38 - 119			
Aldrin [2C]	15.1845	1.0	16.6667	ND	91.1	38 - 119			
Dieldrin	15.4520	2.0	16.6667	ND	92.7	30 - 120			
Dieldrin [2C]	15.4297	2.0	16.6667	ND	92.6	30 - 120			
Endrin	15.7060	2.0	16.6667	ND	94.2	30 - 114			
Endrin [2C]	15.6680	2.0	16.6667	ND	94.0	30 - 114			
gamma-BHC	15.6800	1.0	16.6667	ND	94.1	31 - 122			
gamma-BHC [2C]	15.7277	1.0	16.6667	ND	94.4	31 - 122			
Heptachlor	15.8100	1.0	16.6667	ND	94.9	38 - 123			
Heptachlor [2C]	18.0050	1.0	16.6667	ND	108	38 - 123			

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QUALITY CONTROL SECTION

Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0018 - GCSEMI_PCB/PEST (continued)									
Matrix Spike (B3I0018-MS1) - Continued		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/4/2013					
Surrogate: Decachlorobiphenyl	*15.03*		*16.6667*		*90.2*	*32 - 113*			
Surrogate: Decachlorobiphenyl [2C]	*16.46*		*16.6667*		*98.8*	*32 - 113*			
Surrogate: Tetrachloro-m-xylene	*14.19*		*16.6667*		*85.2*	*32 - 101*			
Surrogate: Tetrachloro-m-xylene [2C]	*15.02*		*16.6667*		*90.1*	*32 - 101*			
Matrix Spike Dup (B3I0018-MSD1)		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/4/2013					
4,4'-DDT	15.4095	2.0	16.6667	ND	92.5	26 - 133	4.25	20	
4,4'-DDT [2C]	17.3803	2.0	16.6667	ND	104	26 - 133	5.32	20	
Aldrin	14.8060	1.0	16.6667	ND	88.8	38 - 119	1.94	20	
Aldrin [2C]	14.9453	1.0	16.6667	ND	89.7	38 - 119	1.59	20	
Dieldrin	14.9032	2.0	16.6667	ND	89.4	30 - 120	3.62	20	
Dieldrin [2C]	14.8320	2.0	16.6667	ND	89.0	30 - 120	3.95	20	
Endrin	15.1940	2.0	16.6667	ND	91.2	30 - 114	3.31	20	
Endrin [2C]	15.0668	2.0	16.6667	ND	90.4	30 - 114	3.91	20	
gamma-BHC	15.5715	1.0	16.6667	ND	93.4	31 - 122	0.694	20	
gamma-BHC [2C]	15.6218	1.0	16.6667	ND	93.7	31 - 122	0.675	20	
Heptachlor	15.7422	1.0	16.6667	ND	94.5	38 - 123	0.430	20	
Heptachlor [2C]	17.9592	1.0	16.6667	ND	108	38 - 123	0.255	20	
Surrogate: Decachlorobiphenyl	*14.49*		*16.6667*		*86.9*	*32 - 113*			
Surrogate: Decachlorobiphenyl [2C]	*16.03*		*16.6667*		*96.2*	*32 - 113*			
Surrogate: Tetrachloro-m-xylene	*14.17*		*16.6667*		*85.0*	*32 - 101*			
Surrogate: Tetrachloro-m-xylene [2C]	*15.00*		*16.6667*		*90.0*	*32 - 101*			

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QUALITY CONTROL SECTION

Semivolatile Organic Compounds by EPA 8270/SIM - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0021 - MSSEMI									
Blank (B3I0021-BLK1)				Prepared: 9/3/2013 Analyzed: 9/9/2013					
2-Methylnaphthalene	ND	5.0			NR				
Acenaphthene	ND	5.0			NR				
Acenaphthylene	ND	5.0			NR				
Anthracene	ND	5.0			NR				
Benzo(a)anthracene	ND	5.0			NR				
Benzo(a)pyrene	ND	5.0			NR				
Benzo(b)fluoranthene	ND	5.0			NR				
Benzo(g,h,i)perylene	ND	5.0			NR				
Benzo(k)fluoranthene	ND	5.0			NR				
Chrysene	ND	5.0			NR				
Dibenz(a,h)anthracene	ND	5.0			NR				
Fluoranthene	ND	5.0			NR				
Fluorene	ND	5.0			NR				
Indeno(1,2,3-cd)pyrene	ND	5.0			NR				
Naphthalene	ND	5.0			NR				
Phenanthrene	ND	5.0			NR				
Pyrene	ND	5.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	*15.26*		*33.3333*		*45.8*	*28 - 96*			
Surrogate: 2-Fluorobiphenyl	*17.20*		*33.3333*		*51.6*	*36 - 113*			
Surrogate: Nitrobenzene-d5	*13.60*		*33.3333*		*40.8*	*29 - 106*			
Surrogate: 4-Terphenyl-d14	*27.52*		*33.3333*		*82.6*	*39 - 138*			
LCS (B3I0021-BS1)				Prepared: 9/3/2013 Analyzed: 9/9/2013					
Acenaphthene	21.1763	5.0	33.3333		63.5	50 - 93			
Phenanthrene	24.3747	5.0	33.3333		73.1	46 - 98			
Pyrene	26.2043	5.0	33.3333		78.6	52 - 112			
Surrogate: 1,2-Dichlorobenzene-d4	*18.29*		*33.3333*		*54.9*	*28 - 96*			
Surrogate: 2-Fluorobiphenyl	*20.32*		*33.3333*		*61.0*	*36 - 113*			
Surrogate: Nitrobenzene-d5	*16.52*		*33.3333*		*49.6*	*29 - 106*			
Surrogate: 4-Terphenyl-d14	*24.28*		*33.3333*		*72.8*	*39 - 138*			
Matrix Spike (B3I0021-MS1)		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/9/2013					
Acenaphthene	24.6473	5.0	33.3333	ND	73.9	45 - 103			
Phenanthrene	26.8527	5.0	33.3333	ND	80.6	43 - 115			
Pyrene	27.1540	5.0	33.3333	ND	81.5	49 - 125			
Surrogate: 1,2-Dichlorobenzene-d4	*21.21*		*33.3333*		*63.6*	*28 - 96*			
Surrogate: 2-Fluorobiphenyl	*24.49*		*33.3333*		*73.5*	*36 - 113*			
Surrogate: Nitrobenzene-d5	*19.77*		*33.3333*		*59.3*	*29 - 106*			
Surrogate: 4-Terphenyl-d14	*25.42*		*33.3333*		*76.3*	*39 - 138*			

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Semivolatile Organic Compounds by EPA 8270/SIM - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0021 - MSSEMI (continued)									
Matrix Spike Dup (B3I0021-MSD1)		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/9/2013					
Acenaphthene	25.9103	5.0	33.3333	ND	77.7	45 - 103	5.00	20	
Phenanthrene	27.3927	5.0	33.3333	ND	82.2	43 - 115	1.99	20	
Pyrene	26.7757	5.0	33.3333	ND	80.3	49 - 125	1.40	20	
Surrogate: 1,2-Dichlorobenzene-d4	*21.75*		*33.3333*		*65.2*	*28 - 96*			
Surrogate: 2-Fluorobiphenyl	*24.87*		*33.3333*		*74.6*	*36 - 113*			
Surrogate: Nitrobenzene-d5	*19.91*		*33.3333*		*59.7*	*29 - 106*			
Surrogate: 4-Terphenyl-d14	*24.23*		*33.3333*		*72.7*	*39 - 138*			

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Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
D6	Sample required dilution due to high concentration of target analyte.
D5	Sample diluted due to failing internal standard in the original run.
D1	Sample required dilution due to possible matrix interference.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

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Client Sample ID T-15-4

Lab ID: 1302547-02

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**19**	1.0	0.14	1	B3H0462	08/24/2013	08/26/13 13:20	

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Client Sample ID T-15-14

Lab ID: 1302547-05

Title 22 Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**30**	2.0	0.22	1	B3H0462	08/24/2013	08/26/13 13:22	
Arsenic	**21**	1.0	0.38	1	B3H0462	08/24/2013	08/26/13 13:22	
Barium	**770**	5.0	0.42	5	B3H0462	08/24/2013	08/26/13 13:54	D6
Beryllium	ND	1.0	0.02	1	B3H0462	08/24/2013	08/26/13 13:22	
Cadmium	**11**	1.0	0.02	1	B3H0462	08/24/2013	08/26/13 13:22	
Chromium	**45**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:22	
Cobalt	**6.4**	1.0	0.06	1	B3H0462	08/24/2013	08/26/13 13:22	
Copper	**690**	2.0	0.11	1	B3H0462	08/24/2013	08/26/13 13:22	
Lead	**1600**	1.0	0.14	1	B3H0462	08/24/2013	08/26/13 13:22	
Molybdenum	**7.3**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:22	
Nickel	**43**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:22	
Selenium	ND	1.0	0.24	1	B3H0462	08/24/2013	08/26/13 13:22	
Silver	**6.5**	1.0	0.06	1	B3H0462	08/24/2013	08/26/13 13:22	
Thallium	ND	1.0	0.29	1	B3H0462	08/24/2013	08/26/13 13:22	
Vanadium	**19**	1.0	0.17	1	B3H0462	08/24/2013	08/26/13 13:22	
Zinc	**3500**	5.0	2.5	5	B3H0462	08/24/2013	08/26/13 13:54	D6

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0060	09/05/2013	09/05/13 13:27	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	**0.63**	0.10	0.008	1	B3H0471	08/26/2013	08/26/13 13:18	

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C8-C10	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:55	
T/R Hydrocarbons: C10-C18	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:55	
T/R Hydrocarbons: C18-C28	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:55	
T/R Hydrocarbons: C28-C36	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:55	

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Lab ID: 1302547-05

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C36-C40	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:55	
T/R Hydrocarbons: C8-C40 Total (HS)	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:55	
Surrogate: p-Terphenyl	*117 %*	*55 - 153*			B3I0015	09/03/2013	*09/04/13 11:55*	

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	**ND**	2.0	**0.12**	1	B3I0018	09/03/2013	09/04/13 09:07	
4,4'-DDE [2C]	**3.3**	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:07	
4,4'-DDT	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:07	
Aldrin	ND	1.0	0.09	1	B3I0018	09/03/2013	09/04/13 09:07	
alpha-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:07	
alpha-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:07	
beta-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:07	
Chlordane	ND	8.5	1.5	1	B3I0018	09/03/2013	09/04/13 09:07	
delta-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:07	
Dieldrin [2C]	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:07	
Endosulfan I	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:07	
Endosulfan II	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:07	
Endosulfan sulfate	ND	2.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:07	
Endrin	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:07	
Endrin aldehyde	ND	2.0	0.19	1	B3I0018	09/03/2013	09/04/13 09:07	
Endrin ketone	ND	2.0	0.14	1	B3I0018	09/03/2013	09/04/13 09:07	
gamma-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:07	
gamma-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:07	
Heptachlor	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:07	
Heptachlor epoxide	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:07	
Methoxychlor	ND	5.0	0.13	1	B3I0018	09/03/2013	09/04/13 09:07	
Toxaphene	ND	50	11	1	B3I0018	09/03/2013	09/04/13 09:07	
Surrogate: Decachlorobiphenyl	*84.6 %*	*32 - 113*			B3I0018	09/03/2013	*09/04/13 09:07*	
Surrogate: Tetrachloro-m-xylene	*84.2 %*	*32 - 101*			B3I0018	09/03/2013	*09/04/13 09:07*	

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Lab ID: 1302547-05

Semivolatile Organic Compounds by EPA 8270/SIM **Analyst: BB**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Methylnaphthalene	ND	5.0	0.75	1	B3I0021	09/03/2013	09/10/13 02:05	
Acenaphthene	ND	5.0	0.43	1	B3I0021	09/03/2013	09/10/13 02:05	
Acenaphthylene	ND	5.0	0.35	1	B3I0021	09/03/2013	09/10/13 02:05	
Anthracene	ND	5.0	0.50	1	B3I0021	09/03/2013	09/10/13 02:05	
Benzo(a)anthracene	ND	5.0	0.71	1	B3I0021	09/03/2013	09/10/13 02:05	
Benzo(a)pyrene	ND	5.0	0.97	1	B3I0021	09/03/2013	09/10/13 02:05	
Benzo(b)fluoranthene	ND	5.0	0.38	1	B3I0021	09/03/2013	09/10/13 02:05	
Benzo(g,h,i)perylene	ND	5.0	1.6	1	B3I0021	09/03/2013	09/10/13 02:05	
Benzo(k)fluoranthene	ND	5.0	1.1	1	B3I0021	09/03/2013	09/10/13 02:05	
Chrysene	ND	5.0	0.76	1	B3I0021	09/03/2013	09/10/13 02:05	
Dibenz(a,h)anthracene	ND	5.0	1.6	1	B3I0021	09/03/2013	09/10/13 02:05	
Fluoranthene	ND	5.0	0.53	1	B3I0021	09/03/2013	09/10/13 02:05	
Fluorene	ND	5.0	0.47	1	B3I0021	09/03/2013	09/10/13 02:05	
Indeno(1,2,3-cd)pyrene	ND	5.0	1.5	1	B3I0021	09/03/2013	09/10/13 02:05	
Naphthalene	ND	5.0	0.54	1	B3I0021	09/03/2013	09/10/13 02:05	
Phenanthrene	ND	5.0	0.63	1	B3I0021	09/03/2013	09/10/13 02:05	
Pyrene	ND	5.0	0.49	1	B3I0021	09/03/2013	09/10/13 02:05	
Surrogate: 1,2-Dichlorobenzene-d4	*59.3 %*	*28 - 96*			B3I0021	09/03/2013	*09/10/13 02:05*	
Surrogate: 2-Fluorobiphenyl	*74.0 %*	*36 - 113*			B3I0021	09/03/2013	*09/10/13 02:05*	
Surrogate: Nitrobenzene-d5	*55.2 %*	*29 - 106*			B3I0021	09/03/2013	*09/10/13 02:05*	
Surrogate: 4-Terphenyl-d14	*76.2 %*	*39 - 138*			B3I0021	09/03/2013	*09/10/13 02:05*	

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Lab ID: 1302547-07

Title 22 Metals by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3H0462	08/24/2013	08/26/13 13:43	
Arsenic	**1.8**	1.0	0.38	1	B3H0462	08/24/2013	08/26/13 13:43	
Barium	**42**	1.0	0.08	1	B3H0462	08/24/2013	08/26/13 13:43	
Beryllium	ND	1.0	0.02	1	B3H0462	08/24/2013	08/26/13 13:43	
Cadmium	ND	1.0	0.02	1	B3H0462	08/24/2013	08/26/13 13:43	
Chromium	**6.9**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:43	
Cobalt	**2.4**	1.0	0.06	1	B3H0462	08/24/2013	08/26/13 13:43	
Copper	**9.9**	2.0	0.11	1	B3H0462	08/24/2013	08/26/13 13:43	
Lead	**12**	1.0	0.14	1	B3H0462	08/24/2013	08/26/13 13:43	
Molybdenum	ND	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:43	
Nickel	**3.0**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:43	
Selenium	ND	1.0	0.24	1	B3H0462	08/24/2013	08/26/13 13:43	
Silver	ND	1.0	0.06	1	B3H0462	08/24/2013	08/26/13 13:43	
Thallium	ND	1.0	0.30	1	B3H0462	08/24/2013	08/26/13 13:43	
Vanadium	**16**	1.0	0.17	1	B3H0462	08/24/2013	08/26/13 13:43	
Zinc	**42**	1.0	0.51	1	B3H0462	08/24/2013	08/26/13 13:43	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0471	08/26/2013	08/26/13 13:26	

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Client Sample ID T-16-S

Lab ID: 1302547-08

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**11**	1.0	0.14	1	B3H0462	08/24/2013	08/26/13 13:45	

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Client Sample ID T-16-2

Lab ID: 1302547-09

Total Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**7.7**	1.0	0.14	1	B3H0462	08/24/2013	08/26/13 13:46	

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Lab ID: 1302547-11

Title 22 Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**9.3**	2.0	0.22	1	B3H0462	08/24/2013	08/26/13 13:48	
Arsenic	**41**	1.0	0.38	1	B3H0462	08/24/2013	08/26/13 13:48	
Barium	**350**	1.0	0.08	1	B3H0462	08/24/2013	08/26/13 13:48	
Beryllium	ND	1.0	0.02	1	B3H0462	08/24/2013	08/26/13 13:48	
Cadmium	**2.4**	1.0	0.02	1	B3H0462	08/24/2013	08/26/13 13:48	
Chromium	**32**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:48	
Cobalt	**6.1**	1.0	0.06	1	B3H0462	08/24/2013	08/26/13 13:48	
Copper	**600**	2.0	0.11	1	B3H0462	08/24/2013	08/26/13 13:48	
Lead	**1300**	1.0	0.14	1	B3H0462	08/24/2013	08/26/13 13:48	
Molybdenum	**6.0**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:48	
Nickel	**39**	1.0	0.04	1	B3H0462	08/24/2013	08/26/13 13:48	
Selenium	ND	1.0	0.24	1	B3H0462	08/24/2013	08/26/13 13:48	
Silver	**2.6**	1.0	0.06	1	B3H0462	08/24/2013	08/26/13 13:48	
Thallium	ND	1.0	0.30	1	B3H0462	08/24/2013	08/26/13 13:48	
Vanadium	**6.2**	1.0	0.17	1	B3H0462	08/24/2013	08/26/13 13:48	
Zinc	**940**	1.0	0.51	1	B3H0462	08/24/2013	08/26/13 13:48	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.056	20	B3I0060	09/05/2013	09/05/13 13:31	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0471	08/26/2013	08/26/13 13:30	

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C8-C10	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:21	
T/R Hydrocarbons: C10-C18	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:21	
T/R Hydrocarbons: C18-C28	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:21	
T/R Hydrocarbons: C28-C36	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:21	

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Lab ID: 1302547-11

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C36-C40	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:21	
T/R Hydrocarbons: C8-C40 Total (HS)	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:21	
Surrogate: p-Terphenyl	*111 %*	*55 - 153*			B3I0015	09/03/2013	*09/04/13 11:21*	

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:20	
4,4'-DDE	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:20	
4,4'-DDT	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:20	
Aldrin	ND	1.0	0.09	1	B3I0018	09/03/2013	09/04/13 09:20	
alpha-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:20	
alpha-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:20	
beta-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:20	
Chlordane	ND	8.5	1.5	1	B3I0018	09/03/2013	09/04/13 09:20	
delta-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:20	
Dieldrin	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:20	
Endosulfan I	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:20	
Endosulfan II	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:20	
Endosulfan sulfate	ND	2.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:20	
Endrin	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:20	
Endrin aldehyde	ND	2.0	0.19	1	B3I0018	09/03/2013	09/04/13 09:20	
Endrin ketone	ND	2.0	0.14	1	B3I0018	09/03/2013	09/04/13 09:20	
gamma-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:20	
gamma-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:20	
Heptachlor	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:20	
Heptachlor epoxide	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:20	
Methoxychlor	ND	5.0	0.13	1	B3I0018	09/03/2013	09/04/13 09:20	
Toxaphene	ND	50	11	1	B3I0018	09/03/2013	09/04/13 09:20	
Surrogate: Decachlorobiphenyl	*84.5 %*	*32 - 113*			B3I0018	09/03/2013	*09/04/13 09:20*	
Surrogate: Tetrachloro-m-xylene	*89.9 %*	*32 - 101*			B3I0018	09/03/2013	*09/04/13 09:20*	

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Semivolatile Organic Compounds by EPA 8270/SIM **Analyst: BB**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Methylnaphthalene	ND	5.0	0.75	1	B3I0021	09/03/2013	09/10/13 00:45	
Acenaphthene	ND	5.0	0.43	1	B3I0021	09/03/2013	09/10/13 00:45	
Acenaphthylene	ND	5.0	0.35	1	B3I0021	09/03/2013	09/10/13 00:45	
Anthracene	ND	5.0	0.50	1	B3I0021	09/03/2013	09/10/13 00:45	
Benzo(a)anthracene	ND	5.0	0.71	1	B3I0021	09/03/2013	09/10/13 00:45	
Benzo(a)pyrene	ND	5.0	0.97	1	B3I0021	09/03/2013	09/10/13 00:45	
Benzo(b)fluoranthene	ND	5.0	0.38	1	B3I0021	09/03/2013	09/10/13 00:45	
Benzo(g,h,i)perylene	ND	5.0	1.6	1	B3I0021	09/03/2013	09/10/13 00:45	
Benzo(k)fluoranthene	ND	5.0	1.1	1	B3I0021	09/03/2013	09/10/13 00:45	
Chrysene	ND	5.0	0.76	1	B3I0021	09/03/2013	09/10/13 00:45	
Dibenz(a,h)anthracene	ND	5.0	1.6	1	B3I0021	09/03/2013	09/10/13 00:45	
Fluoranthene	ND	5.0	0.53	1	B3I0021	09/03/2013	09/10/13 00:45	
Fluorene	ND	5.0	0.47	1	B3I0021	09/03/2013	09/10/13 00:45	
Indeno(1,2,3-cd)pyrene	ND	5.0	1.5	1	B3I0021	09/03/2013	09/10/13 00:45	
Naphthalene	ND	5.0	0.54	1	B3I0021	09/03/2013	09/10/13 00:45	
Phenanthrene	ND	5.0	0.63	1	B3I0021	09/03/2013	09/10/13 00:45	
Pyrene	ND	5.0	0.49	1	B3I0021	09/03/2013	09/10/13 00:45	
Surrogate: 1,2-Dichlorobenzene-d4	*68.3 %*	*28 - 96*			B3I0021	09/03/2013	*09/10/13 00:45*	
Surrogate: 2-Fluorobiphenyl	*78.5 %*	*36 - 113*			B3I0021	09/03/2013	*09/10/13 00:45*	
Surrogate: Nitrobenzene-d5	*59.5 %*	*29 - 106*			B3I0021	09/03/2013	*09/10/13 00:45*	
Surrogate: 4-Terphenyl-d14	*78.6 %*	*39 - 138*			B3I0021	09/03/2013	*09/10/13 00:45*	

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Lab ID: 1302547-12

Title 22 Metals by ICP-AES EPA 6010B

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	4.0	0.44	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Arsenic	**7.9**	2.0	0.76	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Barium	**69**	2.0	0.17	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Beryllium	ND	2.0	0.04	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Cadmium	ND	2.0	0.04	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Chromium	**10**	2.0	0.07	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Cobalt	**7.2**	2.0	0.11	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Copper	**30**	4.0	0.22	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Lead	**78**	2.0	0.28	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Molybdenum	ND	2.0	0.09	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Nickel	**10**	2.0	0.09	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Selenium	ND	2.0	0.48	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Silver	ND	2.0	0.13	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Thallium	ND	2.0	0.59	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Vanadium	**19**	2.0	0.34	2	B3H0462	08/24/2013	08/26/13 13:59	D5
Zinc	**100**	2.0	1.0	2	B3H0462	08/24/2013	08/26/13 13:59	D5

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0471	08/26/2013	08/26/13 13:32	

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C8-C10	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:38	
T/R Hydrocarbons: C10-C18	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:38	
T/R Hydrocarbons: C18-C28	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:38	
T/R Hydrocarbons: C28-C36	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:38	
T/R Hydrocarbons: C36-C40	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:38	
T/R Hydrocarbons: C8-C40 Total (HS)	ND	10	10	1	B3I0015	09/03/2013	09/04/13 11:38	
Surrogate: p-Terphenyl	*120 %*	*55 - 153*			B3I0015	09/03/2013	*09/04/13 11:38*	

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Lab ID: 1302547-12

Organochlorine Pesticides by EPA 8081 **Analyst: BB**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:33	
4,4'-DDE	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:33	
4,4'-DDT	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:33	
Aldrin	ND	1.0	0.09	1	B3I0018	09/03/2013	09/04/13 09:33	
alpha-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:33	
alpha-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:33	
beta-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:33	
Chlordane	ND	8.5	1.5	1	B3I0018	09/03/2013	09/04/13 09:33	
delta-BHC	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:33	
Dieldrin	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:33	
Endosulfan I	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:33	
Endosulfan II	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:33	
Endosulfan sulfate	ND	2.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:33	
Endrin	ND	2.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:33	
Endrin aldehyde	ND	2.0	0.19	1	B3I0018	09/03/2013	09/04/13 09:33	
Endrin ketone	ND	2.0	0.14	1	B3I0018	09/03/2013	09/04/13 09:33	
gamma-BHC	ND	1.0	0.11	1	B3I0018	09/03/2013	09/04/13 09:33	
gamma-Chlordane	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:33	
Heptachlor	ND	1.0	0.10	1	B3I0018	09/03/2013	09/04/13 09:33	
Heptachlor epoxide	ND	1.0	0.12	1	B3I0018	09/03/2013	09/04/13 09:33	
Methoxychlor	ND	5.0	0.13	1	B3I0018	09/03/2013	09/04/13 09:33	
Toxaphene	ND	50	11	1	B3I0018	09/03/2013	09/04/13 09:33	
Surrogate: Decachlorobiphenyl	*76.5 %*	*32 - 113*			B3I0018	09/03/2013	*09/04/13 09:33*	
Surrogate: Tetrachloro-m-xylene	*83.7 %*	*32 - 101*			B3I0018	09/03/2013	*09/04/13 09:33*	

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Semivolatile Organic Compounds by EPA 8270/SIM **Analyst: BB**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Methylnaphthalene	ND	5.0	0.75	1	B3I0021	09/03/2013	09/09/13 23:51	
Acenaphthene	ND	5.0	0.43	1	B3I0021	09/03/2013	09/09/13 23:51	
Acenaphthylene	ND	5.0	0.35	1	B3I0021	09/03/2013	09/09/13 23:51	
Anthracene	ND	5.0	0.50	1	B3I0021	09/03/2013	09/09/13 23:51	
Benzo(a)anthracene	ND	5.0	0.71	1	B3I0021	09/03/2013	09/09/13 23:51	
Benzo(a)pyrene	ND	5.0	0.97	1	B3I0021	09/03/2013	09/09/13 23:51	
Benzo(b)fluoranthene	ND	5.0	0.38	1	B3I0021	09/03/2013	09/09/13 23:51	
Benzo(g,h,i)perylene	ND	5.0	1.6	1	B3I0021	09/03/2013	09/09/13 23:51	
Benzo(k)fluoranthene	ND	5.0	1.1	1	B3I0021	09/03/2013	09/09/13 23:51	
Chrysene	ND	5.0	0.76	1	B3I0021	09/03/2013	09/09/13 23:51	
Dibenz(a,h)anthracene	ND	5.0	1.6	1	B3I0021	09/03/2013	09/09/13 23:51	
Fluoranthene	ND	5.0	0.53	1	B3I0021	09/03/2013	09/09/13 23:51	
Fluorene	ND	5.0	0.47	1	B3I0021	09/03/2013	09/09/13 23:51	
Indeno(1,2,3-cd)pyrene	ND	5.0	1.5	1	B3I0021	09/03/2013	09/09/13 23:51	
Naphthalene	ND	5.0	0.54	1	B3I0021	09/03/2013	09/09/13 23:51	
Phenanthrene	ND	5.0	0.63	1	B3I0021	09/03/2013	09/09/13 23:51	
Pyrene	ND	5.0	0.49	1	B3I0021	09/03/2013	09/09/13 23:51	
Surrogate: 1,2-Dichlorobenzene-d4	*72.6 %*	*28 - 96*			B3I0021	09/03/2013	*09/09/13 23:51*	
Surrogate: 2-Fluorobiphenyl	*84.6 %*	*36 - 113*			B3I0021	09/03/2013	*09/09/13 23:51*	
Surrogate: Nitrobenzene-d5	*64.9 %*	*29 - 106*			B3I0021	09/03/2013	*09/09/13 23:51*	
Surrogate: 4-Terphenyl-d14	*84.3 %*	*39 - 138*			B3I0021	09/03/2013	*09/09/13 23:51*	

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QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0462 - EPA 3050B									
Blank (B3H0462-BLK1)				Prepared: 8/24/2013 Analyzed: 8/24/2013					
Lead	ND	1.0			NR				
LCS (B3H0462-BS1)				Prepared: 8/24/2013 Analyzed: 8/24/2013					
Lead	52.0702	1.0	50.0000		104	80 - 120			
Matrix Spike (B3H0462-MS1)		**Source: 1302545-01**		Prepared: 8/24/2013 Analyzed: 8/24/2013					
Lead	365.129	1.0	125.000	192.932	138	51 - 106			M1
Matrix Spike Dup (B3H0462-MSD1)		**Source: 1302545-01**		Prepared: 8/24/2013 Analyzed: 8/24/2013					
Lead	222.517	1.0	125.000	192.932	23.7	51 - 106	48.5	20	M1, R

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QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0462 - EPA 3050B									
Blank (B3H0462-BLK1)				Prepared: 8/24/2013 Analyzed: 8/24/2013					
Antimony	ND	2.0			NR				
Arsenic	ND	1.0			NR				
Barium	ND	1.0			NR				
Beryllium	ND	1.0			NR				
Cadmium	ND	1.0			NR				
Chromium	ND	1.0			NR				
Cobalt	ND	1.0			NR				
Copper	ND	2.0			NR				
Lead	ND	1.0			NR				
Molybdenum	ND	1.0			NR				
Nickel	ND	1.0			NR				
Selenium	ND	1.0			NR				
Silver	ND	1.0			NR				
Thallium	ND	1.0			NR				
Vanadium	ND	1.0			NR				
Zinc	ND	1.0			NR				
LCS (B3H0462-BS1)				Prepared: 8/24/2013 Analyzed: 8/24/2013					
Antimony	51.3548	2.0	50.0000		103	80 - 120			
Arsenic	50.4178	1.0	50.0000		101	80 - 120			
Barium	53.9127	1.0	50.0000		108	80 - 120			
Beryllium	56.6674	1.0	50.0000		113	80 - 120			
Cadmium	50.5566	1.0	50.0000		101	80 - 120			
Chromium	54.3394	1.0	50.0000		109	80 - 120			
Cobalt	52.1474	1.0	50.0000		104	80 - 120			
Copper	54.0990	2.0	50.0000		108	80 - 120			
Lead	52.0702	1.0	50.0000		104	80 - 120			
Molybdenum	51.8474	1.0	50.0000		104	80 - 120			
Nickel	50.2858	1.0	50.0000		101	80 - 120			
Selenium	47.5461	1.0	50.0000		95.1	80 - 120			
Silver	47.0613	1.0	50.0000		94.1	80 - 120			
Thallium	52.2978	1.0	50.0000		105	80 - 120			
Vanadium	53.9608	1.0	50.0000		108	80 - 120			
Zinc	47.6911	1.0	50.0000		95.4	80 - 120			
Matrix Spike (B3H0462-MS1)		**Source: 1302545-01**		Prepared: 8/24/2013 Analyzed: 8/24/2013					
Antimony	338.881	2.0	125.000	3.86908	268	21 - 109			M1
Arsenic	120.144	1.0	125.000	6.00210	91.3	55 - 102			
Barium	210.352	1.0	125.000	220.820	-8.37	40 - 130			M1
Beryllium	117.800	1.0	125.000	ND	94.2	60 - 104			

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QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0462 - EPA 3050B (continued)									
Matrix Spike (B3H0462-MS1) - Continued		**Source: 1302545-01**		Prepared: 8/24/2013 Analyzed: 8/24/2013					
Cadmium	106.956	1.0	125.000	2.14439	83.8	52 - 100			
Chromium	126.551	1.0	125.000	11.9870	91.7	53 - 113			
Cobalt	117.041	1.0	125.000	3.56592	90.8	53 - 104			
Copper	237.894	2.0	125.000	81.2562	125	51 - 122			M1
Lead	365.129	1.0	125.000	192.932	138	51 - 106			M1
Molybdenum	115.596	1.0	125.000	2.67000	90.3	55 - 103			
Nickel	117.480	1.0	125.000	10.7080	85.4	48 - 112			
Selenium	106.643	1.0	125.000	ND	85.3	53 - 104			
Silver	115.347	1.0	125.000	ND	92.3	61 - 109			
Thallium	103.791	1.0	125.000	ND	83.0	44 - 103			
Vanadium	141.396	1.0	125.000	20.3254	96.9	55 - 115			
Zinc	1169.03	1.0	125.000	332.013	670	24 - 130			M1
Matrix Spike Dup (B3H0462-MSD1)		**Source: 1302545-01**		Prepared: 8/24/2013 Analyzed: 8/24/2013					
Antimony	102.774	2.0	125.000	3.86908	79.1	21 - 109	107	20	R
Arsenic	121.887	1.0	125.000	6.00210	92.7	55 - 102	1.44	20	
Barium	218.046	1.0	125.000	220.820	-2.22	40 - 130	3.59	20	M1
Beryllium	120.454	1.0	125.000	ND	96.4	60 - 104	2.23	20	
Cadmium	109.919	1.0	125.000	2.14439	86.2	52 - 100	2.73	20	
Chromium	128.364	1.0	125.000	11.9870	93.1	53 - 113	1.42	20	
Cobalt	118.950	1.0	125.000	3.56592	92.3	53 - 104	1.62	20	
Copper	216.700	2.0	125.000	81.2562	108	51 - 122	9.32	20	
Lead	222.517	1.0	125.000	192.932	23.7	51 - 106	48.5	20	M1, R
Molybdenum	118.560	1.0	125.000	2.67000	92.7	55 - 103	2.53	20	
Nickel	120.387	1.0	125.000	10.7080	87.7	48 - 112	2.44	20	
Selenium	111.332	1.0	125.000	ND	89.1	53 - 104	4.30	20	
Silver	117.546	1.0	125.000	ND	94.0	61 - 109	1.89	20	
Thallium	105.557	1.0	125.000	ND	84.4	44 - 103	1.69	20	
Vanadium	140.845	1.0	125.000	20.3254	96.4	55 - 115	0.391	20	
Zinc	370.078	1.0	125.000	332.013	30.5	24 - 130	104	20	R

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QUALITY CONTROL SECTION

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0060 - STLC DI Extraction									
Blank (B3I0060-BLK1)				Prepared: 9/5/2013 Analyzed: 9/5/2013					
Lead	ND	1.0			NR				
LCS (B3I0060-BS1)				Prepared: 9/5/2013 Analyzed: 9/5/2013					
Lead	2.23246	1.0	2.00000		112	80 - 120			
Duplicate (B3I0060-DUP1)		**Source: 1302547-11**		Prepared: 9/5/2013 Analyzed: 9/5/2013					
Lead	0.246635	1.0		ND	NR			20	
Matrix Spike (B3I0060-MS1)		**Source: 1302547-11**		Prepared: 9/5/2013 Analyzed: 9/5/2013					
Lead	2.70088	1.0	2.50000	ND	108	70 - 130			
Matrix Spike Dup (B3I0060-MSD1)		**Source: 1302547-11**		Prepared: 9/5/2013 Analyzed: 9/5/2013					
Lead	2.70566	1.0	2.50000	ND	108	70 - 130	0.177	20	

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QUALITY CONTROL SECTION

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0471 - EPA 7471									
Blank (B3H0471-BLK1)				Prepared: 8/26/2013 Analyzed: 8/26/2013					
Mercury	ND	0.10			NR				
LCS (B3H0471-BS1)				Prepared: 8/26/2013 Analyzed: 8/26/2013					
Mercury	0.964349	0.10	0.833333		116	80 - 120			
Matrix Spike (B3H0471-MS1)		**Source: 1302514-01**		Prepared: 8/26/2013 Analyzed: 8/26/2013					
Mercury	0.992497	0.10	0.819672	0.028358	118	70 - 130			
Matrix Spike Dup (B3H0471-MSD1)		**Source: 1302514-01**		Prepared: 8/26/2013 Analyzed: 8/26/2013					
Mercury	0.972738	0.10	0.819672	0.028358	115	70 - 130	2.01	20	
Post Spike (B3H0471-PS1)		**Source: 1302514-01**		Prepared: 8/26/2013 Analyzed: 8/26/2013					
Mercury	0.006196		5.00000E-3	0.000340	117	85 - 115			M1

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QUALITY CONTROL SECTION

Hydrocarbon Chain Distribution by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0015 - GCSEMI_DRO									
Blank (B3I0015-BLK1)				Prepared: 9/3/2013 Analyzed: 9/4/2013					
T/R Hydrocarbons: C8-C10	ND	10			NR				
T/R Hydrocarbons: C10-C18	ND	10			NR				
T/R Hydrocarbons: C18-C28	ND	10			NR				
T/R Hydrocarbons: C28-C36	ND	10			NR				
T/R Hydrocarbons: C36-C40	ND	10			NR				
T/R Hydrocarbons: C8-C40 Total (HS)	ND	10			NR				
Surrogate: p-Terphenyl	*86.46*		*80.0000*		*108*	*55 - 153*			
LCS (B3I0015-BS1)				Prepared: 9/3/2013 Analyzed: 9/4/2013					
DRO	1024.54	10	1000.00		102	65 - 151			
Surrogate: p-Terphenyl	*83.83*		*80.0000*		*105*	*55 - 153*			
Matrix Spike (B3I0015-MS1)		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/4/2013					
DRO	1007.07	10	1000.00	ND	101	45 - 168			
Surrogate: p-Terphenyl	*89.78*		*80.0000*		*112*	*55 - 153*			
Matrix Spike Dup (B3I0015-MSD1)		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/4/2013					
DRO	975.430	10	1000.00	ND	97.5	45 - 168	3.19	20	
Surrogate: p-Terphenyl	*82.08*		*80.0000*		*103*	*55 - 153*			

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QUALITY CONTROL SECTION

Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0018 - GCSEMI_PCB/PEST									
Blank (B3I0018-BLK1)				Prepared: 9/3/2013 Analyzed: 9/4/2013					
4,4'-DDD	ND	2.0			NR				
4,4'-DDD [2C]	ND	2.0			NR				
4,4'-DDE	ND	2.0			NR				
4,4'-DDE [2C]	ND	2.0			NR				
4,4'-DDT	ND	2.0			NR				
4,4'-DDT [2C]	ND	2.0			NR				
Aldrin	ND	1.0			NR				
Aldrin [2C]	ND	1.0			NR				
alpha-BHC	ND	1.0			NR				
alpha-BHC [2C]	ND	1.0			NR				
alpha-Chlordane	ND	1.0			NR				
alpha-Chlordane [2C]	ND	1.0			NR				
beta-BHC	ND	1.0			NR				
beta-BHC [2C]	ND	1.0			NR				
Chlordane	ND	8.5			NR				
Chlordane [2C]	ND	8.5			NR				
delta-BHC	ND	1.0			NR				
delta-BHC [2C]	ND	1.0			NR				
Dieldrin	ND	2.0			NR				
Dieldrin [2C]	ND	2.0			NR				
Endosulfan I	ND	1.0			NR				
Endosulfan I [2C]	ND	1.0			NR				
Endosulfan II	ND	2.0			NR				
Endosulfan II [2C]	ND	2.0			NR				
Endosulfan sulfate	ND	2.0			NR				
Endosulfan Sulfate [2C]	ND	2.0			NR				
Endrin	ND	2.0			NR				
Endrin [2C]	ND	2.0			NR				
Endrin aldehyde	ND	2.0			NR				
Endrin aldehyde [2C]	ND	2.0			NR				
Endrin ketone	ND	2.0			NR				
Endrin ketone [2C]	ND	2.0			NR				
gamma-BHC	ND	1.0			NR				
gamma-BHC [2C]	ND	1.0			NR				
gamma-Chlordane	ND	1.0			NR				
gamma-Chlordane [2C]	ND	1.0			NR				
Heptachlor	ND	1.0			NR				
Heptachlor [2C]	ND	1.0			NR				
Heptachlor epoxide	ND	1.0			NR				
Heptachlor epoxide [2C]	ND	1.0			NR				

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QUALITY CONTROL SECTION

Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0018 - GCSEMI_PCB/PEST (continued)									
Blank (B3I0018-BLK1) - Continued				Prepared: 9/3/2013 Analyzed: 9/4/2013					
Methoxychlor	ND	5.0			NR				
Methoxychlor [2C]	ND	5.0			NR				
Toxaphene	ND	50			NR				
Toxaphene [2C]	ND	50			NR				
Surrogate: Decachlorobiphenyl	*11.93*		*16.6667*		*71.6*	*32 - 113*			
Surrogate: Decachlorobiphenyl [2C]	*12.71*		*16.6667*		*76.3*	*32 - 113*			
Surrogate: Tetrachloro-m-xylene	*12.99*		*16.6667*		*77.9*	*32 - 101*			
Surrogate: Tetrachloro-m-xylene [2C]	*12.69*		*16.6667*		*76.1*	*32 - 101*			
LCS (B3I0018-BS1)				Prepared: 9/3/2013 Analyzed: 9/4/2013					
4,4'-DDT	12.5252	2.0	16.6667		75.2	60 - 108			
4,4'-DDT [2C]	14.4887	2.0	16.6667		86.9	60 - 108			
Aldrin	13.6718	1.0	16.6667		82.0	57 - 111			
Aldrin [2C]	13.0053	1.0	16.6667		78.0	57 - 111			
Dieldrin	12.9073	2.0	16.6667		77.4	61 - 106			
Dieldrin [2C]	12.6792	2.0	16.6667		76.1	61 - 106			
Endrin	12.1877	2.0	16.6667		73.1	57 - 97			
Endrin [2C]	12.3100	2.0	16.6667		73.9	57 - 97			
gamma-BHC	14.0502	1.0	16.6667		84.3	61 - 109			
gamma-BHC [2C]	13.7977	1.0	16.6667		82.8	61 - 109			
Heptachlor	14.6188	1.0	16.6667		87.7	58 - 115			
Heptachlor [2C]	15.5230	1.0	16.6667		93.1	58 - 115			
Surrogate: Decachlorobiphenyl	*12.80*		*16.6667*		*76.8*	*32 - 113*			
Surrogate: Decachlorobiphenyl [2C]	*13.77*		*16.6667*		*82.6*	*32 - 113*			
Surrogate: Tetrachloro-m-xylene	*13.11*		*16.6667*		*78.6*	*32 - 101*			
Surrogate: Tetrachloro-m-xylene [2C]	*13.49*		*16.6667*		*80.9*	*32 - 101*			
Matrix Spike (B3I0018-MS1)		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/4/2013					
4,4'-DDT	16.0780	2.0	16.6667	ND	96.5	26 - 133			
4,4'-DDT [2C]	18.3302	2.0	16.6667	ND	110	26 - 133			
Aldrin	15.0963	1.0	16.6667	ND	90.6	38 - 119			
Aldrin [2C]	15.1845	1.0	16.6667	ND	91.1	38 - 119			
Dieldrin	15.4520	2.0	16.6667	ND	92.7	30 - 120			
Dieldrin [2C]	15.4297	2.0	16.6667	ND	92.6	30 - 120			
Endrin	15.7060	2.0	16.6667	ND	94.2	30 - 114			
Endrin [2C]	15.6680	2.0	16.6667	ND	94.0	30 - 114			
gamma-BHC	15.6800	1.0	16.6667	ND	94.1	31 - 122			
gamma-BHC [2C]	15.7277	1.0	16.6667	ND	94.4	31 - 122			
Heptachlor	15.8100	1.0	16.6667	ND	94.9	38 - 123			
Heptachlor [2C]	18.0050	1.0	16.6667	ND	108	38 - 123			

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QUALITY CONTROL SECTION

Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0018 - GCSEMI_PCB/PEST (continued)									
Matrix Spike (B3I0018-MS1) - Continued		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/4/2013					
Surrogate: Decachlorobiphenyl	*15.03*		*16.6667*		*90.2*	*32 - 113*			
Surrogate: Decachlorobiphenyl [2C]	*16.46*		*16.6667*		*98.8*	*32 - 113*			
Surrogate: Tetrachloro-m-xylene	*14.19*		*16.6667*		*85.2*	*32 - 101*			
Surrogate: Tetrachloro-m-xylene [2C]	*15.02*		*16.6667*		*90.1*	*32 - 101*			
Matrix Spike Dup (B3I0018-MSD1)		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/4/2013					
4,4'-DDT	15.4095	2.0	16.6667	ND	92.5	26 - 133	4.25	20	
4,4'-DDT [2C]	17.3803	2.0	16.6667	ND	104	26 - 133	5.32	20	
Aldrin	14.8060	1.0	16.6667	ND	88.8	38 - 119	1.94	20	
Aldrin [2C]	14.9453	1.0	16.6667	ND	89.7	38 - 119	1.59	20	
Dieldrin	14.9032	2.0	16.6667	ND	89.4	30 - 120	3.62	20	
Dieldrin [2C]	14.8320	2.0	16.6667	ND	89.0	30 - 120	3.95	20	
Endrin	15.1940	2.0	16.6667	ND	91.2	30 - 114	3.31	20	
Endrin [2C]	15.0668	2.0	16.6667	ND	90.4	30 - 114	3.91	20	
gamma-BHC	15.5715	1.0	16.6667	ND	93.4	31 - 122	0.694	20	
gamma-BHC [2C]	15.6218	1.0	16.6667	ND	93.7	31 - 122	0.675	20	
Heptachlor	15.7422	1.0	16.6667	ND	94.5	38 - 123	0.430	20	
Heptachlor [2C]	17.9592	1.0	16.6667	ND	108	38 - 123	0.255	20	
Surrogate: Decachlorobiphenyl	*14.49*		*16.6667*		*86.9*	*32 - 113*			
Surrogate: Decachlorobiphenyl [2C]	*16.03*		*16.6667*		*96.2*	*32 - 113*			
Surrogate: Tetrachloro-m-xylene	*14.17*		*16.6667*		*85.0*	*32 - 101*			
Surrogate: Tetrachloro-m-xylene [2C]	*15.00*		*16.6667*		*90.0*	*32 - 101*			

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QUALITY CONTROL SECTION

Semivolatile Organic Compounds by EPA 8270/SIM - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0021 - MSSEMI									
Blank (B3I0021-BLK1)				Prepared: 9/3/2013 Analyzed: 9/9/2013					
2-Methylnaphthalene	ND	5.0			NR				
Acenaphthene	ND	5.0			NR				
Acenaphthylene	ND	5.0			NR				
Anthracene	ND	5.0			NR				
Benzo(a)anthracene	ND	5.0			NR				
Benzo(a)pyrene	ND	5.0			NR				
Benzo(b)fluoranthene	ND	5.0			NR				
Benzo(g,h,i)perylene	ND	5.0			NR				
Benzo(k)fluoranthene	ND	5.0			NR				
Chrysene	ND	5.0			NR				
Dibenz(a,h)anthracene	ND	5.0			NR				
Fluoranthene	ND	5.0			NR				
Fluorene	ND	5.0			NR				
Indeno(1,2,3-cd)pyrene	ND	5.0			NR				
Naphthalene	ND	5.0			NR				
Phenanthrene	ND	5.0			NR				
Pyrene	ND	5.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	*15.26*		*33.3333*		*45.8*	*28 - 96*			
Surrogate: 2-Fluorobiphenyl	*17.20*		*33.3333*		*51.6*	*36 - 113*			
Surrogate: Nitrobenzene-d5	*13.60*		*33.3333*		*40.8*	*29 - 106*			
Surrogate: 4-Terphenyl-d14	*27.52*		*33.3333*		*82.6*	*39 - 138*			
LCS (B3I0021-BS1)				Prepared: 9/3/2013 Analyzed: 9/9/2013					
Acenaphthene	21.1763	5.0	33.3333		63.5	50 - 93			
Phenanthrene	24.3747	5.0	33.3333		73.1	46 - 98			
Pyrene	26.2043	5.0	33.3333		78.6	52 - 112			
Surrogate: 1,2-Dichlorobenzene-d4	*18.29*		*33.3333*		*54.9*	*28 - 96*			
Surrogate: 2-Fluorobiphenyl	*20.32*		*33.3333*		*61.0*	*36 - 113*			
Surrogate: Nitrobenzene-d5	*16.52*		*33.3333*		*49.6*	*29 - 106*			
Surrogate: 4-Terphenyl-d14	*24.28*		*33.3333*		*72.8*	*39 - 138*			
Matrix Spike (B3I0021-MS1)		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/9/2013					
Acenaphthene	24.6473	5.0	33.3333	ND	73.9	45 - 103			
Phenanthrene	26.8527	5.0	33.3333	ND	80.6	43 - 115			
Pyrene	27.1540	5.0	33.3333	ND	81.5	49 - 125			
Surrogate: 1,2-Dichlorobenzene-d4	*21.21*		*33.3333*		*63.6*	*28 - 96*			
Surrogate: 2-Fluorobiphenyl	*24.49*		*33.3333*		*73.5*	*36 - 113*			
Surrogate: Nitrobenzene-d5	*19.77*		*33.3333*		*59.3*	*29 - 106*			
Surrogate: 4-Terphenyl-d14	*25.42*		*33.3333*		*76.3*	*39 - 138*			

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Semivolatile Organic Compounds by EPA 8270/SIM - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3I0021 - MSSEMI (continued)									
Matrix Spike Dup (B3I0021-MSD1)		**Source: 1302547-12**		Prepared: 9/3/2013 Analyzed: 9/9/2013					
Acenaphthene	25.9103	5.0	33.3333	ND	77.7	45 - 103	5.00	20	
Phenanthrene	27.3927	5.0	33.3333	ND	82.2	43 - 115	1.99	20	
Pyrene	26.7757	5.0	33.3333	ND	80.3	49 - 125	1.40	20	
Surrogate: 1,2-Dichlorobenzene-d4	*21.75*		*33.3333*		*65.2*	*28 - 96*			
Surrogate: 2-Fluorobiphenyl	*24.87*		*33.3333*		*74.6*	*36 - 113*			
Surrogate: Nitrobenzene-d5	*19.91*		*33.3333*		*59.7*	*29 - 106*			
Surrogate: 4-Terphenyl-d14	*24.23*		*33.3333*		*72.7*	*39 - 138*			

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Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
D6	Sample required dilution due to high concentration of target analyte.
D5	Sample diluted due to failing internal standard in the original run.
D1	Sample required dilution due to possible matrix interference.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

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Client Sample ID T-17-0.5

Lab ID: 1302581-01

Total Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	11	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 18:43	

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Client Sample ID T-17-1.5

Lab ID: 1302581-02

Title 22 Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3H0501	08/27/2013	08/27/13 18:44	
Arsenic	**2.9**	1.0	0.38	1	B3H0501	08/27/2013	08/27/13 18:44	
Barium	**50**	1.0	0.08	1	B3H0501	08/27/2013	08/27/13 18:44	
Beryllium	ND	1.0	0.02	1	B3H0501	08/27/2013	08/27/13 18:44	
Cadmium	ND	1.0	0.02	1	B3H0501	08/27/2013	08/27/13 18:44	
Chromium	**8.6**	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 18:44	
Cobalt	**3.1**	1.0	0.06	1	B3H0501	08/27/2013	08/27/13 18:44	
Copper	**7.0**	2.0	0.11	1	B3H0501	08/27/2013	08/27/13 18:44	
Lead	**9.8**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 18:44	
Molybdenum	ND	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 18:44	
Nickel	**3.3**	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 18:44	
Selenium	ND	1.0	0.24	1	B3H0501	08/27/2013	08/27/13 18:44	
Silver	ND	1.0	0.06	1	B3H0501	08/27/2013	08/27/13 18:44	
Thallium	ND	1.0	0.29	1	B3H0501	08/27/2013	08/27/13 18:44	
Vanadium	**23**	1.0	0.17	1	B3H0501	08/27/2013	08/27/13 18:44	
Zinc	**22**	1.0	0.50	1	B3H0501	08/27/2013	08/27/13 18:44	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0553	08/28/2013	08/28/13 17:22	

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Client Sample ID T-17-5

Lab ID: 1302581-03

Total Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.8**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 18:46	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
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Client Sample ID T-18-0.5

Lab ID: 1302581-04

Title 22 Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3H0501	08/27/2013	08/27/13 18:47	
Arsenic	**2.8**	1.0	0.38	1	B3H0501	08/27/2013	08/27/13 18:47	
Barium	**36**	1.0	0.08	1	B3H0501	08/27/2013	08/27/13 18:47	
Beryllium	ND	1.0	0.02	1	B3H0501	08/27/2013	08/27/13 18:47	
Cadmium	ND	1.0	0.02	1	B3H0501	08/27/2013	08/27/13 18:47	
Chromium	**13**	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 18:47	
Cobalt	**2.5**	1.0	0.06	1	B3H0501	08/27/2013	08/27/13 18:47	
Copper	**21**	2.0	0.11	1	B3H0501	08/27/2013	08/27/13 18:47	
Lead	**24**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 18:47	
Molybdenum	ND	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 18:47	
Nickel	**3.3**	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 18:47	
Selenium	ND	1.0	0.24	1	B3H0501	08/27/2013	08/27/13 18:47	
Silver	ND	1.0	0.06	1	B3H0501	08/27/2013	08/27/13 18:47	
Thallium	ND	1.0	0.30	1	B3H0501	08/27/2013	08/27/13 18:47	
Vanadium	**19**	1.0	0.17	1	B3H0501	08/27/2013	08/27/13 18:47	
Zinc	**36**	1.0	0.51	1	B3H0501	08/27/2013	08/27/13 18:47	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0553	08/28/2013	08/28/13 17:42	

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Client Sample ID T-18-3

Lab ID: 1302581-05

Total Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**9.2**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 18:52	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
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Client Sample ID T-18-5.5

Lab ID: 1302581-06

Total Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.6**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 18:54	

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Client Sample ID T-19-1

Lab ID: 1302581-07

Title 22 Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3H0501	08/27/2013	08/27/13 18:56	
Arsenic	**1.2**	1.0	0.38	1	B3H0501	08/27/2013	08/27/13 18:56	
Barium	**24**	1.0	0.08	1	B3H0501	08/27/2013	08/27/13 18:56	
Beryllium	ND	1.0	0.02	1	B3H0501	08/27/2013	08/27/13 18:56	
Cadmium	ND	1.0	0.02	1	B3H0501	08/27/2013	08/27/13 18:56	
Chromium	**11**	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 18:56	
Cobalt	**2.5**	1.0	0.06	1	B3H0501	08/27/2013	08/27/13 18:56	
Copper	**4.8**	2.0	0.11	1	B3H0501	08/27/2013	08/27/13 18:56	
Lead	**2.4**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 18:56	
Molybdenum	ND	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 18:56	
Nickel	**3.2**	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 18:56	
Selenium	ND	1.0	0.24	1	B3H0501	08/27/2013	08/27/13 18:56	
Silver	ND	1.0	0.06	1	B3H0501	08/27/2013	08/27/13 18:56	
Thallium	ND	1.0	0.29	1	B3H0501	08/27/2013	08/27/13 18:56	
Vanadium	**16**	1.0	0.17	1	B3H0501	08/27/2013	08/27/13 18:56	
Zinc	**19**	1.0	0.50	1	B3H0501	08/27/2013	08/27/13 18:56	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0553	08/28/2013	08/28/13 17:44	

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5710 Ruffin Road	Report To : Lisa Bestard
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Client Sample ID T-19-3.5

Lab ID: 1302581-08

Total Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.2**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 18:57	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID T-19-7

Lab ID: 1302581-09

Total Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.3**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 18:59	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID T-20-1

Lab ID: 1302581-10

Total Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.3**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 19:00	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID T-20-3.5

Lab ID: 1302581-11

Title 22 Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3H0501	08/27/2013	08/27/13 19:02	
Arsenic	**1.3**	1.0	0.38	1	B3H0501	08/27/2013	08/27/13 19:02	
Barium	**28**	1.0	0.08	1	B3H0501	08/27/2013	08/27/13 19:02	
Beryllium	ND	1.0	0.02	1	B3H0501	08/27/2013	08/27/13 19:02	
Cadmium	ND	1.0	0.02	1	B3H0501	08/27/2013	08/27/13 19:02	
Chromium	**8.1**	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 19:02	
Cobalt	**1.7**	1.0	0.06	1	B3H0501	08/27/2013	08/27/13 19:02	
Copper	**5.6**	2.0	0.11	1	B3H0501	08/27/2013	08/27/13 19:02	
Lead	**2.2**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 19:02	
Molybdenum	ND	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 19:02	
Nickel	**2.8**	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 19:02	
Selenium	ND	1.0	0.24	1	B3H0501	08/27/2013	08/27/13 19:02	
Silver	ND	1.0	0.06	1	B3H0501	08/27/2013	08/27/13 19:02	
Thallium	ND	1.0	0.29	1	B3H0501	08/27/2013	08/27/13 19:02	
Vanadium	**16**	1.0	0.17	1	B3H0501	08/27/2013	08/27/13 19:02	
Zinc	**14**	1.0	0.50	1	B3H0501	08/27/2013	08/27/13 19:02	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0553	08/28/2013	08/28/13 17:46	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
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San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID T-20-6.5

Lab ID: 1302581-12

Total Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**5.3**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 19:03	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
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San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID T-21-1

Lab ID: 1302581-13

Title 22 Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3H0501	08/27/2013	08/27/13 19:05	
Arsenic	**2.7**	1.0	0.38	1	B3H0501	08/27/2013	08/27/13 19:05	
Barium	**45**	1.0	0.08	1	B3H0501	08/27/2013	08/27/13 19:05	
Beryllium	ND	1.0	0.02	1	B3H0501	08/27/2013	08/27/13 19:05	
Cadmium	ND	1.0	0.02	1	B3H0501	08/27/2013	08/27/13 19:05	
Chromium	**8.0**	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 19:05	
Cobalt	**2.4**	1.0	0.06	1	B3H0501	08/27/2013	08/27/13 19:05	
Copper	**7.0**	2.0	0.11	1	B3H0501	08/27/2013	08/27/13 19:05	
Lead	**8.1**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 19:05	
Molybdenum	ND	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 19:05	
Nickel	**3.1**	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 19:05	
Selenium	ND	1.0	0.24	1	B3H0501	08/27/2013	08/27/13 19:05	
Silver	ND	1.0	0.06	1	B3H0501	08/27/2013	08/27/13 19:05	
Thallium	ND	1.0	0.30	1	B3H0501	08/27/2013	08/27/13 19:05	
Vanadium	**22**	1.0	0.17	1	B3H0501	08/27/2013	08/27/13 19:05	
Zinc	**20**	1.0	0.51	1	B3H0501	08/27/2013	08/27/13 19:05	

Mercury by AA (Cold Vapor) EPA 7471A **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0553	08/28/2013	08/28/13 17:48	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
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Client Sample ID T-21-2

Lab ID: 1302581-14

Total Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	5.4	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 19:06	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
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San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID T-22-1

Lab ID: 1302581-15

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3H0501	08/27/2013	08/27/13 19:12	
Arsenic	**2.0**	1.0	0.38	1	B3H0501	08/27/2013	08/27/13 19:12	
Barium	**26**	1.0	0.08	1	B3H0501	08/27/2013	08/27/13 19:12	
Beryllium	ND	1.0	0.02	1	B3H0501	08/27/2013	08/27/13 19:12	
Cadmium	ND	1.0	0.02	1	B3H0501	08/27/2013	08/27/13 19:12	
Chromium	**12**	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 19:12	
Cobalt	**2.2**	1.0	0.06	1	B3H0501	08/27/2013	08/27/13 19:12	
Copper	**7.7**	2.0	0.11	1	B3H0501	08/27/2013	08/27/13 19:12	
Lead	**7.0**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 19:12	
Molybdenum	ND	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 19:12	
Nickel	**3.2**	1.0	0.04	1	B3H0501	08/27/2013	08/27/13 19:12	
Selenium	ND	1.0	0.24	1	B3H0501	08/27/2013	08/27/13 19:12	
Silver	ND	1.0	0.06	1	B3H0501	08/27/2013	08/27/13 19:12	
Thallium	ND	1.0	0.29	1	B3H0501	08/27/2013	08/27/13 19:12	
Vanadium	**23**	1.0	0.17	1	B3H0501	08/27/2013	08/27/13 19:12	
Zinc	**26**	1.0	0.50	1	B3H0501	08/27/2013	08/27/13 19:12	

Mercury by AA (Cold Vapor) EPA 7471A — **Analyst: VV**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0553	08/28/2013	08/28/13 17:50	

Hydrocarbon Chain Distribution by EPA 8015B (Modified) — **Analyst: MFR**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C8-C10	ND	10	10	1	B3H0499	08/27/2013	08/27/13 17:29	
T/R Hydrocarbons: C10-C18	ND	10	10	1	B3H0499	08/27/2013	08/27/13 17:29	
T/R Hydrocarbons: C18-C28	ND	10	10	1	B3H0499	08/27/2013	08/27/13 17:29	
T/R Hydrocarbons: C28-C36	ND	10	10	1	B3H0499	08/27/2013	08/27/13 17:29	
T/R Hydrocarbons: C36-C40	ND	10	10	1	B3H0499	08/27/2013	08/27/13 17:29	
T/R Hydrocarbons: C8-C40 Total (HS)	ND	10	10	1	B3H0499	08/27/2013	08/27/13 17:29	
Surrogate: p-Terphenyl	*95.4 %*	*55 - 153*			B3H0499	08/27/2013	*08/27/13 17:29*	

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Lab ID: 1302581-15

Organochlorine Pesticides by EPA 8081 **Analyst: BB**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.12	1	B3H0528	08/28/2013	08/28/13 14:52	
4,4'-DDE	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:52	
4,4'-DDT	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:52	
Aldrin	ND	1.0	0.09	1	B3H0528	08/28/2013	08/28/13 14:52	
alpha-BHC	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:52	
alpha-Chlordane	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:52	
beta-BHC	ND	1.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:52	
Chlordane	ND	8.5	1.5	1	B3H0528	08/28/2013	08/28/13 14:52	
delta-BHC	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:52	
Dieldrin	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:52	
Endosulfan I	ND	1.0	0.12	1	B3H0528	08/28/2013	08/28/13 14:52	
Endosulfan II	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:52	
Endosulfan sulfate	ND	2.0	0.12	1	B3H0528	08/28/2013	08/28/13 14:52	
Endrin	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:52	
Endrin aldehyde	ND	2.0	0.19	1	B3H0528	08/28/2013	08/28/13 14:52	
Endrin ketone	ND	2.0	0.14	1	B3H0528	08/28/2013	08/28/13 14:52	
gamma-BHC	ND	1.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:52	
gamma-Chlordane	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:52	
Heptachlor	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:52	
Heptachlor epoxide	ND	1.0	0.12	1	B3H0528	08/28/2013	08/28/13 14:52	
Methoxychlor	ND	5.0	0.13	1	B3H0528	08/28/2013	08/28/13 14:52	
Toxaphene	ND	50	11	1	B3H0528	08/28/2013	08/28/13 14:52	
Surrogate: Decachlorobiphenyl	*67.0 %*	*32 - 113*			B3H0528	08/28/2013	*08/28/13 14:52*	
Surrogate: Tetrachloro-m-xylene	*93.6 %*	*32 - 101*			B3H0528	08/28/2013	*08/28/13 14:52*	

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Client Sample ID T-22-1

Lab ID: 1302581-15

Semivolatile Organic Compounds by EPA 8270/SIM **Analyst: MFR**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Methylnaphthalene	ND	5.0	0.75	1	B3H0509	08/27/2013	08/27/13 19:35	
Acenaphthene	ND	5.0	0.43	1	B3H0509	08/27/2013	08/27/13 19:35	
Acenaphthylene	ND	5.0	0.35	1	B3H0509	08/27/2013	08/27/13 19:35	
Anthracene	ND	5.0	0.50	1	B3H0509	08/27/2013	08/27/13 19:35	
Benzo(a)anthracene	ND	5.0	0.71	1	B3H0509	08/27/2013	08/27/13 19:35	
Benzo(a)pyrene	ND	5.0	0.97	1	B3H0509	08/27/2013	08/27/13 19:35	
Benzo(b)fluoranthene	ND	5.0	0.38	1	B3H0509	08/27/2013	08/27/13 19:35	
Benzo(g,h,i)perylene	ND	5.0	1.6	1	B3H0509	08/27/2013	08/27/13 19:35	
Benzo(k)fluoranthene	ND	5.0	1.1	1	B3H0509	08/27/2013	08/27/13 19:35	
Chrysene	ND	5.0	0.76	1	B3H0509	08/27/2013	08/27/13 19:35	
Dibenz(a,h)anthracene	ND	5.0	1.6	1	B3H0509	08/27/2013	08/27/13 19:35	
Fluoranthene	ND	5.0	0.53	1	B3H0509	08/27/2013	08/27/13 19:35	
Fluorene	ND	5.0	0.47	1	B3H0509	08/27/2013	08/27/13 19:35	
Indeno(1,2,3-cd)pyrene	ND	5.0	1.5	1	B3H0509	08/27/2013	08/27/13 19:35	
Naphthalene	ND	5.0	0.54	1	B3H0509	08/27/2013	08/27/13 19:35	
Phenanthrene	ND	5.0	0.63	1	B3H0509	08/27/2013	08/27/13 19:35	
Pyrene	ND	5.0	0.49	1	B3H0509	08/27/2013	08/27/13 19:35	
Surrogate: 1,2-Dichlorobenzene-d4	*68.4 %*		*28 - 96*		B3H0509	08/27/2013	*08/27/13 19:35*	
Surrogate: 2-Fluorobiphenyl	*75.1 %*		*36 - 113*		B3H0509	08/27/2013	*08/27/13 19:35*	
Surrogate: Nitrobenzene-d5	*77.9 %*		*29 - 106*		B3H0509	08/27/2013	*08/27/13 19:35*	
Surrogate: 4-Terphenyl-d14	*112 %*		*39 - 138*		B3H0509	08/27/2013	*08/27/13 19:35*	

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San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID T-22-4.5

Lab ID: 1302581-16

Total Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.4**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 19:13	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID T-22-7

Lab ID: 1302581-17

Total Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**6.2**	5.0	0.70	5	B3H0501	08/27/2013	08/28/13 14:47	D5

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID T-23-1

Lab ID: 1302581-18

Total Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**32**	1.0	0.14	1	B3H0501	08/27/2013	08/27/13 19:16	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID T-23-3

Lab ID: 1302581-19

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3H0502	08/27/2013	08/27/13 19:22	
Arsenic	**1.4**	1.0	0.38	1	B3H0502	08/27/2013	08/27/13 19:22	
Barium	**17**	1.0	0.08	1	B3H0502	08/27/2013	08/27/13 19:22	
Beryllium	ND	1.0	0.02	1	B3H0502	08/27/2013	08/27/13 19:22	
Cadmium	ND	1.0	0.02	1	B3H0502	08/27/2013	08/27/13 19:22	
Chromium	**9.6**	1.0	0.04	1	B3H0502	08/27/2013	08/27/13 19:22	
Cobalt	**1.4**	1.0	0.06	1	B3H0502	08/27/2013	08/27/13 19:22	
Copper	**5.0**	2.0	0.11	1	B3H0502	08/27/2013	08/27/13 19:22	
Lead	**4.3**	1.0	0.14	1	B3H0502	08/27/2013	08/27/13 19:22	
Molybdenum	ND	1.0	0.04	1	B3H0502	08/27/2013	08/27/13 19:22	
Nickel	**2.5**	1.0	0.04	1	B3H0502	08/27/2013	08/27/13 19:22	
Selenium	ND	1.0	0.24	1	B3H0502	08/27/2013	08/27/13 19:22	
Silver	ND	1.0	0.06	1	B3H0502	08/27/2013	08/27/13 19:22	
Thallium	ND	1.0	0.30	1	B3H0502	08/27/2013	08/27/13 19:22	
Vanadium	**22**	1.0	0.17	1	B3H0502	08/27/2013	08/27/13 19:22	
Zinc	**15**	1.0	0.51	1	B3H0502	08/27/2013	08/27/13 19:22	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0553	08/28/2013	08/28/13 17:52	

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: MFR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C8-C10	ND	10	10	1	B3H0499	08/27/2013	08/27/13 17:46	
T/R Hydrocarbons: C10-C18	ND	10	10	1	B3H0499	08/27/2013	08/27/13 17:46	
T/R Hydrocarbons: C18-C28	ND	10	10	1	B3H0499	08/27/2013	08/27/13 17:46	
T/R Hydrocarbons: C28-C36	ND	10	10	1	B3H0499	08/27/2013	08/27/13 17:46	
T/R Hydrocarbons: C36-C40	ND	10	10	1	B3H0499	08/27/2013	08/27/13 17:46	
T/R Hydrocarbons: C8-C40 Total (HS)	ND	10	10	1	B3H0499	08/27/2013	08/27/13 17:46	
Surrogate: p-Terphenyl	*107 %*	*55 - 153*			B3H0499	08/27/2013	*08/27/13 17:46*	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID T-23-3

Lab ID: 1302581-19

Organochlorine Pesticides by EPA 8081 **Analyst: BB**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.12	1	B3H0528	08/28/2013	08/28/13 13:33	
4,4'-DDE	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 13:33	
4,4'-DDT	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 13:33	
Aldrin	ND	1.0	0.09	1	B3H0528	08/28/2013	08/28/13 13:33	
alpha-BHC	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 13:33	
alpha-Chlordane	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 13:33	
beta-BHC	ND	1.0	0.11	1	B3H0528	08/28/2013	08/28/13 13:33	
Chlordane	ND	8.5	1.5	1	B3H0528	08/28/2013	08/28/13 13:33	
delta-BHC	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 13:33	
Dieldrin	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 13:33	
Endosulfan I	ND	1.0	0.12	1	B3H0528	08/28/2013	08/28/13 13:33	
Endosulfan II	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 13:33	
Endosulfan sulfate	ND	2.0	0.12	1	B3H0528	08/28/2013	08/28/13 13:33	
Endrin	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 13:33	
Endrin aldehyde	ND	2.0	0.19	1	B3H0528	08/28/2013	08/28/13 13:33	
Endrin ketone	ND	2.0	0.14	1	B3H0528	08/28/2013	08/28/13 13:33	
gamma-BHC	ND	1.0	0.11	1	B3H0528	08/28/2013	08/28/13 13:33	
gamma-Chlordane	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 13:33	
Heptachlor	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 13:33	
Heptachlor epoxide	ND	1.0	0.12	1	B3H0528	08/28/2013	08/28/13 13:33	
Methoxychlor	ND	5.0	0.13	1	B3H0528	08/28/2013	08/28/13 13:33	
Toxaphene	ND	50	11	1	B3H0528	08/28/2013	08/28/13 13:33	
Surrogate: Decachlorobiphenyl	*73.4 %*		*32 - 113*		B3H0528	08/28/2013	*08/28/13 13:33*	
Surrogate: Tetrachloro-m-xylene	*84.0 %*		*32 - 101*		B3H0528	08/28/2013	*08/28/13 13:33*	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID T-23-3

Lab ID: 1302581-19

Semivolatile Organic Compounds by EPA 8270/SIM **Analyst: MFR**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Methylnaphthalene	ND	5.0	0.75	1	B3H0509	08/27/2013	08/27/13 20:02	
Acenaphthene	ND	5.0	0.43	1	B3H0509	08/27/2013	08/27/13 20:02	
Acenaphthylene	ND	5.0	0.35	1	B3H0509	08/27/2013	08/27/13 20:02	
Anthracene	ND	5.0	0.50	1	B3H0509	08/27/2013	08/27/13 20:02	
Benzo(a)anthracene	ND	5.0	0.71	1	B3H0509	08/27/2013	08/27/13 20:02	
Benzo(a)pyrene	ND	5.0	0.97	1	B3H0509	08/27/2013	08/27/13 20:02	
Benzo(b)fluoranthene	ND	5.0	0.38	1	B3H0509	08/27/2013	08/27/13 20:02	
Benzo(g,h,i)perylene	ND	5.0	1.6	1	B3H0509	08/27/2013	08/27/13 20:02	
Benzo(k)fluoranthene	ND	5.0	1.1	1	B3H0509	08/27/2013	08/27/13 20:02	
Chrysene	ND	5.0	0.76	1	B3H0509	08/27/2013	08/27/13 20:02	
Dibenz(a,h)anthracene	ND	5.0	1.6	1	B3H0509	08/27/2013	08/27/13 20:02	
Fluoranthene	ND	5.0	0.53	1	B3H0509	08/27/2013	08/27/13 20:02	
Fluorene	ND	5.0	0.47	1	B3H0509	08/27/2013	08/27/13 20:02	
Indeno(1,2,3-cd)pyrene	ND	5.0	1.5	1	B3H0509	08/27/2013	08/27/13 20:02	
Naphthalene	ND	5.0	0.54	1	B3H0509	08/27/2013	08/27/13 20:02	
Phenanthrene	ND	5.0	0.63	1	B3H0509	08/27/2013	08/27/13 20:02	
Pyrene	ND	5.0	0.49	1	B3H0509	08/27/2013	08/27/13 20:02	
Surrogate: 1,2-Dichlorobenzene-d4	*76.0 %*	*28 - 96*			B3H0509	08/27/2013	*08/27/13 20:02*	
Surrogate: 2-Fluorobiphenyl	*75.8 %*	*36 - 113*			B3H0509	08/27/2013	*08/27/13 20:02*	
Surrogate: Nitrobenzene-d5	*80.5 %*	*29 - 106*			B3H0509	08/27/2013	*08/27/13 20:02*	
Surrogate: 4-Terphenyl-d14	*119 %*	*39 - 138*			B3H0509	08/27/2013	*08/27/13 20:02*	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID T-23-8

Lab ID: 1302581-20

Total Metals by ICP-AES EPA 6010B **Analyst: AG**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**18**	5.0	0.70	5	B3H0502	08/27/2013	08/28/13 14:49	D5

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID Dup-2

Lab ID: 1302581-21

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3H0502	08/27/2013	08/27/13 19:32	
Arsenic	**1.6**	1.0	0.38	1	B3H0502	08/27/2013	08/27/13 19:32	
Barium	**14**	1.0	0.08	1	B3H0502	08/27/2013	08/27/13 19:32	
Beryllium	ND	1.0	0.02	1	B3H0502	08/27/2013	08/27/13 19:32	
Cadmium	ND	1.0	0.02	1	B3H0502	08/27/2013	08/27/13 19:32	
Chromium	**8.7**	1.0	0.04	1	B3H0502	08/27/2013	08/27/13 19:32	
Cobalt	**1.4**	1.0	0.06	1	B3H0502	08/27/2013	08/27/13 19:32	
Copper	**4.1**	2.0	0.11	1	B3H0502	08/27/2013	08/27/13 19:32	
Lead	**1.6**	1.0	0.14	1	B3H0502	08/27/2013	08/27/13 19:32	
Molybdenum	ND	1.0	0.04	1	B3H0502	08/27/2013	08/27/13 19:32	
Nickel	**2.5**	1.0	0.04	1	B3H0502	08/27/2013	08/27/13 19:32	
Selenium	ND	1.0	0.24	1	B3H0502	08/27/2013	08/27/13 19:32	
Silver	ND	1.0	0.06	1	B3H0502	08/27/2013	08/27/13 19:32	
Thallium	ND	1.0	0.30	1	B3H0502	08/27/2013	08/27/13 19:32	
Vanadium	**22**	1.0	0.17	1	B3H0502	08/27/2013	08/27/13 19:32	
Zinc	**14**	1.0	0.51	1	B3H0502	08/27/2013	08/27/13 19:32	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0553	08/28/2013	08/28/13 17:54	

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: MFR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C8-C10	ND	10	10	1	B3H0499	08/27/2013	08/27/13 18:03	
T/R Hydrocarbons: C10-C18	ND	10	10	1	B3H0499	08/27/2013	08/27/13 18:03	
T/R Hydrocarbons: C18-C28	ND	10	10	1	B3H0499	08/27/2013	08/27/13 18:03	
T/R Hydrocarbons: C28-C36	ND	10	10	1	B3H0499	08/27/2013	08/27/13 18:03	
T/R Hydrocarbons: C36-C40	ND	10	10	1	B3H0499	08/27/2013	08/27/13 18:03	
T/R Hydrocarbons: C8-C40 Total (HS)	ND	10	10	1	B3H0499	08/27/2013	08/27/13 18:03	
Surrogate: p-Terphenyl	*106 %*	*55 - 153*			B3H0499	08/27/2013	*08/27/13 18:03*	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID Dup-2

Lab ID: 1302581-21

Organochlorine Pesticides by EPA 8081 **Analyst: BB**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.12	1	B3H0528	08/28/2013	08/28/13 14:26	
4,4'-DDE	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:26	
4,4'-DDT	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:26	
Aldrin	ND	1.0	0.09	1	B3H0528	08/28/2013	08/28/13 14:26	
alpha-BHC	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:26	
alpha-Chlordane	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:26	
beta-BHC	ND	1.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:26	
Chlordane	ND	8.5	1.5	1	B3H0528	08/28/2013	08/28/13 14:26	
delta-BHC	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:26	
Dieldrin	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:26	
Endosulfan I	ND	1.0	0.12	1	B3H0528	08/28/2013	08/28/13 14:26	
Endosulfan II	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:26	
Endosulfan sulfate	ND	2.0	0.12	1	B3H0528	08/28/2013	08/28/13 14:26	
Endrin	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:26	
Endrin aldehyde	ND	2.0	0.19	1	B3H0528	08/28/2013	08/28/13 14:26	
Endrin ketone	ND	2.0	0.14	1	B3H0528	08/28/2013	08/28/13 14:26	
gamma-BHC	ND	1.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:26	
gamma-Chlordane	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:26	
Heptachlor	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:26	
Heptachlor epoxide	ND	1.0	0.12	1	B3H0528	08/28/2013	08/28/13 14:26	
Methoxychlor	ND	5.0	0.13	1	B3H0528	08/28/2013	08/28/13 14:26	
Toxaphene	ND	50	11	1	B3H0528	08/28/2013	08/28/13 14:26	
Surrogate: Decachlorobiphenyl	*58.4 %*	*32 - 113*			B3H0528	08/28/2013	*08/28/13 14:26*	
Surrogate: Tetrachloro-m-xylene	*82.3 %*	*32 - 101*			B3H0528	08/28/2013	*08/28/13 14:26*	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID Dup-2

Lab ID: 1302581-21

Semivolatile Organic Compounds by EPA 8270/SIM **Analyst: MFR**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Methylnaphthalene	ND	5.0	0.75	1	B3H0509	08/27/2013	08/27/13 20:29	
Acenaphthene	ND	5.0	0.43	1	B3H0509	08/27/2013	08/27/13 20:29	
Acenaphthylene	ND	5.0	0.35	1	B3H0509	08/27/2013	08/27/13 20:29	
Anthracene	ND	5.0	0.50	1	B3H0509	08/27/2013	08/27/13 20:29	
Benzo(a)anthracene	ND	5.0	0.71	1	B3H0509	08/27/2013	08/27/13 20:29	
Benzo(a)pyrene	ND	5.0	0.97	1	B3H0509	08/27/2013	08/27/13 20:29	
Benzo(b)fluoranthene	ND	5.0	0.38	1	B3H0509	08/27/2013	08/27/13 20:29	
Benzo(g,h,i)perylene	ND	5.0	1.6	1	B3H0509	08/27/2013	08/27/13 20:29	
Benzo(k)fluoranthene	ND	5.0	1.1	1	B3H0509	08/27/2013	08/27/13 20:29	
Chrysene	ND	5.0	0.76	1	B3H0509	08/27/2013	08/27/13 20:29	
Dibenz(a,h)anthracene	ND	5.0	1.6	1	B3H0509	08/27/2013	08/27/13 20:29	
Fluoranthene	ND	5.0	0.53	1	B3H0509	08/27/2013	08/27/13 20:29	
Fluorene	ND	5.0	0.47	1	B3H0509	08/27/2013	08/27/13 20:29	
Indeno(1,2,3-cd)pyrene	ND	5.0	1.5	1	B3H0509	08/27/2013	08/27/13 20:29	
Naphthalene	ND	5.0	0.54	1	B3H0509	08/27/2013	08/27/13 20:29	
Phenanthrene	ND	5.0	0.63	1	B3H0509	08/27/2013	08/27/13 20:29	
Pyrene	ND	5.0	0.49	1	B3H0509	08/27/2013	08/27/13 20:29	
Surrogate: 1,2-Dichlorobenzene-d4	*81.3 %*	*28 - 96*			B3H0509	08/27/2013	*08/27/13 20:29*	
Surrogate: 2-Fluorobiphenyl	*80.1 %*	*36 - 113*			B3H0509	08/27/2013	*08/27/13 20:29*	
Surrogate: Nitrobenzene-d5	*88.1 %*	*29 - 106*			B3H0509	08/27/2013	*08/27/13 20:29*	
Surrogate: 4-Terphenyl-d14	*123 %*	*39 - 138*			B3H0509	08/27/2013	*08/27/13 20:29*	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID Dup-1

Lab ID: 1302581-22

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.22	1	B3H0502	08/27/2013	08/27/13 19:34	
Arsenic	**1.9**	1.0	0.38	1	B3H0502	08/27/2013	08/27/13 19:34	
Barium	**54**	1.0	0.08	1	B3H0502	08/27/2013	08/27/13 19:34	
Beryllium	ND	1.0	0.02	1	B3H0502	08/27/2013	08/27/13 19:34	
Cadmium	ND	1.0	0.02	1	B3H0502	08/27/2013	08/27/13 19:34	
Chromium	**11**	1.0	0.04	1	B3H0502	08/27/2013	08/27/13 19:34	
Cobalt	**2.2**	1.0	0.06	1	B3H0502	08/27/2013	08/27/13 19:34	
Copper	**7.3**	2.0	0.11	1	B3H0502	08/27/2013	08/27/13 19:34	
Lead	**6.0**	1.0	0.14	1	B3H0502	08/27/2013	08/27/13 19:34	
Molybdenum	ND	1.0	0.04	1	B3H0502	08/27/2013	08/27/13 19:34	
Nickel	**3.0**	1.0	0.04	1	B3H0502	08/27/2013	08/27/13 19:34	
Selenium	ND	1.0	0.24	1	B3H0502	08/27/2013	08/27/13 19:34	
Silver	ND	1.0	0.06	1	B3H0502	08/27/2013	08/27/13 19:34	
Thallium	ND	1.0	0.30	1	B3H0502	08/27/2013	08/27/13 19:34	
Vanadium	**21**	1.0	0.17	1	B3H0502	08/27/2013	08/27/13 19:34	
Zinc	**25**	1.0	0.51	1	B3H0502	08/27/2013	08/27/13 19:34	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	0.008	1	B3H0553	08/28/2013	08/28/13 17:56	

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: MFR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
T/R Hydrocarbons: C8-C10	ND	10	10	1	B3H0499	08/27/2013	08/27/13 11:16	
T/R Hydrocarbons: C10-C18	ND	10	10	1	B3H0499	08/27/2013	08/27/13 11:16	
T/R Hydrocarbons: C18-C28	ND	10	10	1	B3H0499	08/27/2013	08/27/13 11:16	
T/R Hydrocarbons: C28-C36	ND	10	10	1	B3H0499	08/27/2013	08/27/13 11:16	
T/R Hydrocarbons: C36-C40	ND	10	10	1	B3H0499	08/27/2013	08/27/13 11:16	
T/R Hydrocarbons: C8-C40 Total (HS)	ND	10	10	1	B3H0499	08/27/2013	08/27/13 11:16	
Surrogate: p-Terphenyl	*91.9 %*	*55 - 153*			B3H0499	08/27/2013	*08/27/13 11:16*	

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego , CA 92123	Reported : 9/25/2013

Client Sample ID Dup-1

Lab ID: 1302581-22

Organochlorine Pesticides by EPA 8081 **Analyst: BB**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	0.12	1	B3H0528	08/28/2013	08/28/13 14:39	
4,4'-DDE	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:39	
4,4'-DDT	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:39	
Aldrin	ND	1.0	0.09	1	B3H0528	08/28/2013	08/28/13 14:39	
alpha-BHC	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:39	
alpha-Chlordane	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:39	
beta-BHC	ND	1.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:39	
Chlordane	ND	8.5	1.5	1	B3H0528	08/28/2013	08/28/13 14:39	
delta-BHC	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:39	
Dieldrin	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:39	
Endosulfan I	ND	1.0	0.12	1	B3H0528	08/28/2013	08/28/13 14:39	
Endosulfan II	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:39	
Endosulfan sulfate	ND	2.0	0.12	1	B3H0528	08/28/2013	08/28/13 14:39	
Endrin	ND	2.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:39	
Endrin aldehyde	ND	2.0	0.19	1	B3H0528	08/28/2013	08/28/13 14:39	
Endrin ketone	ND	2.0	0.14	1	B3H0528	08/28/2013	08/28/13 14:39	
gamma-BHC	ND	1.0	0.11	1	B3H0528	08/28/2013	08/28/13 14:39	
gamma-Chlordane	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:39	
Heptachlor	ND	1.0	0.10	1	B3H0528	08/28/2013	08/28/13 14:39	
Heptachlor epoxide	ND	1.0	0.12	1	B3H0528	08/28/2013	08/28/13 14:39	
Methoxychlor	ND	5.0	0.13	1	B3H0528	08/28/2013	08/28/13 14:39	
Toxaphene	ND	50	11	1	B3H0528	08/28/2013	08/28/13 14:39	
Surrogate: Decachlorobiphenyl	*57.1 %*		*32 - 113*		B3H0528	08/28/2013	*08/28/13 14:39*	
Surrogate: Tetrachloro-m-xylene	*79.6 %*		*32 - 101*		B3H0528	08/28/2013	*08/28/13 14:39*	

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Client Sample ID Dup-1

Lab ID: 1302581-22

Semivolatile Organic Compounds by EPA 8270/SIM **Analyst: MFR**

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Methylnaphthalene	ND	5.0	0.75	1	B3H0509	08/27/2013	08/27/13 20:55	
Acenaphthene	ND	5.0	0.43	1	B3H0509	08/27/2013	08/27/13 20:55	
Acenaphthylene	ND	5.0	0.35	1	B3H0509	08/27/2013	08/27/13 20:55	
Anthracene	ND	5.0	0.50	1	B3H0509	08/27/2013	08/27/13 20:55	
Benzo(a)anthracene	ND	5.0	0.71	1	B3H0509	08/27/2013	08/27/13 20:55	
Benzo(a)pyrene	ND	5.0	0.97	1	B3H0509	08/27/2013	08/27/13 20:55	
Benzo(b)fluoranthene	ND	5.0	0.38	1	B3H0509	08/27/2013	08/27/13 20:55	
Benzo(g,h,i)perylene	ND	5.0	1.6	1	B3H0509	08/27/2013	08/27/13 20:55	
Benzo(k)fluoranthene	ND	5.0	1.1	1	B3H0509	08/27/2013	08/27/13 20:55	
Chrysene	ND	5.0	0.76	1	B3H0509	08/27/2013	08/27/13 20:55	
Dibenz(a,h)anthracene	ND	5.0	1.6	1	B3H0509	08/27/2013	08/27/13 20:55	
Fluoranthene	ND	5.0	0.53	1	B3H0509	08/27/2013	08/27/13 20:55	
Fluorene	ND	5.0	0.47	1	B3H0509	08/27/2013	08/27/13 20:55	
Indeno(1,2,3-cd)pyrene	ND	5.0	1.5	1	B3H0509	08/27/2013	08/27/13 20:55	
Naphthalene	ND	5.0	0.54	1	B3H0509	08/27/2013	08/27/13 20:55	
Phenanthrene	ND	5.0	0.63	1	B3H0509	08/27/2013	08/27/13 20:55	
Pyrene	ND	5.0	0.49	1	B3H0509	08/27/2013	08/27/13 20:55	
Surrogate: 1,2-Dichlorobenzene-d4	*69.6 %*	*28 - 96*			B3H0509	08/27/2013	*08/27/13 20:55*	
Surrogate: 2-Fluorobiphenyl	*72.6 %*	*36 - 113*			B3H0509	08/27/2013	*08/27/13 20:55*	
Surrogate: Nitrobenzene-d5	*77.0 %*	*29 - 106*			B3H0509	08/27/2013	*08/27/13 20:55*	
Surrogate: 4-Terphenyl-d14	*111 %*	*39 - 138*			B3H0509	08/27/2013	*08/27/13 20:55*	

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QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0501 - EPA 3050B									
Blank (B3H0501-BLK1)				Prepared: 8/27/2013 Analyzed: 8/27/2013					
Lead	ND	1.0			NR				
LCS (B3H0501-BS1)				Prepared: 8/27/2013 Analyzed: 8/27/2013					
Lead	46.3248	1.0	50.0000		92.6	80 - 120			
Matrix Spike (B3H0501-MS1)		**Source: 1302553-04**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
Lead	101.900	1.0	125.628	9.77072	73.3	51 - 106			
Matrix Spike Dup (B3H0501-MSD1)		**Source: 1302553-04**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
Lead	123.436	1.0	125.628	9.77072	90.5	51 - 106	19.1	20	

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QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0502 - EPA 3050B									
Blank (B3H0502-BLK1)				Prepared: 8/27/2013 Analyzed: 8/27/2013					
Lead	ND	1.0			NR				
LCS (B3H0502-BS1)				Prepared: 8/27/2013 Analyzed: 8/27/2013					
Lead	48.0110	1.0	50.0000		96.0	80 - 120			
Matrix Spike (B3H0502-MS1)		**Source: 1302581-19**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
Lead	107.541	1.0	125.000	4.32169	82.6	51 - 106			
Matrix Spike Dup (B3H0502-MSD1)		**Source: 1302581-19**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
Lead	105.488	1.0	125.000	4.32169	80.9	51 - 106	1.93	20	

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QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0501 - EPA 3050B									
Blank (B3H0501-BLK1)				Prepared: 8/27/2013 Analyzed: 8/27/2013					
Antimony	ND	2.0			NR				
Arsenic	ND	1.0			NR				
Barium	ND	1.0			NR				
Beryllium	ND	1.0			NR				
Cadmium	ND	1.0			NR				
Chromium	ND	1.0			NR				
Cobalt	ND	1.0			NR				
Copper	ND	2.0			NR				
Lead	ND	1.0			NR				
Molybdenum	ND	1.0			NR				
Nickel	ND	1.0			NR				
Selenium	ND	1.0			NR				
Silver	ND	1.0			NR				
Thallium	ND	1.0			NR				
Vanadium	ND	1.0			NR				
Zinc	ND	1.0			NR				
LCS (B3H0501-BS1)				Prepared: 8/27/2013 Analyzed: 8/27/2013					
Antimony	45.5193	2.0	50.0000		91.0	80 - 120			
Arsenic	45.1432	1.0	50.0000		90.3	80 - 120			
Barium	48.0044	1.0	50.0000		96.0	80 - 120			
Beryllium	47.5121	1.0	50.0000		95.0	80 - 120			
Cadmium	45.7351	1.0	50.0000		91.5	80 - 120			
Chromium	49.4383	1.0	50.0000		98.9	80 - 120			
Cobalt	47.0126	1.0	50.0000		94.0	80 - 120			
Copper	47.1274	2.0	50.0000		94.3	80 - 120			
Lead	46.3248	1.0	50.0000		92.6	80 - 120			
Molybdenum	48.1178	1.0	50.0000		96.2	80 - 120			
Nickel	46.5633	1.0	50.0000		93.1	80 - 120			
Selenium	43.7986	1.0	50.0000		87.6	80 - 120			
Silver	45.8586	1.0	50.0000		91.7	80 - 120			
Thallium	48.2531	1.0	50.0000		96.5	80 - 120			
Vanadium	47.0970	1.0	50.0000		94.2	80 - 120			
Zinc	43.5008	1.0	50.0000		87.0	80 - 120			
Matrix Spike (B3H0501-MS1)		**Source: 1302553-04**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
Antimony	69.9063	2.0	125.628	0.226140	55.5	21 - 109			
Arsenic	100.814	1.0	125.628	3.03102	77.8	55 - 102			
Barium	192.254	1.0	125.628	90.9634	80.6	40 - 130			
Beryllium	96.0923	1.0	125.628	0.221536	76.3	60 - 104			

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QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0501 - EPA 3050B (continued)									
Matrix Spike (B3H0501-MS1) - Continued		**Source: 1302553-04**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
Cadmium	87.5116	1.0	125.628	ND	69.7	52 - 100			
Chromium	123.462	1.0	125.628	23.0401	79.9	53 - 113			
Cobalt	97.4611	1.0	125.628	9.71019	69.8	53 - 104			
Copper	206.382	2.0	125.628	59.9777	117	51 - 122			
Lead	101.900	1.0	125.628	9.77072	73.3	51 - 106			
Molybdenum	98.9325	1.0	125.628	1.37564	77.7	55 - 103			
Nickel	117.558	1.0	125.628	26.4391	72.5	48 - 112			
Selenium	92.4710	1.0	125.628	ND	73.6	53 - 104			
Silver	100.127	1.0	125.628	ND	79.7	61 - 109			
Thallium	91.6812	1.0	125.628	0.446545	72.6	44 - 103			
Vanadium	132.364	1.0	125.628	32.1138	79.8	55 - 115			
Zinc	159.544	1.0	125.628	54.0052	84.0	24 - 130			
Matrix Spike Dup (B3H0501-MSD1)		**Source: 1302553-04**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
Antimony	82.3972	2.0	125.628	0.226140	65.4	21 - 109	16.4	20	
Arsenic	121.430	1.0	125.628	3.03102	94.2	55 - 102	18.6	20	
Barium	280.993	1.0	125.628	90.9634	151	40 - 130	37.5	20	M1, R
Beryllium	116.311	1.0	125.628	0.221536	92.4	60 - 104	19.0	20	
Cadmium	107.314	1.0	125.628	ND	85.4	52 - 100	20.3	20	R
Chromium	155.193	1.0	125.628	23.0401	105	53 - 113	22.8	20	R
Cobalt	118.463	1.0	125.628	9.71019	86.6	53 - 104	19.5	20	
Copper	169.293	2.0	125.628	59.9777	87.0	51 - 122	19.7	20	
Lead	123.436	1.0	125.628	9.77072	90.5	51 - 106	19.1	20	
Molybdenum	119.150	1.0	125.628	1.37564	93.7	55 - 103	18.5	20	
Nickel	143.080	1.0	125.628	26.4391	92.8	48 - 112	19.6	20	
Selenium	108.690	1.0	125.628	ND	86.5	53 - 104	16.1	20	
Silver	123.972	1.0	125.628	ND	98.7	61 - 109	21.3	20	R
Thallium	109.650	1.0	125.628	0.446545	86.9	44 - 103	17.8	20	
Vanadium	164.960	1.0	125.628	32.1138	106	55 - 115	21.9	20	R
Zinc	182.460	1.0	125.628	54.0052	102	24 - 130	13.4	20	

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QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0502 - EPA 3050B									
Blank (B3H0502-BLK1)				Prepared: 8/27/2013 Analyzed: 8/27/2013					
Antimony	ND	2.0			NR				
Arsenic	ND	1.0			NR				
Barium	ND	1.0			NR				
Beryllium	ND	1.0			NR				
Cadmium	ND	1.0			NR				
Chromium	ND	1.0			NR				
Cobalt	ND	1.0			NR				
Copper	ND	2.0			NR				
Lead	ND	1.0			NR				
Molybdenum	ND	1.0			NR				
Nickel	ND	1.0			NR				
Selenium	ND	1.0			NR				
Silver	ND	1.0			NR				
Thallium	ND	1.0			NR				
Vanadium	ND	1.0			NR				
Zinc	ND	1.0			NR				
LCS (B3H0502-BS1)				Prepared: 8/27/2013 Analyzed: 8/27/2013					
Antimony	47.0294	2.0	50.0000		94.1	80 - 120			
Arsenic	46.5678	1.0	50.0000		93.1	80 - 120			
Barium	49.5719	1.0	50.0000		99.1	80 - 120			
Beryllium	49.3620	1.0	50.0000		98.7	80 - 120			
Cadmium	47.8318	1.0	50.0000		95.7	80 - 120			
Chromium	51.0374	1.0	50.0000		102	80 - 120			
Cobalt	48.6570	1.0	50.0000		97.3	80 - 120			
Copper	48.8524	2.0	50.0000		97.7	80 - 120			
Lead	48.0110	1.0	50.0000		96.0	80 - 120			
Molybdenum	50.2258	1.0	50.0000		100	80 - 120			
Nickel	48.1922	1.0	50.0000		96.4	80 - 120			
Selenium	45.4041	1.0	50.0000		90.8	80 - 120			
Silver	47.3568	1.0	50.0000		94.7	80 - 120			
Thallium	50.1247	1.0	50.0000		100	80 - 120			
Vanadium	48.1473	1.0	50.0000		96.3	80 - 120			
Zinc	45.9998	1.0	50.0000		92.0	80 - 120			
Matrix Spike (B3H0502-MS1)		**Source: 1302581-19**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
Antimony	88.7987	2.0	125.000	0.334224	70.8	21 - 109			
Arsenic	104.171	1.0	125.000	1.39494	82.2	55 - 102			
Barium	125.460	1.0	125.000	17.2902	86.5	40 - 130			
Beryllium	107.258	1.0	125.000	0.251609	85.6	60 - 104			

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QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0502 - EPA 3050B (continued)									
Matrix Spike (B3H0502-MS1) - Continued		**Source: 1302581-19**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
Cadmium	105.214	1.0	125.000	0.05392	84.1	52 - 100			
Chromium	119.820	1.0	125.000	9.58718	88.2	53 - 113			
Cobalt	108.264	1.0	125.000	1.42811	85.5	53 - 104			
Copper	117.564	2.0	125.000	5.03998	90.0	51 - 122			
Lead	107.541	1.0	125.000	4.32169	82.6	51 - 106			
Molybdenum	107.528	1.0	125.000	0.201343	85.9	55 - 103			
Nickel	109.996	1.0	125.000	2.53968	86.0	48 - 112			
Selenium	100.114	1.0	125.000	ND	80.1	53 - 104			
Silver	108.811	1.0	125.000	ND	87.0	61 - 109			
Thallium	104.746	1.0	125.000	ND	83.8	44 - 103			
Vanadium	128.710	1.0	125.000	21.7620	85.6	55 - 115			
Zinc	122.310	1.0	125.000	14.6311	86.1	24 - 130			
Matrix Spike Dup (B3H0502-MSD1)		**Source: 1302581-19**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
Antimony	85.2999	2.0	125.000	0.334224	68.0	21 - 109	4.02	20	
Arsenic	101.462	1.0	125.000	1.39494	80.1	55 - 102	2.63	20	
Barium	118.422	1.0	125.000	17.2902	80.9	40 - 130	5.77	20	
Beryllium	105.014	1.0	125.000	0.251609	83.8	60 - 104	2.11	20	
Cadmium	99.5756	1.0	125.000	0.05392	79.6	52 - 100	5.51	20	
Chromium	113.422	1.0	125.000	9.58718	83.1	53 - 113	5.49	20	
Cobalt	102.623	1.0	125.000	1.42811	81.0	53 - 104	5.35	20	
Copper	111.438	2.0	125.000	5.03998	85.1	51 - 122	5.35	20	
Lead	105.488	1.0	125.000	4.32169	80.9	51 - 106	1.93	20	
Molybdenum	98.0801	1.0	125.000	0.201343	78.3	55 - 103	9.19	20	
Nickel	103.947	1.0	125.000	2.53968	81.1	48 - 112	5.65	20	
Selenium	97.2268	1.0	125.000	ND	77.8	53 - 104	2.93	20	
Silver	102.856	1.0	125.000	ND	82.3	61 - 109	5.63	20	
Thallium	101.267	1.0	125.000	ND	81.0	44 - 103	3.38	20	
Vanadium	121.997	1.0	125.000	21.7620	80.2	55 - 115	5.35	20	
Zinc	115.468	1.0	125.000	14.6311	80.7	24 - 130	5.76	20	

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QUALITY CONTROL SECTION

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0553 - EPA 7471									
Blank (B3H0553-BLK1)				Prepared: 8/28/2013 Analyzed: 8/28/2013					
Mercury	ND	0.10			NR				
LCS (B3H0553-BS1)				Prepared: 8/28/2013 Analyzed: 8/28/2013					
Mercury	0.791357	0.10	0.833333		95.0	80 - 120			
Matrix Spike (B3H0553-MS1)		**Source: 1302581-02**		Prepared: 8/28/2013 Analyzed: 8/28/2013					
Mercury	0.812980	0.10	0.833333	0.015021	95.8	70 - 130			
Matrix Spike Dup (B3H0553-MSD1)		**Source: 1302581-02**		Prepared: 8/28/2013 Analyzed: 8/28/2013					
Mercury	0.795502	0.10	0.833333	0.015021	93.7	70 - 130	2.17	20	
Post Spike (B3H0553-PS1)		**Source: 1302581-02**		Prepared: 8/28/2013 Analyzed: 8/28/2013					
Mercury	0.004890		5.00000E-3	0.000180	94.2	85 - 115			

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
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QUALITY CONTROL SECTION

Hydrocarbon Chain Distribution by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0499 - GCSEMI_DRO									
Blank (B3H0499-BLK1)				Prepared: 8/27/2013 Analyzed: 8/27/2013					
T/R Hydrocarbons: C8-C10	ND	10			NR				
T/R Hydrocarbons: C10-C18	ND	10			NR				
T/R Hydrocarbons: C18-C28	ND	10			NR				
T/R Hydrocarbons: C28-C36	ND	10			NR				
T/R Hydrocarbons: C36-C40	ND	10			NR				
T/R Hydrocarbons: C8-C40 Total (HS)	ND	10			NR				
Surrogate: p-Terphenyl	*73.51*		*80.0000*		*91.9*	*55 - 153*			
LCS (B3H0499-BS1)				Prepared: 8/27/2013 Analyzed: 8/27/2013					
DRO	1017.08	10	1000.00		102	65 - 151			
Surrogate: p-Terphenyl	*76.61*		*80.0000*		*95.8*	*55 - 153*			
Matrix Spike (B3H0499-MS1)		**Source: 1302581-22**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
DRO	1164.57	10	1000.00	ND	116	45 - 168			
Surrogate: p-Terphenyl	*85.79*		*80.0000*		*107*	*55 - 153*			
Matrix Spike Dup (B3H0499-MSD1)		**Source: 1302581-22**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
DRO	1182.02	10	1000.00	ND	118	45 - 168	1.49	20	
Surrogate: p-Terphenyl	*88.34*		*80.0000*		*110*	*55 - 153*			

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
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QUALITY CONTROL SECTION

Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0528 - GCSEMI_PCB/PEST									
Blank (B3H0528-BLK1)				Prepared: 8/28/2013 Analyzed: 8/28/2013					
4,4'-DDD	ND	2.0			NR				
4,4'-DDD [2C]	ND	2.0			NR				
4,4'-DDE	ND	2.0			NR				
4,4'-DDE [2C]	ND	2.0			NR				
4,4'-DDT	ND	2.0			NR				
4,4'-DDT [2C]	ND	2.0			NR				
Aldrin	ND	1.0			NR				
Aldrin [2C]	ND	1.0			NR				
alpha-BHC	ND	1.0			NR				
alpha-BHC [2C]	ND	1.0			NR				
alpha-Chlordane	ND	1.0			NR				
alpha-Chlordane [2C]	ND	1.0			NR				
beta-BHC	ND	1.0			NR				
beta-BHC [2C]	ND	1.0			NR				
Chlordane	ND	8.5			NR				
Chlordane [2C]	ND	8.5			NR				
delta-BHC	ND	1.0			NR				
delta-BHC [2C]	ND	1.0			NR				
Dieldrin	ND	2.0			NR				
Dieldrin [2C]	ND	2.0			NR				
Endosulfan I	ND	1.0			NR				
Endosulfan I [2C]	ND	1.0			NR				
Endosulfan II	ND	2.0			NR				
Endosulfan II [2C]	ND	2.0			NR				
Endosulfan sulfate	ND	2.0			NR				
Endosulfan Sulfate [2C]	ND	2.0			NR				
Endrin	ND	2.0			NR				
Endrin [2C]	ND	2.0			NR				
Endrin aldehyde	ND	2.0			NR				
Endrin aldehyde [2C]	ND	2.0			NR				
Endrin ketone	ND	2.0			NR				
Endrin ketone [2C]	ND	2.0			NR				
gamma-BHC	ND	1.0			NR				
gamma-BHC [2C]	ND	1.0			NR				
gamma-Chlordane	ND	1.0			NR				
gamma-Chlordane [2C]	ND	1.0			NR				
Heptachlor	ND	1.0			NR				
Heptachlor [2C]	ND	1.0			NR				
Heptachlor epoxide	ND	1.0			NR				
Heptachlor epoxide [2C]	ND	1.0			NR				

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego,CA 92123	Reported : 9/25/2013

QUALITY CONTROL SECTION

Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0528 - GCSEMI_PCB/PEST (continued)									
Blank (B3H0528-BLK1) - Continued				Prepared: 8/28/2013 Analyzed: 8/28/2013					
Methoxychlor	ND	5.0			NR				
Methoxychlor [2C]	ND	5.0			NR				
Toxaphene	ND	50			NR				
Toxaphene [2C]	ND	50			NR				
Surrogate: Decachlorobiphenyl	*10.37*		*16.6667*		*62.2*	*32 - 113*			
Surrogate: Decachlorobiphenyl [2C]	*11.26*		*16.6667*		*67.5*	*32 - 113*			
Surrogate: Tetrachloro-m-xylene	*11.46*		*16.6667*		*68.7*	*32 - 101*			
Surrogate: Tetrachloro-m-xylene [2C]	*11.29*		*16.6667*		*67.8*	*32 - 101*			
LCS (B3H0528-BS1)				Prepared: 8/28/2013 Analyzed: 8/28/2013					
4,4'-DDT	12.0903	2.0	16.6667		72.5	60 - 108			
4,4'-DDT [2C]	13.8113	2.0	16.6667		82.9	60 - 108			
Aldrin	12.6592	1.0	16.6667		76.0	57 - 111			
Aldrin [2C]	12.0685	1.0	16.6667		72.4	57 - 111			
Dieldrin	11.8433	2.0	16.6667		71.1	61 - 106			
Dieldrin [2C]	11.7780	2.0	16.6667		70.7	61 - 106			
Endrin	12.5257	2.0	16.6667		75.2	57 - 97			
Endrin [2C]	12.6215	2.0	16.6667		75.7	57 - 97			
gamma-BHC	13.5828	1.0	16.6667		81.5	61 - 109			
gamma-BHC [2C]	13.4043	1.0	16.6667		80.4	61 - 109			
Heptachlor	14.7767	1.0	16.6667		88.7	58 - 115			
Heptachlor [2C]	16.4642	1.0	16.6667		98.8	58 - 115			
Surrogate: Decachlorobiphenyl	*11.19*		*16.6667*		*67.2*	*32 - 113*			
Surrogate: Decachlorobiphenyl [2C]	*11.81*		*16.6667*		*70.8*	*32 - 113*			
Surrogate: Tetrachloro-m-xylene	*12.62*		*16.6667*		*75.7*	*32 - 101*			
Surrogate: Tetrachloro-m-xylene [2C]	*12.94*		*16.6667*		*77.6*	*32 - 101*			
Matrix Spike (B3H0528-MS1)		**Source: 1302581-19**		Prepared: 8/28/2013 Analyzed: 8/28/2013					
4,4'-DDT	16.1120	2.0	16.6667	ND	96.7	26 - 133			
4,4'-DDT [2C]	18.1945	2.0	16.6667	ND	109	26 - 133			
Aldrin	15.8102	1.0	16.6667	ND	94.9	38 - 119			
Aldrin [2C]	15.6835	1.0	16.6667	ND	94.1	38 - 119			
Dieldrin	16.3482	2.0	16.6667	1.46033	89.3	30 - 120			
Dieldrin [2C]	16.3330	2.0	16.6667	1.14633	91.1	30 - 120			
Endrin	15.4843	2.0	16.6667	ND	92.9	30 - 114			
Endrin [2C]	16.2322	2.0	16.6667	ND	97.4	30 - 114			
gamma-BHC	16.7697	1.0	16.6667	ND	101	31 - 122			
gamma-BHC [2C]	17.0062	1.0	16.6667	ND	102	31 - 122			
Heptachlor	18.7450	1.0	16.6667	ND	112	38 - 123			
Heptachlor [2C]	21.1547	1.0	16.6667	ND	127	38 - 123			M2

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego,CA 92123	Reported : 9/25/2013

QUALITY CONTROL SECTION

Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0528 - GCSEMI_PCB/PEST (continued)									
Matrix Spike (B3H0528-MS1) - Continued		**Source: 1302581-19**		Prepared: 8/28/2013 Analyzed: 8/28/2013					
Surrogate: Decachlorobiphenyl	*14.03*		*16.6667*		*84.2*	*32 - 113*			
Surrogate: Decachlorobiphenyl [2C]	*15.55*		*16.6667*		*93.3*	*32 - 113*			
Surrogate: Tetrachloro-m-xylene	*14.63*		*16.6667*		*87.8*	*32 - 101*			
Surrogate: Tetrachloro-m-xylene [2C]	*16.43*		*16.6667*		*98.6*	*32 - 101*			
Matrix Spike Dup (B3H0528-MSD1)		**Source: 1302581-19**		Prepared: 8/28/2013 Analyzed: 8/28/2013					
4,4'-DDT	14.7760	2.0	16.6667	ND	88.7	26 - 133	8.65	20	
4,4'-DDT [2C]	16.9168	2.0	16.6667	ND	102	26 - 133	7.28	20	
Aldrin	14.9977	1.0	16.6667	ND	90.0	38 - 119	5.27	20	
Aldrin [2C]	14.9115	1.0	16.6667	ND	89.5	38 - 119	5.05	20	
Dieldrin	15.2628	2.0	16.6667	1.46033	82.8	30 - 120	6.87	20	
Dieldrin [2C]	15.4732	2.0	16.6667	1.14633	86.0	30 - 120	5.41	20	
Endrin	14.6655	2.0	16.6667	ND	88.0	30 - 114	5.43	20	
Endrin [2C]	15.4535	2.0	16.6667	ND	92.7	30 - 114	4.91	20	
gamma-BHC	16.1920	1.0	16.6667	ND	97.2	31 - 122	3.51	20	
gamma-BHC [2C]	16.2407	1.0	16.6667	ND	97.4	31 - 122	4.60	20	
Heptachlor	17.9097	1.0	16.6667	ND	107	38 - 123	4.56	20	
Heptachlor [2C]	20.0807	1.0	16.6667	ND	120	38 - 123	5.21	20	
Surrogate: Decachlorobiphenyl	*12.52*		*16.6667*		*75.1*	*32 - 113*			
Surrogate: Decachlorobiphenyl [2C]	*14.28*		*16.6667*		*85.7*	*32 - 113*			
Surrogate: Tetrachloro-m-xylene	*14.21*		*16.6667*		*85.2*	*32 - 101*			
Surrogate: Tetrachloro-m-xylene [2C]	*14.35*		*16.6667*		*86.1*	*32 - 101*			

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego,CA 92123	Reported : 9/25/2013

QUALITY CONTROL SECTION

Semivolatile Organic Compounds by EPA 8270/SIM - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0509 - MSSEMI_ISOTOPEDILN									
Blank (B3H0509-BLK1)				Prepared: 8/27/2013 Analyzed: 8/27/2013					
2-Methylnaphthalene	ND	5.0			NR				
Acenaphthene	ND	5.0			NR				
Acenaphthylene	ND	5.0			NR				
Anthracene	ND	5.0			NR				
Benzo(a)anthracene	ND	5.0			NR				
Benzo(a)pyrene	ND	5.0			NR				
Benzo(b)fluoranthene	ND	5.0			NR				
Benzo(g,h,i)perylene	ND	5.0			NR				
Benzo(k)fluoranthene	ND	5.0			NR				
Chrysene	ND	5.0			NR				
Dibenz(a,h)anthracene	ND	5.0			NR				
Fluoranthene	ND	5.0			NR				
Fluorene	ND	5.0			NR				
Indeno(1,2,3-cd)pyrene	ND	5.0			NR				
Naphthalene	ND	5.0			NR				
Phenanthrene	ND	5.0			NR				
Pyrene	ND	5.0			NR				
Surrogate: 1,2-Dichlorobenzene-d4	*21.46*		*33.3333*		*64.4*	*28 - 96*			
Surrogate: 2-Fluorobiphenyl	*14.94*		*33.3333*		*44.8*	*36 - 113*			
Surrogate: Nitrobenzene-d5	*26.17*		*33.3333*		*78.5*	*29 - 106*			
Surrogate: 4-Terphenyl-d14	*33.26*		*33.3333*		*99.8*	*39 - 138*			
LCS (B3H0509-BS1)				Prepared: 8/27/2013 Analyzed: 8/27/2013					
Acenaphthene	24.4153	5.0	33.3333		73.2	50 - 93			
Phenanthrene	26.6273	5.0	33.3333		79.9	46 - 98			
Pyrene	31.8883	5.0	33.3333		95.7	52 - 112			
Surrogate: 1,2-Dichlorobenzene-d4	*22.85*		*33.3333*		*68.5*	*28 - 96*			
Surrogate: 2-Fluorobiphenyl	*23.13*		*33.3333*		*69.4*	*36 - 113*			
Surrogate: Nitrobenzene-d5	*25.54*		*33.3333*		*76.6*	*29 - 106*			
Surrogate: 4-Terphenyl-d14	*32.77*		*33.3333*		*98.3*	*39 - 138*			
Matrix Spike (B3H0509-MS1)		**Source: 1302581-19**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
Acenaphthene	26.3007	5.0	33.3333	ND	78.9	45 - 103			
Phenanthrene	27.7783	5.0	33.3333	ND	83.3	43 - 115			
Pyrene	29.9390	5.0	33.3333	ND	89.8	49 - 125			
Surrogate: 1,2-Dichlorobenzene-d4	*22.23*		*33.3333*		*66.7*	*28 - 96*			
Surrogate: 2-Fluorobiphenyl	*24.59*		*33.3333*		*73.8*	*36 - 113*			
Surrogate: Nitrobenzene-d5	*30.06*		*33.3333*		*90.2*	*29 - 106*			
Surrogate: 4-Terphenyl-d14	*35.48*		*33.3333*		*106*	*39 - 138*			

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego,CA 92123	Reported : 9/25/2013

QUALITY CONTROL SECTION

Semivolatile Organic Compounds by EPA 8270/SIM - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3H0509 - MSSEMI_ISOTOPEDILN (continued)									
Matrix Spike Dup (B3H0509-MSD1)		**Source: 1302581-19**		Prepared: 8/27/2013 Analyzed: 8/27/2013					
Acenaphthene	27.3473	5.0	33.3333	ND	82.0	45 - 103	3.90	20	
Phenanthrene	28.9180	5.0	33.3333	ND	86.8	43 - 115	4.02	20	
Pyrene	32.3383	5.0	33.3333	ND	97.0	49 - 125	7.71	20	
Surrogate: 1,2-Dichlorobenzene-d4	*24.18*		*33.3333*		*72.5*	*28 - 96*			
Surrogate: 2-Fluorobiphenyl	*25.78*		*33.3333*		*77.3*	*36 - 113*			
Surrogate: Nitrobenzene-d5	*31.65*		*33.3333*		*94.9*	*29 - 106*			
Surrogate: 4-Terphenyl-d14	*40.18*		*33.3333*		*121*	*39 - 138*			

Ninyo & Moore	Project Number : Clairemont HS BS, 105338077
5710 Ruffin Road	Report To : Lisa Bestard
San Diego,CA 92123	Reported : 9/25/2013

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
D6	Sample required dilution due to high concentration of target analyte.
D5	Sample diluted due to failing internal standard in the original run.
D1	Sample required dilution due to possible matrix interference.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 2

* broken glass in same container

Instruction: Complete all shaded areas.

For Laboratory Use Only					ATLCOC Ver: 20130715
Method of Transport	Sample Conditions Upon Receipt				
	Condition	Y	N	Condition	Y / N
☐ Client ☑ ATL ☐ FedEx ☐ OnTrac ☐ GSO ☐ Other:	1. CHILLED	☑	☐	5. # OF SAMPLES MATCH COC	☐ ☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐ ☐
	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C: 4.4	
	4. SEALED	☐	☐		

CUSTOMER

Company: Ninyo & Moore
Address: 5710 Ruffin Rd
City: San Diego State: CA Zip: 92123
Tel: 858 576-1000
Fax:

SEND REPORT TO:
Attn: Lisa Bestard
Email: LBestard@NinyoandMoore.com
Company: Ninyo & Moore
Address: 5710 Ruffin Rd
City: San Diego CA State: CA Zip: 92123

SEND INVOICE TO: ☑ Same as SEND REPORT TO
Attn:
Email:
Company: Same as Report
Address:
City: State: Zip:

PROJECT SAMPLES

Project Name: Clairemont H.S.
Project No.: 1053380088
Sampler: BMC/BAD
Quote No:
PO #:
Special Instructions/Comments: otherwise have metal/total lead results we will assign TPH, PAH, OCP on highest metal concentration

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals); TO-15; 6010B/7471B Title 22; 6010B Lead

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE/ FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

Container: # ; Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Liter; 6=Jar; 7 = Canister; Material: 1=Glass; 2=Plastic; 3=Metal; Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4 = 4C; 5=Zn (Ac)2; 6=NaOH; 7=NaOH2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

ITEM	Lab No.	Sample Description: Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	6010B/7471B Title 22	6010B Lead	TAT	Container #	Type	Material	Preservative	REMARKS
1	1302545 - 1	T-12-S	08.20.13									X	X		5					
2	-2	T-12-0.5																		
3	-3	T-12-2											X							
4	-4	T-12-4																		
5	-5	T-12-9.5											X							
6	-6	T-12-11.5																		
7	-7	T-12-15																		
8	-8	T-12-16																		
9	-9	T-13-S											X							
10	-10	T-13-2										X	X							

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab -- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for fi ve (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-fi ve (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
[signature]	8/21/13	1230	[signature] Edward Rodriguez	8-21-13	13:20
[signature] Edward Rodriguez	8-21-13	1717	[signature]	8/21/13	1717

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 2 of 2

*Broken glass in containers

Instruction: Complete all shaded areas.

For Laboratory Use Only					ATLCOC Ver: 20130715
Method of Transport	Sample Conditions Upon Receipt				
	Condition	Y	N	Condition	Y / N
☐ Client ☐ ATL	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐ ☐
☐ FedEx ☐ OnTrac	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐ ☐
☐ GSO	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:	
☐ Other: _____	4. SEALED	☐	☐		

CUSTOMER

Company: Ninyo & Moore
Address: 8710 Ruffin Rd
City: San Diego
State: CA
Zip: 92123
Tel: 858 576-1000
Fax: 858 576-9600

SEND REPORT TO:
Attn: Lisa Bestard
Email: LBestard@NinyoandMoore.com
Company: Ninyo & Moore
Address: 8710 Ruffin Rd
City: San Diego
State: CA
Zip: 92104

SEND INVOICE TO: ☒ same as SEND REPORT TO
Attn:
Email:
Company:
Address:
City:
State:
Zip:

PROJECT SAMPLES

Project Name: Clairmont H.S.
Project No.: 105338088
Sampler: BAB/BMC
Quote No:
PO #:
Special Instructions/Comments:

Encircle or Write Requested Analysis

ITEM	Lab No.	Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	6010B/7471A Title 22	6010B Cd	TPH	TAT	Container #	Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Bladder; 7=Canister	Material: 1=glass; 2=plastic; 3=Metal	Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn (Ac)2; 6=NaOH; 7=NaHSO3	REMARKS
1	1302545 -11	T-13-4	08.20.13											X		5					
2	-12	T-13-7.5																			
3	-13	T-14-0.5											X								
4	-14	T-14-5.5												X							
5	-15	T-14-10		16:00																	
6	-16	T-14-15		16:25																	
7	-17	T-14-21		16:30									X								
8																					
9																					
10																					

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE/ FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

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11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
[signature]	8/21/13	1230	[signature] Edwardo Rodriguez	8-21-13	13:15
[signature] Edward Rodriguez	8-21-13	1717	[signature] FEDEX	8/21/13	1717
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

broken glass in some containers

Page 1 of 2

Instruction: Complete all shaded areas.

For Laboratory Use Only			ATLCOC Ver: 20130715
Method of Transport	Sample Conditions Upon Receipt		
	Condition	Y	N
☑ Client ☑ ATL	1. CHILLED	☑	☐
☐ FedEx ☐ OnTrac	2. HEADSPACE (VOA)	☐	☐
☐ GSO	3. CONTAINER INTACT	☐	☐
☐ Other:	4. SEALED	☐	☐
	Condition	Y	N
	5. # OF SAMPLES MATCH COC	☐	☐
	6. PRESERVED	☐	☐
	7. COOLER TEMP, deg C: 4.8		

CUSTOMER

Company: Ninyo & Moore
Address: 5710 Ruffin Road
City: San Diego State: CA Zip: 92123
Tel: 858 576-1000 Fax: 858 576-9600

SEND REPORT TO:
Attn: Lisa Bestard Email: LBestard@NinyoandMoore.com
Company: Ninyo and Moore
Address: 5710 Ruffin Rd
City: San Diego State: CA Zip: 92123

SEND INVOICE TO: ☑ same as SEND REPORT TO
Attn: Same as Report Email:
Company:
Address:
City: State: Zip:

PROJECT SAMPLES

Project Name: Clairmont H.S.
Project No.: 105338088
Sampler: BAB/BMC
Quote No:
PO #: metal
Special Instructions/Comments: after we have metal and lead results we will assign TPH, PAH, OCPs on highest concentrations

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals); TO-15; 6010B / 7470 Title 22; 6010B lead

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE/ FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

ITEM	Lab No.	Sample ID / Location	Date	Time	8260 / 624	8015(GRO)	8015(DRO)	8270	8081	8082	6010 / 7000	TO-15	6010B / 7470	6010B lead	TAT	Container #	Type	Material	Preservative	REMARKS
1	1302547-1	T-15-0.5	08/21/13	720											5					
2	-2	T-15-4		740									X							
3	-3	T-15-8		800																
4	-4	T-15-11		815																
5	-5	T-15-14		845									X	X BAB 08.21.13						
6	-6	T-15-19		900																
7	-7	T-15-2		1004									X							
8	-8	T-16-5		1045										X						
9	-9	T-16-2		1050										X						
10	-10	T-16-5		1100																

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Bottle; 7=Canister
Material: 1=Glass; 2=Plastic; 3=Metal
Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn (Ac)2; 6=NaOH; 7=NaHSO3

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for fi ve (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-fi ve (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Brianne Cartright	8/21/13	1230	Edward Rodriguez	8-21-13	13:20
Edward Rodriguez	8-21-13	1717		8/21/13	1717

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 2 of 2

☆ Caution broken glass in some containers

Instruction: Complete all shaded areas.

For Laboratory Use Only					ATLCOC Ver: 20130715
Method of Transport	Sample Conditions Upon Receipt				
	Condition	Y	N	Condition	Y / N
☐ Client ☐ ATL ☐ FedEx ☐ OnTrac ☐ GSO ☐ Other:	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐ ☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐ ☐
	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:	
	4. SEALED	☐	☐		

CUSTOMER

Company: Ninyo & Moore
Address: 5710 Ruffin Rd
City: San Diego State: CA Zip: 92123
Tel: 858 576-1000 Fax: 858 576-9600

SEND REPORT TO:
Attn: Lisa Bestard
Email: LBestard@NinyoandMoore.com
Company: Ninyo & Moore
Address: 5710 Ruffin Rd
City: San Diego State: CA Zip: 92104

SEND INVOICE TO: ☒ Same as SEND REPORT TO
Attn:
Email:
Company:
Address:
City: State: Zip:

PROJECT SAMPLES

Project Name: Clairmont H.S.
Project No.: 105338088
Sampler: BAB/BME
Quote No:
PO #:
Special Instructions/Comments:

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals); TO-15; 6010B/7471A Title 22 metals; 6010B Total lead

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE/ FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

ITEM	Lab No.	Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles)	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	6010B/7471A Title 22 metals	6010B Total lead	TAT	#	Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Pedlar; 7=Canister	Material: 1=Glass; 2=Plastic; 3=Metal	Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn (Ac)2; 6=NaOH; 7=NAS2O3	REMARKS
1	1302547-11	T-16-9	08.21.13	11:07									X		5					
2	↓ -12	T-16-12	↓	11:40									X		↓					
3	↓ -13	T-16-13	↓	11:50									X		↓					
4																				
5																				
6																				
7																				
8																				
9																				
10																				

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
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   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
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8. Hard copy reports will be disposed of after 45 calendar days from report date.
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   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Brianne Cerbolt	8/21/13	1230	Edward Rodriguez	8-21-13	13:20
Edward Rodriguez	8-21-13	1717	FPOWA	8/21/13	1717

Rachelle Arada

From: Lisa Bestard [lbestard@ninyoandmoore.com]
Sent: Friday, August 30, 2013 5:01 PM
To: Rachelle Arada
Subject: FW: Results - Clairemont HS BS, 105338077 (ATL# 1302581)

Importance: High

Please see request for additional analyses below.
-----Original Message-----
From: Beth Abramson-Beck
Sent: Friday, August 30, 2013 4:58 PM
To: Lisa Bestard
Subject: RE: Results - Clairemont HS BS, 105338077 (ATL# 1302581)
Importance: High

Hello Rachelle,

Please analyze the following **seven samples** for

TPH C8-C40 8015(M) B

polynuclear aromatic hydrocarbons (PAHs) 8270C

organochlorine pesticides 8081A

T-12-9.5
T-13-4
T-14-21
T-15-14
T-16-9
T-12-S
T-16-12

Please analyze the **two highest lead samples** for dioxin and furans by 8290
T-12-9.5
T-15-14

Please analyze the **four highest lead samples** with the highest lead concentrations by DI WET for lead

T-12-9.5
T-14-21
T-15-14
T-16-9

We need a Level III Data Validation Package to accompany this report

Beth S.Abramson-Beck, P.G. 4580
Principal Geologist

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 3

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport	Sample Conditions Upon Receipt	Y	N	Condition	Y	N
☐ Client ☒ ATL	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ OnTrac	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
☐ Other:	4. SEALED	☐	☐			

CUSTOMER

Company: Ninyo & Moore — Address: — City: — State: — Zip: — Tel: — Fax:

SEND REPORT TO:
Attn: Lisa Bestard — Email: lbestard@ninyoandmoore.com
Company: Ninyo & Moore
Address: 5710 Ruffin Road
City: San Diego — State: CA — Zip: 92121

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: — Email:
Company:
Address:
City: — State: — Zip:

PROJECT SAMPLES

Project Name: Clairemont HS BS
Project No.: 105338077
Sampler: BAB/BR
Quote No:
PO #:

Special Instructions/Comments: additional analyses for TPH, PAH & OCP on highest lead metals. - N&M will assign after initial results

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals); TO-15; 6010B/7471A; 6010B

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE / FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

TAT; Container: #; Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7=Canister; Material: 1=Glass; 2=Plastic; 3=Metal; Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn(Ac)2; 6=NaOH; 7=NA2S2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

ITEM	Lab No.	Sample ID / Location	Date	Time	6010B/7471A	6010B	REMARKS
1	1302581 -1	T-17-0.5		13:50	X	X	
2	-2	T-17-1.5		14:05	X	X	
3	-3	T-17-5		14:30		X	
4	-4	T-18-0.5		15:15	X	X	
5	-5	T-18-3		15:30		X	
6	-6	T-18-5.5		15:50		X	
7	-7	T-19-1		8:29	X	X	
8	-8	T-19-3.5		8:46		X	
9	-9	T-19-7		9:00		X	
10	-10	T-20-1		10:05		X	

TERMS

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3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
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6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
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   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name — Signature

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
[signature]			[signature] Edward Rodriguez	8-23-13	11:25
[signature] Edward Rodriguez	8-23-13	16:10	[signature]	8/23/13	16:10

ADVANCED TECHNOLOGY LABORATORIES

3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 2 of 3

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport	Sample Conditions Upon Receipt: Condition	Y	N	Condition	Y	N
☐ Client ☒ ATL ☐ FedEx ☐ OnTrac ☐ GSO ☐ Other:	1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
	4. SEALED	☐	☐			

CUSTOMER

Company: Ninyo & Moore
Address:
City:
State:
Zip:
Tel:
Fax:

SEND REPORT TO:
Attn: Lisa Bestard
Email: lbestard@ninyoandmoore.com
Company: Ninyo & Moore
Address: 5710 Ruffin Road
City: San Diego
State: CA
Zip: 92123

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: [redacted] Bestard
Email:
Company: Ninyo & Moore
Address:
City: SD
State:
Zip:

PROJECT SAMPLES

Project Name: Claremont HS
Project No.: 105338-077
Sampler: BAB
Quote No:
PO #:
Special Instructions/Comments: additional analyses for TPH, PAH, OCP on highest total metals/lead. NeM will assign after initial results

Encircle or Write Requested Analysis

ITEM	Lab No.	Sample ID / Location	Date	Time	8260 / 624 (Volatiles)	8015(GRO)	8015(DRO)	8270(Semi-volatiles) PAH's	8081(Organochlorine Pesticides)	8082(PCBs)	6010 / 7000(Title 22 Metals)	TO-15	Lead (6010) total Lead	TPH-CA-LUFT	Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	Container #	Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Vial; 7=Canister	Material: 1=Glass; 2=Plastic; 3=Metal	Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn (Ac)2; 6=NaOH; 7=NaAsO2	QA/QC ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV	REMARKS
1	1302581 -11	T-20-3.5	08.22.13	10:20								X														
2	-12	T-20-6.5		10:35									X													
3	-13	T-21-1		12:09								X														
4	-14	T-21-2		12:50									X													
5	-15	T-22-1	14:50	14:50				X	X			X		X												
6	DUP	~~T-22-1D~~		~~14:50~~				X	X			X		X												
7	-16	T-22-4.5		15:22									X													
8	-17	T-22-7		15:40									X													
9	-18	T-23-1		16:37									X													
10	-19	T-23-3		16:42				X	X			X		X												

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
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   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
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As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name _____ Signature _____

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
[signature]	08.22.13		[signature] Edward Rodriguez	8-23-13	11:25
[signature] Edward Rodriguez	8-23-13	16:10	[signature] FEDEX	8/23/13	1610
[signature]					

CHAIN OF CUSTODY RECORD

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

P.O.#: _____ Quote #: _____
Logged By: _____ Date: _____
NOTE: Please include your Quote No. to ensure proper pricing of your project.

FOR LABORATORY USE ONLY:

Method of Transport: ☐ Client ☒ ATL ☐ FedEx ☐ OnTrac ☐ GSO ☐ Other: _____

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☐ 4. SEALED Y☐ N☐
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☐ N☐
3. CONTAINER INTACT Y☐ N☐ 6. PRESERVED Y☐ N☐

Client: Attn: Ninyo & Moore
Address: 5710 Ruffin Road
City: San Diego State: CA Zip Code: 92123
TEL: FAX:
Project Name: Clairemont HS Project #: 105338077 Sampler: BAB (Printed Name) (Signature)

Relinquished by: (Signature and Printed Name)	Date: 08.22.13	Time:	Received by: (Signature and Printed Name) Edward Rodriguez	Date: 8-23-13	Time: 11:25
Relinquished by: (Signature and Printed Name) Edward Rodriguez	Date: 8-23-13	Time: 16:10	Received by: (Signature and Printed Name)	Date: 8/23/13	Time: 1610
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: _____ Print Name _____ Date _____ Signature

Send Report To: Attn: LISA Bestard; Co: Ninyo & Moore; Addr: 5710 Ruffin Rd; City: SD State: CA Zip: 92123

Bill To: Attn: _____ Co: SAME Addr: _____ City: _____ State: _____ Zip: _____

Special Instructions/Comments: additional analyses for TPH, PAH, OCP on highest total metals/lead. Nom will assign a flex initial results

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.
Storage Fees (applies when storage is requested):
- Sample : $2.00 / sample / mo (after 45 days)
- Records : $1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D. / Location	Date	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (BNA) PAHs	8010B (Total Metal)	8015B (GRO) / 8021 (BTEX)	8015B (DRO)	TITLE 22 / CAM 17 (6010 / 7000) Lead 6010B only	TPH C8-C40	SEDIMENT	SOLID	SOIL	DRINKING WATER	GROUND WATER	WASTEWATER	STORMWATER	AQUEOUS	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
	BAB	~~T-23 3D~~	08.22.13	16:14	X		X				X	X														
	1302181-20	T-23 8	08.22.13	17:00								X														
	BAB	~~DUP-1~~																								
	-21	DUP-2			X		X				X	X	X													
	-22	DUP-1			X		X				X	X	X													

QA/QC: RTNE ☐ CT ☐ Legal ☐ SWRCB ☐ Logcode ____ OTHER ____

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: ☐A= Overnight ≤ 24 hrs ☐B= Emergency Next workday ☐C= Critical 2 Workdays ☐D= Urgent 3 Workdays ☐E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=Hcl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Rev. 2010-0325

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

Rachelle Arada

From: Lisa Bestard [lbestard@ninyoandmoore.com]
Sent: Friday, August 30, 2013 5:01 PM
To: Rachelle Arada
Subject: FW: Results - Clairemont HS BS, 105338077 (ATL# 1302581)

Importance: High

Please see request for additional analyses below.
-----Original Message-----
From: Beth Abramson-Beck
Sent: Friday, August 30, 2013 4:58 PM
To: Lisa Bestard
Subject: RE: Results - Clairemont HS BS, 105338077 (ATL# 1302581)
Importance: High

Hello Rachelle,

Please analyze the following **seven samples** for

TPH C8-C40 8015(M) B

polynuclear aromatic hydrocarbons (PAHs) 8270C

organochlorine pesticides 8081A

T-12-9.5
T-13-4
T-14-21
T-15-14
T-16-9
T-12-S
T-16-12

Please analyze the **two highest lead samples** for dioxin and furans by 8290
T-12-9.5
T-15-14

Please analyze the **four highest lead samples** with the highest lead concentrations by DI WET for lead

T-12-9.5
T-14-21
T-15-14
T-16-9

We need a Level III Data Validation Package to accompany this report

Beth S.Abramson-Beck, P.G. 4580
Principal Geologist

ADVANCED TECHNOLOGY LABORATORIES

Sample Receipt Acknowledgement

Work Order # 1302545

Client:	**Ninyo & Moore - SD**	**Project Manager:**	**Rachelle Arada**
Project:	**CLAIREMONT H.S., 105338071 & 105338088**	**Project Number:**	**CLAIREMONT H.S., 105338088**

Report To:	**Invoice To:**
Ninyo & Moore - SD	Ninyo & Moore - SD
Lisa Bestard	Lisa Bestard
5710 Ruffin Road	5710 Ruffin Road
San Diego, CA 92123	San Diego, CA 92123
Phone: (858) 576-1000	Phone :(858) 576-1000
Fax: (858) 576-9600	Fax: (858) 576-9600

Date Due:	08/28/13 17:00 (5 day TAT)	Date Received:	08/21/13 13:20
Received By:	**Ron Diwa**	**Date Logged In:**	**08/22/13 10:43**
Logged In By:	Ron Diwa	Shipped by:	ATL

Please review the checklist below. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues. If you have any questions or further instructions, please contact your Project Manager at (526) 989-4045.

Sample(s) received on ice?	**Yes**	☐	**No**	☑
Sample(s) received on blue ice?	**Yes**	☑	**No**	☐
Cooler temperature within acceptance limit?	**Yes**	☑	**No**	☐
Shipping container received in good condition?	**Yes**	☑	**No**	☐
Custody seals present on shipping container?	**Yes**	☐	**No**	☑
Custody seals intact on shipping container?	**Yes**	☐	**No**	☑
Custody seals present on sample bottles?	**Yes**	☐	**No**	☑
Custody seals intact on sample bottles?	**Yes**	☐	**No**	☑
Chain of Custody (COC) present?	**Yes**	☑	**No**	☐
Sampler name present in COC?	**Yes**	☑	**No**	☐
COC signed when relinquished and received?	**Yes**	☑	**No**	☐
COC agrees with sample labels?	Yes	☑	No	☐
Samples in proper container/bottle?	Yes	☑	No	☐
Sample containers intact?	Yes	☑	No	☐
Sufficient sample amount for indicated tests?	Yes	☑	No	☐
All samples received within holding time?	Yes	☑	No	☐
VOA vials for VOC meet headspace criteria?	Yes	☐	No	☑
Water samples meet preservation criteria?	Yes	☐	No	☑

Default Cooler	Temp: 4.8 °C

Sample Receipt Comments:

ADVANCED TECHNOLOGY LABORATORIES

Sample Receipt Acknowledgement

Work Order # 1302547

Client:	Ninyo & Moore - SD	**Project Manager:**	Rachelle Arada
Project:	CLAIREMONT H.S., 105338071 & 105338088	**Project Number:**	CLAIREMONT H.S., 105338088

Report To:	**Invoice To:**
Ninyo & Moore - SD	Ninyo & Moore - SD
Lisa Bestard	Lisa Bestard
5710 Ruffin Road	5710 Ruffin Road
San Diego, CA 92123	San Diego, CA 92123
Phone: (858) 576-1000	Phone :(858) 576-1000
Fax: (858) 576-9600	Fax: (858) 576-9600

Date Due:	08/28/13 17:00 (5 day TAT)	Date Received:	08/21/13 13:20
Received By:	Ron Diwa	Date Logged In:	08/22/13 11:03
Logged In By:	Ron Diwa	Shipped by:	ATL

Please review the checklist below. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues. If you have any questions or further instructions, please contact your Project Manager at (526) 989-4045.

Sample(s) received on ice?	Yes	☐	No	☑
Sample(s) received on blue ice?	Yes	☑	No	☐
Cooler temperature within acceptance limit?	Yes	☑	No	☐
Shipping container received in good condition?	Yes	☑	No	☐
Custody seals present on shipping container?	Yes	☐	No	☑
Custody seals intact on shipping container?	Yes	☐	No	☑
Custody seals present on sample bottles?	Yes	☐	No	☑
Custody seals intact on sample bottles?	Yes	☐	No	☑
Chain of Custody (COC) present?	Yes	☑	No	☐
Sampler name present in COC?	Yes	☑	No	☐
COC signed when relinquished and received?	Yes	☑	No	☐
COC agrees with sample labels?	Yes	☑	No	☐
Samples in proper container/bottle?	Yes	☑	No	☐
Sample containers intact?	Yes	☑	No	☐
Sufficient sample amount for indicated tests?	Yes	☑	No	☐
All samples received within holding time?	Yes	☑	No	☐
VOA vials for VOC meet headspace criteria?	Yes	☐	No	☑
Water samples meet preservation criteria?	Yes	☐	No	☑

Default Cooler	Temp: 4.8 °C

Sample Receipt Comments:

ADVANCED TECHNOLOGY LABORATORIES

Sample Receipt Acknowledgement

Work Order # 1302581

Client:	Ninyo & Moore - SD	Project Manager:	Rachelle Arada
Project:	CLAIREMONT H.S., 105338071 & 105338088	Project Number:	CLAIREMONT HS BS, 105338077

Report To:
Ninyo & Moore - SD
Lisa Bestard
5710 Ruffin Road
San Diego, CA 92123
Phone: (858) 576-1000
Fax: (858) 576-9600

Invoice To:
Ninyo & Moore - SD
Lisa Bestard
5710 Ruffin Road
San Diego, CA 92123
Phone :(858) 576-1000
Fax: (858) 576-9600

Date Due:	08/30/13 17:00 (5 day TAT)	Date Received:	08/23/13 11:25
Received By:	Ron Diwa	Date Logged In:	08/23/13 17:30
Logged In By:	Ron Diwa	Shipped by:	ATL

Please review the checklist below. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues. If you have any questions or further instructions, please contact your Project Manager at (526) 989-4045.

Sample(s) received on ice?	Yes	☐	No	☑
Sample(s) received on blue ice?	Yes	☑	No	☐
Cooler temperature within acceptance limit?	Yes	☑	No	☐
Shipping container received in good condition?	Yes	☑	No	☐
Custody seals present on shipping container?	Yes	☐	No	☑
Custody seals intact on shipping container?	Yes	☐	No	☑
Custody seals present on sample bottles?	Yes	☐	No	☑
Custody seals intact on sample bottles?	Yes	☐	No	☑
Chain of Custody (COC) present?	Yes	☑	No	☐
Sampler name present in COC?	Yes	☑	No	☐
COC signed when relinquished and received?	Yes	☑	No	☐
COC agrees with sample labels?	Yes	☑	No	☐
Samples in proper container/bottle?	Yes	☑	No	☐
Sample containers intact?	Yes	☑	No	☐
Sufficient sample amount for indicated tests?	Yes	☑	No	☐
All samples received within holding time?	Yes	☑	No	☐
VOA vials for VOC meet headspace criteria?	Yes	☐	No	☑
Water samples meet preservation criteria?	Yes	☐	No	☑

Default Cooler	Temp: 5.7 °C

Sample Receipt Comments:
All samples are collected 8/22/13 as indicated on sample jars.

Method EPA 8015B

ANALYSIS RUN LOG

INJECTION LOG

Sam #	File Name	QC Batch	Sample Name	Date of Injection	Time of Injection
96	O0208_001.rst	MeCl2	Solvent Blank	2/8/2013	11:36:25 AM
96	O0208_002.rst	MeCl2	Solvent Blank A2L0054	2/8/2013	11:53:02 AM
97	O0208_003.rst	Marker	C8-C40,A2L0023, ~~A2F0444~~	2/8/2013	12:44:34 PM
1	O0208_004.rst	Diesel	10/8ppm,ICAL, A2L0001	2/8/2013	1:01:34 PM
2	O0208_005.rst	Diesel	100/40ppm,ICAL, A2L0002	2/8/2013	1:18:11 PM
3	O0208_006.rst	Diesel	500/80ppm,ICAL, A2L0003	2/8/2013	1:34:55 PM
4	O0208_007.rst	Diesel	1000/100ppm,ICAL, A2L0004	2/8/2013	1:51:49 PM
5	O0208_008.rst	Diesel	5000/120ppm,ICAL, A2L0005	2/8/2013	2:08:48 PM
96	O0208_009.rst	MeCl2	Solvent Blank	2/8/2013	2:25:40 PM
6	O0208_010.rst	Motor Oil	10/8ppm,ICAL A2L0007	2/8/2013	2:54:35 PM
7	O0208_011.rst	Motor Oil	100/40ppm,ICAL A2L0008	2/8/2013	3:11:43 PM
8	O0208_012.rst	Motor Oil	500/80ppm,ICAL A2L0009	2/8/2013	3:28:48 PM
9	O0208_013.rst	Motor Oil	1000/100ppm,ICAL A2L0010	2/8/2013	3:45:47 PM
10	O0208_014.rst	Motor Oil	5000/120ppm,ICAL A2L0011	2/8/2013	4:02:47 PM
11	O0208_015.rst	Hydraulic Oil	10/8ppm,ICAL A2L0130	2/8/2013	4:19:47 PM
12	O0208_016.rst	Hydraulic Oil	100/40ppm,ICAL A2L0131	2/8/2013	4:36:43 PM
13	O0208_017.rst	Hydraulic Oil	500/80ppm,ICAL A2L0132	2/8/2013	4:53:32 PM
14	O0208_018.rst	Hydraulic Oil	1000/100ppm,ICAL A2L0133	2/8/2013	5:10:15 PM
15	O0208_019.rst	Hydraulic Oil	5000/120ppm,ICAL A2L0134	2/8/2013	5:26:56 PM
96	O0208_020.rst	MeCl2	Solvent Blank	2/8/2013	5:43:36 PM
96	O0208_021.rst	MeCl2	Solvent Blank	2/8/2013	6:00:13 PM
98	O0208_022.rst	Diesel	500/80ppm,ICV A2L0006	2/8/2013	6:16:47 PM
99	O0208_023.rst	Motor Oil	500/80ppm,ICV A2L0012	2/8/2013	6:33:20 PM
100	O0208_024.rst	Hydraulic Oil	500/80ppm,ICV A2L0135	2/8/2013	6:49:57 PM
96	O0208_025.rst	MeCl2	Solvent Blank	2/8/2013	7:07:04 PM

INSTRUMENT ID.: GC 21

QUANT. METHOD: 0020813

ANALYSIS SEQUENCE

Sequence Comments:

S3I0141

Instrument: GC-21
Calibration ID: UNASSIGNED

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3I0141-CAL1	QC		1	A2L0001		
S3I0141-CAL2	QC		2	A2L0002		
S3I0141-CAL3	QC		3	A2L0003		
S3I0141-CAL4	QC		4	A2L0004		
S3I0141-CAL5	QC		5	A2L0005		
S3I0141-CAL6	QC		6	A2L0007		
S3I0141-CAL7	QC		7	A2L0008		
S3I0141-CAL8	QC		8	A2L0009		
S3I0141-CAL9	QC		9	A2L0010		
S3I0141-CALA	QC		10	A2L0011		
S3I0141-CALB	QC		11	A2L0130		
S3I0141-CALC	QC		12	A2L0131		
S3I0141-CALD	QC		13	A2L0132		
S3I0141-CALE	QC		14	A2L0133		
S3I0141-CALF	QC		15	A2L0134		
S3I0141-ICV1	QC		16	A2L0006		
S3I0141-ICV2	QC		17	A2L0012		
S3I0141-ICV3	QC		18	A2L0135		

Samples Loaded By — Date: 9/16/13

Data Processed By — Date: 9/16/13

INJECTION LOG

Sam #	File Name	QC Batch	Sample Name	Date of Injection	Time of Injection
96	O0827_001.rst	MeCl2	Solvent Blank	8/27/2013	8:46:25 AM
97	O0827_002.rst	Marker	C8-C40,A2L0023,	8/27/2013	9:02:50 AM
98	O0827_003.rst	Diesel	S3H0319-CCV1	8/27/2013	9:19:27 AM
99	O0827_004.rst	Motor Oil	S3H0319-CCV2 NR, BIAS LOW	8/27/2013	9:36:07 AM
99	O0827_005.rst	Motor Oil	S3H0319-CCV2	8/27/2013	9:52:53 AM
1	O0827_006.rst	B3H0499	B3H0499-BLK1@1	8/27/2013	10:09:36 AM
2	O0827_007.rst	B3H0499	B3H0499-BS1@1	8/27/2013	10:26:17 AM
3	O0827_008.rst	B3H0499	B3H0499-MS1@1	8/27/2013	10:42:56 AM
4	O0827_009.rst	B3H0499	B3H0499-MSD1@1	8/27/2013	10:59:39 AM
5	O0827_010.rst	B3H0499	1302581-22@1	8/27/2013	11:16:22 AM
6	O0827_011.rst	B3H0499	1302601-01@5	8/27/2013	11:33:06 AM
7	O0827_012.rst	B3H0499	1302601-02@5	8/27/2013	11:49:56 AM
8	O0827_013.rst	B3H0499	1302601-03@5	8/27/2013	12:06:41 PM
98	O0827_014.rst	Diesel	S3H0319-CCV3	8/27/2013	1:52:02 PM
99	O0827_015.rst	Motor Oil	S3H0319-CCV4	8/27/2013	2:08:51 PM
13	O0827_016.rst	B3H0499	1302476-47@1	8/27/2013	2:25:42 PM
14	O0827_017.rst	B3H0499	1302476-48@1	8/27/2013	2:42:26 PM
15	O0827_018.rst	B3H0499	1302476-53@1	8/27/2013	2:59:11 PM
16	O0827_019.rst	B3H0499	1302476-58@1	8/27/2013	3:15:55 PM
17	O0827_020.rst	B3H0499	1302476-63@1	8/27/2013	3:32:38 PM
18	O0827_021.rst	B3H0499	1302476-AC@1	8/27/2013	3:49:19 PM
19	O0827_022.rst	B3H0499	1302476-AS@1	8/27/2013	4:06:08 PM
20	O0827_023.rst	B3H0499	1302476-AT@1	8/27/2013	4:22:48 PM
21	O0827_024.rst	B3H0499	1302476-AX@1	8/27/2013	4:39:28 PM
22	O0827_025.rst	B3H0499	1302476-BC@1	8/27/2013	4:56:09 PM
23	O0827_026.rst	B3H0499	1302610-09@1	8/27/2013	5:12:55 PM
9	O0827_027.rst	B3H0499	1302581-15@1	8/27/2013	5:29:39 PM
10	O0827_028.rst	B3H0499	1302581-19@1	8/27/2013	5:46:23 PM
11	O0827_029.rst	B3H0499	1302581-21@1	8/27/2013	6:03:03 PM
12	O0827_030.rst	B3H0499	1302565-01@1	8/27/2013	6:19:39 PM
96	O0827_031.rst	MeCl2	Solvent Blank	8/27/2013	6:36:12 PM
98	O0827_032.rst	Diesel	S3H0319-CCV5	8/27/2013	7:03:33 PM
99	O0827_033.rst	Motor Oil	S3H0319-CCV6	8/27/2013	7:20:11 PM

INSTRUMENT ID.: GC-21

QUANT. METHOD: 0020813

SIGNATURE: [signature] INITIAL: [initials]

ANALYSIS SEQUENCE

S3H0319

Sequence Comments:

Instrument: GC-21
Calibration ID: UNASSIGNED

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3H0319-CCV1	QC		1	A3F0497		
S3H0319-CCV2	QC		2	A3F0498		
B3H0499-BLK1	QC		3			
B3H0499-BS1	QC		4			
B3H0499-MS1	QC		5			
B3H0499-MSD1	QC		6			
1302581-22	8015_HCID	A	7			
1302581-22	8015_DRO	A	8			BatchQC
1302581-22	8015_HCID_CUST	A	9			BatchQC
1302601-01	8015_DRO	A	10			
1302601-02	8015_DRO	A	11			
1302601-03	8015_DRO	A	12			
S3H0319-CCV3	QC		13	A3F0497		
S3H0319-CCV4	QC		14	A3F0498		
1302476-47	8015_HCID	A	15			C8-40
1302476-48	8015_HCID	A	16			C8-40
1302476-53	8015_HCID	A	17			C8-40
1302476-58	8015_HCID	A	18			C8-40
1302476-63	8015_HCID	A	19			C8-40
1302476-AC	8015_HCID	A	20			C8-40
1302476-AS	8015_HCID	A	21			C8-40
1302476-AT	8015_HCID	A	22			C8-40
1302476-AX	8015_HCID	A	23			C8-40

Samples Loaded By — Date: 9/14/13

Data Processed By — Date: 9/14/13

ANALYSIS SEQUENCE

S3H0319

Sequence Comments:

Instrument: GC-21
Calibration ID: UNASSIGNED

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
1302476-BC	8015_HCID	A	24			C8-40
1302610-09	8015_HCID_CUST	A	25			
1302581-15	8015_HCID	A	26			
1302581-19	8015_HCID	A	27			
1302581-21	8015_HCID	A	28			
1302565-01	8015_HCID_CUST	A	29			
S3H0319-CCV5	QC		30	A3F0497		
S3H0319-CCV6	QC		31	A3F0498		

Samples Loaded By Date Data Processed By Date

Printed: 9/16/2013 4:23:40PM :: C:\Program Files\Promium\Element\Print\seq_ATL_Default(2).rpt

INJECTION LOG

Sam #	File Name	QC Batch	Sample Name	Date of Injection	Time of Injection
96	O0904_001.rst	MeCl2	Solvent Blank	9/4/2013	8:14:34 AM
97	O0904_002.rst	Marker	C8-C40,A2L0023,	9/4/2013	8:34:32 AM
98	O0904_003.rst	Diesel	S3I0010-CCV1	9/4/2013	8:51:16 AM
99	O0904_004.rst	Motor Oil	S3I0010-CCV2 SURR HIGH	9/4/2013	9:07:55 AM
1	O0904_005.rst	B3I0015	B3I0015-BLK1@1	9/4/2013	9:24:36 AM
2	O0904_006.rst	B3I0015	B3I0015-BS1@1	9/4/2013	9:41:21 AM
3	O0904_007.rst	B3I0015	1302661-01@1	9/4/2013	9:57:53 AM
4	O0904_008.rst	B3I0015	1302661-02@1	9/4/2013	10:14:39 AM
5	O0904_009.rst	B3I0015	1302661-03@1	9/4/2013	10:31:15 AM
6	O0904_010.rst	B3I0015	1302661-04@1	9/4/2013	10:48:04 AM
7	O0904_011.rst	B3I0015	1302545-05@1	9/4/2013	11:04:52 AM
8	O0904_012.rst	B3I0015	1302547-11@1	9/4/2013	11:21:40 AM
9	O0904_013.rst	B3I0015	1302547-12@1	9/4/2013	11:38:36 AM
10	O0904_014.rst	B3I0015	1302547-05@1	9/4/2013	11:55:29 AM
11	O0904_015.rst	B3I0015	1302545-11@1	9/4/2013	12:12:17 PM
12	O0904_016.rst	B3I0015	1302545-17@1	9/4/2013	12:29:03 PM
13	O0904_017.rst	B3I0015	B3I0015-MS1@1	9/4/2013	12:45:53 PM
14	O0904_018.rst	B3I0015	B3I0015-MSD1@1	9/4/2013	1:02:39 PM
15	O0904_019.rst	B3I0015	1302545-01@1	9/4/2013	1:19:25 PM
96	O0904_020.rst	MeCl2	Solvent Blank	9/4/2013	1:36:13 PM
98	O0904_021.rst	Diesel	S3I0010-CCV3	9/4/2013	1:47:24 PM
99	O0904_022.rst	Motor Oil	S3I0010-CCV4 SURR HIGH, UR	9/4/2013	2:04:07 PM
99	O0904_023.rst	Motor Oil	S3I0010-CCV4	9/4/2013	2:21:00 PM

INSTRUMENT ID.: GC 21
QUANT. METHOD: 0020813
SIGNATURE: [signature] INITIAL: [initials]

ANALYSIS SEQUENCE

Sequence Comments:

S3I0010

Instrument: GC-21
Calibration ID: UNASSIGNED

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3I0010-CCV1	QC		1	A3F0497		
S3I0010-CCV2	QC		2	A3F0498		
B3I0015-BLK1	QC		3			
B3I0015-BS1	QC		4			
B3I0015-MS1	QC		5			
B3I0015-MSD1	QC		6			
1302661-04	8015_HCID_CUST	A	7			
1302661-03	8015_HCID_CUST	A	8			
1302545-11	8015_HCID	A	9			
1302661-02	8015_HCID_CUST	A	10			
1302661-01	8015_HCID_CUST	A	11			
1302547-12	8015_HCID	A	12			
1302547-12	8015_HCID_CUST	A	13			BatchQC
1302547-11	8015_HCID	A	14			
1302547-05	8015_HCID	A	15			
1302545-17	8015_HCID	A	16			
1302545-05	8015_HCID	A	17			
1302545-01	8015_HCID	A	18			
S3I0010-CCV3	QC		19	A3F0497		
S3I0010-CCV4	QC		20	A3F0498		

Samples Loaded By — Date: 9/4/13

Data Processed By — Date: 9/4/13

SAMPLE PREPARATION LOG

PREPARATION BENCH SHEET

B3H0499

Advanced Technology Laboratories

Matrix: Soil
Date Prepared: 08/27/13 11:29
End Date/Time: 08/27/13 15:24

Prepared by: AL
IS Code:
IS Volume:

Prep Code: GCSEMI_DRO

Lab Number	Analysis	Sample pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Surrogate ID	ul Surrogate	Extraction Comments
1302476-47	8015_HCID		10.0	10						A3H0157	1000	C8-40
1302476-48	8015_HCID		10.0	10						A3H0157	1000	C8-40
1302476-53	8015_HCID		10.0	10						A3H0157	1000	C8-40
1302476-58	8015_HCID		10.0	10						A3H0157	1000	C8-40
1302476-63	8015_HCID		10.0	10						A3H0157	1000	C8-40
1302476-AC	8015_HCID		10.0	10						A3H0157	1000	C8-40
1302476-AS	8015_HCID		10.0	10						A3H0157	1000	C8-40
1302476-AT	8015_HCID		10.0	10						A3H0157	1000	C8-40
1302476-AX	8015_HCID		10.0	10						A3H0157	1000	C8-40
1302476-BC	8015_HCID		10.0	10						A3H0157	1000	C8-40
1302565-01	8015_HCID_CUST		9.9	10						A3H0157	1000	
1302581-15	8015_HCID		10.0	10						A3H0157	1000	
1302581-19	8015_HCID		9.9	10						A3H0157	1000	
1302581-21	8015_HCID		10.0	10						A3H0157	1000	
1302581-22	8015_DRO		10.0	10						A3H0157	1000	Added for BatchQC in: B3H0499
1302581-22	8015_HCID		10.0	10						A3H0157	1000	
1302581-22	8015_HCID_CUST		10.0	10						A3H0157	1000	Added for BatchQC in: B3H0499
1302601-01	8015_DRO		9.9	10						A3H0157	1000	
1302601-02	8015_DRO		10.0	10						A3H0157	1000	
1302601-03	8015_DRO		9.9	10						A3H0157	1000	

al 8-27-13
Prepared By Date

Preparation Reviewed By Date

Extracts Received By Date 8/27/13

Printed: 8/27/2013 3:24:54PM :: bch_ATL_SVOA(2)

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PREPARATION BENCH SHEET

B3H0499

Advanced Technology Laboratories

Matrix: Soil
Date Prepared: 08/27/13 15:11
End Date/Time: 08/27/13 15:24

Prepared by: SM
IS Code:
IS Volume:

Prep Code: GCSEMI_DRO

Lab Number	Analysis	Sample pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Surrogate ID	ul Surrogate	Extraction Comments
1302610-09	8015_HCID_CUST		10.0	10						A3H0157	1000	
B3H0499-BLK1	QC		10.0	10						A3H0157	1000	
B3H0499-BS1	QC		10.0	10	A3H0156			1000		A3H0157	1000	
B3H0499-MS1	QC		10.0	10	A3H0156		1302581-22	1000		A3H0157	1000	
B3H0499-MSD1	QC		10.0	10	A3H0156		1302581-22	1000		A3H0157	1000	

Number	Reagent Name
A3F0224	Sand
A3G0432	Sodium Sulfate
A3G0433	Methylene Chloride

al 8-27-13
Prepared By Date

Preparation Reviewed By Date

rf 8/27/13
Extracts Received By Date

Printed: 8/27/2013 3:24:54PM :: bch_ATL_SVOA(2)

PREPARATION BENCH SHEET

B3I0015

Advanced Technology Laboratories

Matrix: Soil
Date Prepared: 09/03/13 10:26
End Date/Time: 09/03/13 15:05

Prepared by: AL
IS Code:
IS Volume:

Prep Code: GCSEMI_DRO

Lab Number	Analysis	Sample pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Surrogate ID	ul Surrogate	Extraction Comments
1302545-01	8015_HCID		9.9	10						A3H0157	1000	
1302545-05	8015_HCID		10.0	10						A3H0157	1000	
1302545-11	8015_HCID		10.0	10						A3H0157	1000	
1302545-17	8015_HCID		10.0	10						A3H0157	1000	
1302547-05	8015_HCID		10.0	10						A3H0157	1000	
1302547-11	8015_HCID		10.0	10						A3H0157	1000	
1302547-12	8015_HCID		10.0	10						A3H0157	1000	
1302547-12	8015_HCID_CUST		10.0	10						A3H0157	1000	Added for BatchQC in: B3I0015
1302661-01	8015_HCID_CUST		10.0	10						A3H0157	1000	
1302661-02	8015_HCID_CUST		10.0	10						A3H0157	1000	
1302661-03	8015_HCID_CUST		10.0	10						A3H0157	1000	
1302661-04	8015_HCID_CUST		10.0	10						A3H0157	1000	
B3I0015-BLK1	QC		10.0	10						A3H0157	1000	
B3I0015-BS1	QC		10.0	10	A3H0286			1000		A3H0157	1000	
B3I0015-MS1	QC		10.0	10	A3H0286		1302547-12	1000		A3H0157	1000	
B3I0015-MSD1	QC		10.0	10	A3H0286		1302547-12	1000		A3H0157	1000	

AL 9-3-13
Prepared By — Date

Preparation Reviewed By — 9/4/13 Date

Extracts Received By — 9/3/13 Date

Printed: 9/3/2013 3:06:27PM :: bch_ATL_SVOA(2)

PREPARATION BENCH SHEET

B3I0015

Advanced Technology Laboratories

Matrix: Soil
Date Prepared: 09/03/13 10:26
End Date/Time: 09/03/13 15:05

Prepared by: AL
IS Code:
IS Volume:

Prep Code: GCSEMI_DRO

Lab Number	Analysis	Sample pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Surrogate ID	ul Surrogate	Extraction Comments

Number	Reagent Name
A3F0224	Sand
A3G0432	Sodium Sulfate
A3G0433	Methylene Chloride

Prepared By	Date	Preparation Reviewed By	Date	Extracts Received By	Date
al	9-3-13	m	9/4/13		9/3/13

Printed: 9/3/2013 3:06:27PM :: bch_ATL_SVOA(2)

INITIAL CALIBRATION DATA SUMMARY

TotalChrom Method File d:\gc-21\method\o020813.mth
Printed by : gc on: 2/11/2013 8:42:31 AM
Created by : gc on: 2/8/2013 1:32:13 PM
Edited by : gc on: 2/11/2013 8:42:19 AM
Number of Times Edited : 31

Number of Times Calibrated : 85

Description: O20813

Instrument Conditions

Instrument Control Method
Instrument Name : GC-21
Instrument Type : HP6890 GC with HP7673A Autosampler

Channel Parameters
Data will be collected from channel A
Delay Time : 0.00 min
Run Time : 9.36 min
Sampling Rate : 10.0000 pts/s

	Channel A	Channel B
Signal Source	DetA	TestSignal
Attenuation	0	0
Offset	0.0 mV	0.0 mV

Autosampler Method
Syringe Capacity : 10 µL
Injection Speed : Normal
Viscosity Delay : 0
Pre-injection Sample Washes : 1
Post-injection Solvent Washes (B) : 2

Injection Volume : 1.0 µL
Sample Pumps : 2
Wash/Waste Vial Set : 2
Post-injection Solvent Washes (A) : 2

Carriers Parameters
Carrier A control : PFlow - He
Column A length : 15.00 m
Vacuum Compensation : OFF
Split Ratio : 1.0 : 1
Initial Setpoint : 6.0 ML/MIN

Diameter : 320 µm

Initial Hold : 999.00 min

Valve configuration and settings
Valve 1 : NONE
Valve 3 : NONE
Valve 5 : NONE

Valve 2 : NONE
Valve 4 : NONE
Valve 6 : NONE

Detector Parameters

	Detector A	Detector B
Detector	FID	NONE
Range	100	
Autozero	OFF	OFF

Heated Zones
Injector A: CAP
Setpoint : 280 °C

Injector B: NONE
Setpoint : OFF

Detector A : °C
Detector B : °C
Auxiliary (NONE) : 0°C

Oven Program

Cryogenics : Off
Initial Temp : 40°C
Initial Hold : 0.50 min
Ramp 1 : 75.0 0/min to 70°, hold for 0.00 min
Ramp 2 : 40.0 0/min to 175°, hold for 0.00 min
Ramp 3 : 30.0 0/min to 320°, hold for 1.00 min

Total Run Time : 9.36 min
Maximum Temp : 400°C
Equilibration Time : 0.50 min

Timed Events

There are no timed events in the method

Real Time Plot Parameters

	Pages	Offset (mV)	Scale (mV)
Channel A	1	0.000	500.000

Processing Parameters

Bunch Factor : 1 points
Noise Threshold : 1 µV
Area Threshold : 50.00 µV

Peak Separation Criteria

Width Ratio : 0.200
Valley-to-Peak Ratio : 0.010

Exponential Skim Criteria

Peak Height Ratio : 5.000
Adjusted Height Ratio : 4.000
Valley Height Ratio : 3.000

Baseline Timed Events

Event #1 - Disable Peak Detection at 0.025
Event #2 - Forward Baseline On at 0.314
Event #3 - Enable Peak Detection at 0.843
Event #4 - Force Tangential Skim at 5.020

Optional Reports

No report format files given

Optional Report Plot Parameters

Plot Number	1	2	3	4	5
Generate this plot	No	No	No	No	No
Start plot at end of delay time	Yes	Yes	Yes	Yes	Yes
Start Time					
End Time					
Scale Type	Vertical Scaling	Vertical Scaling	Vertical Scaling	Vertical Scaling	Vertical Scaling
Scale Factor	1.000	1.000	1.000	1.000	1.000
Full Scale					
Offset					

Annotated Replot Parameters

Offset & Scale set to absolute values
Draw baselines
Include timed event annotations
Automatically set plot start and end times to data limits

Plot Offset : 0.000 µV
Plot Scale : 50.000 µV
Number of Pages : 1
Plot Title : Chromatogram
X-Axis Label : Time [min]
Y-Axis Label : Response [mV]
Orientation : Portrait
Retention Labels : Top of Plot
Component Labels : Actual Time

User Programs

No user programs will be executed

Global Sample Information

Default Sample Volume : 1.000 ul
Quantitation Units : ng
Void Time : 0.000 min
Correct amounts during calibration : No
Convert unknowns to concentration units : Yes
Reject outliers during calibration : No

An External Standard calibration will be used
Unknown peaks will be quantitated using a response factor of 1.000000e+06
First peak will be relative retention reference

Component Information

C8-C10

Component Type : Timed Group
Start Time : 0.843
End Time : 1.404
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C12-C14

Component Type : Timed Group
Start Time : 2.089
End Time : 2.940
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C10-C18

Component Type : Timed Group
Start Time : 1.404
End Time : 3.909
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C9-C25

Component Type : Timed Group
Start Time : 1.100
End Time : 6.005
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C13-C22
Component Type : Timed Group
Start Time : 2.421
End Time : 5.181
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

Diesel
Component Type : Timed Group
Start Time : 1.418
End Time : 6.690
Include only unidentified peaks : Yes
Reference Component :
Calibrating Area versus Amount using a 1st Order Fit
Curve will be forced through the origin
Amounts will not be scaled prior to the regression
Weighting factor for the regression: 1
Component standard purity percentage : 100.0000%

User Values
Label :
Value 1 : 0.000000
Value 2 : 500.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

Calibration Level

Level Name	Amount	Area	Height	ISTD Amt.	ISTD Resp.	# Replicates
D1	10.0000	46442.60	16846.41	----------	----------	1
D2	100.0000	85496.34	47621.20	----------	----------	1
D3	500.0000	270172.67	205763.67	----------	----------	1
D4	1000.0000	494306.21	392208.65	----------	----------	1
D5	5000.0000	2483366.20	1.93e+06	----------	----------	1

Calibration Curve : y = (0.000000) + (497.151101)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.999173

C13-C23
Component Type : Timed Group
Start Time : 2.421
End Time : 5.500
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C10-C28
Component Type : Timed Group
Start Time : 1.418
End Time : 6.690
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C13-C25
Component Type : Timed Group
Start Time : 2.421
End Time : 5.971
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C8-C40
Component Type : Timed Group
Start Time : 0.843
End Time : 9.140
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

p-Terphenyl
Component Type : Single Peak Component
Retention Time : 5.064 min
Search Window : 5.02 s, 5.11 %
Reference Component :
Find peak closest to expected RT in window
Use Average Calibration Factor (Area / Amount)
Component standard purity percentage : 100.0000%

User Values
Label :
Value 1 : 80.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

Calibration Level

Level Name	Amount	Area	Height	ISTD Amt.	ISTD Resp.	# Replicates
S1	8.0000	5900.70	6279.58	----------	----------	1
S2	40.0000	25770.60	26966.09	----------	----------	1
S3	80.0000	43677.90	46145.63	----------	----------	1
S4	100.0000	59120.35	61131.29	----------	----------	1
S5	120.0000	71883.40	69932.86	----------	----------	1

Average Calibration Factor = 623.611617 (%RSD = 11.65)

C18-C28
Component Type : Timed Group
Start Time : 3.909
End Time : 6.545
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C10-C40
Component Type : Timed Group
Start Time : 1.418
End Time : 9.140
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

Motor Oil
Component Type : Timed Group
Start Time : 3.874
End Time : 8.323
Include only unidentified peaks : Yes
Reference Component :
Calibrating Area versus Amount using a 1st Order Fit
Curve will be forced through the origin
Amounts will not be scaled prior to the regression
Weighting factor for the regression: 1
Component standard purity percentage : 100.0000%

User Values
Label :
Value 1 : 0.000000
Value 2 : 500.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

Calibration Level

Level Name	Amount	Area	Height	ISTD Amt.	ISTD Resp.	# Replicates
M1	10.0000	23809.45	7368.55	----------	----------	1
M2	100.0000	62266.76	24969.82	----------	----------	1
M3	500.0000	262265.89	138662.87	----------	----------	1
M4	1000.0000	536940.34	317210.27	----------	----------	1
M5	5000.0000	2554942.43	1.79e+06	----------	----------	1

Calibration Curve : y = (0.000000) + (512.155331)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.999744

C18-C36
Component Type : Timed Group
Start Time : 3.874
End Time : 8.323
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C23-C32
Component Type : Timed Group
Start Time : 5.292
End Time : 7.548
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C23-C36
Component Type : Timed Group
Start Time : 5.292
End Time : 8.323
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

Hydraulic Oil
Component Type : Timed Group
Start Time : 4.455
End Time : 8.690
Include only unidentified peaks : Yes
Reference Component :
Calibrating Area versus Amount using a 1st Order Fit
Curve will be forced through the origin
Amounts will not be scaled prior to the regression
Weighting factor for the regression: 1
Component standard purity percentage : 100.0000%

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

Calibration Level

Level Name	Amount	Area	Height	ISTD Amt.	ISTD Resp.	# Replicates
H1	10.0000	57069.33	19130.19	----------	----------	1
H2	100.0000	62066.68	23624.00	----------	----------	1
H3	500.0000	252089.90	135633.35	----------	----------	1
H4	1000.0000	462682.78	306307.82	----------	----------	1
H5	5000.0000	2386932.88	1.92e+06	----------	----------	1

Calibration Curve : y = (0.000000) + (477.156198)x + (0.000000)x^2 + (0.000000)x^3
R-squared : 0.999147

C23-C40
Component Type : Timed Group
Start Time : 5.292
End Time : 9.140
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

>C23
Component Type : Timed Group
Start Time : 5.292
End Time : 9.140
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C24-C40
Component Type : Timed Group
Start Time : 5.569
End Time : 9.140
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C28-C36
Component Type : Timed Group
Start Time : 6.545
End Time : 8.164
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C26-C40
Component Type : Timed Group
Start Time : 6.068
End Time : 9.140
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

>C32
Component Type : Timed Group
Start Time : 7.548
End Time : 9.140
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

C36-C40
Component Type : Timed Group
Start Time : 8.164
End Time : 9.140
Include only unidentified peaks : Yes
Reference Component :
Quantitation will use calibration reference : Diesel
Reference calibration correction factor : 1.0000

User Values
Label :
Value 1 : 0.000000
Value 2 : 0.000000
Value 3 : 0.000000
Value 4 : 0.000000
Value 5 : 0.000000

Calibration Replicate Lists
Component : C8-C10
This component has no calibration levels

Component : C12-C14
This component has no calibration levels

Component : C10-C18
This component has no calibration levels

Component : C9-C25
This component has no calibration levels

Component : C13-C22
This component has no calibration levels

Component : Diesel
Level : D1

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
46442.60	16846.41	10.0000	--------	--------	2/8/2013	2:26:18 PM	D:\GC-21\Data\O020813\o0208_004.rst

Level : D2

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
85496.34	47621.20	100.0000	--------	--------	2/8/2013	2:26:19 PM	D:\GC-21\Data\O020813\o0208_005.rst

Level : D3

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
270172.67	205763.67	500.0000	-------	-------	2/8/2013	2:26:19 PM	D:\GC-21\Data\O020813\o0208_006.rst

Level : D4

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
494306.21	392208.65	1000.0000	-------	-------	2/8/2013	2:26:19 PM	D:\GC-21\Data\O020813\o0208_007.rst

Level : D5

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
2483366.20	1.92527e+006	5000.0000	-------	-------	2/8/2013	2:26:19 PM	D:\GC-21\Data\O020813\o0208_008.rst

Component : C13-C23
This component has no calibration levels

Component : C10-C28
This component has no calibration levels

Component : C13-C25
This component has no calibration levels

Component : C8-C40
This component has no calibration levels

Component : p-Terphenyl
Level : S1

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
5900.70	6279.58	8.0000	-------	-------	2/8/2013	2:29:52 PM	D:\GC-21\Data\O020813\o0208_004.rst

Level : S2

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
25770.60	26966.09	40.0000	-------	-------	2/8/2013	2:29:52 PM	D:\GC-21\Data\O020813\o0208_005.rst

Level : S3

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
43677.90	46145.63	80.0000	-------	-------	2/8/2013	2:29:52 PM	D:\GC-21\Data\O020813\o0208_006.rst

Level : S4

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
59120.35	61131.29	100.0000	-------	-------	2/8/2013	2:29:52 PM	D:\GC-21\Data\O020813\o0208_007.rst

Level : S5

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
71883.40	69932.86	120.0000	-------	-------	2/8/2013	2:29:52 PM	D:\GC-21\Data\O020813\o0208_008.rst

Component : C18-C28
This component has no calibration levels

Component : C10-C40
This component has no calibration levels

Component : Motor Oil
Level : M1

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
23809.45	7368.55	10.0000	--------	--------	2/8/2013	4:13:13 PM	D:\GC-21\Data\O020813\o0208_010.rst

Level : M2

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
62266.76	24969.82	100.0000	--------	--------	2/8/2013	4:13:13 PM	D:\GC-21\Data\O020813\o0208_011.rst

Level : M3

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
262265.89	138662.87	500.0000	--------	--------	2/8/2013	4:13:13 PM	D:\GC-21\Data\O020813\o0208_012.rst

Level : M4

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
536940.34	317210.27	1000.0000	--------	--------	2/8/2013	4:13:13 PM	D:\GC-21\Data\O020813\o0208_013.rst

Level : M5

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
2554942.43	1.79491e+006	5000.0000	--------	--------	2/8/2013	4:13:13 PM	D:\GC-21\Data\O020813\o0208_014.rst

Component : C18-C36
This component has no calibration levels

Component : C23-C32
This component has no calibration levels

Component : C23-C36
This component has no calibration levels

Component : Hydraulic Oil
Level : H1

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
57069.33	19130.19	10.0000	--------	--------	2/11/2013	8:01:20 AM	D:\GC-21\Data\O020813\o0208_015.rst

Level : H2

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
62066.68	23624.00	100.0000	--------	--------	2/11/2013	8:01:20 AM	D:\GC-21\Data\O020813\o0208_016.rst

Level : H3

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
252089.90	135633.35	500.0000	--------	--------	2/11/2013	8:01:20 AM	D:\GC-21\Data\O020813\o0208_017.rst

Level : H4

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
462682.78	306307.82	1000.0000	--------	--------	2/11/2013	8:01:20 AM	D:\GC-21\Data\O020813\o0208_018.rst

Level : H5

Area	Height	Vol Adj Amt	ISTD Response	ISTD Amount	Date	Time	File
2386932.88	1.91723e+006	5000.0000	———	———	2/11/2013	8:01:20 AM	D:\GC-21\Data\O020813\o0208_019.rst

Component : C23-C40
This component has no calibration levels

Component : >C23
This component has no calibration levels

Component : C24-C40
This component has no calibration levels

Component : C28-C36
This component has no calibration levels

Component : C26-C40
This component has no calibration levels

Component : >C32
This component has no calibration levels

Component : C36-C40
This component has no calibration levels

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

Advanced Technology Laboratories 3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Software Version : 6.3.1.0504
Sample Name : 500/80ppm,ICV
Instrument Name : GC-21
Rack/Vial : 1/98
Sample Amount : 1.000000
Cycle : 1

Date : 6/18/2013 2:15:59 PM
Data Acquisition Time : 2/8/2013 6:16:47 PM
Channel : A
Operator : gc
Dilution Factor : 1.000000

Result File : D:\GC-21\Data\O020813\o0208_022.rst
Sequence File : C:\PenExe\TcWS\Ver6.3.1\Temp\o0208_022-1788777084-20130617-154252.idx
Sample Notes:
O20813

Instrument Run Log
547,"Not ready:","F inl pres 12.7 psi"," at runtime 0.14"
547,"Not ready:","F inl pres 13.5 psi"," at runtime 0.76"
614,"Not ready:","Host system"," at runtime 0.95"
0,"","","",""

Continuing Calibration Report

Component Name	Time [min]	Area [µV·s]	Final Conc PPM	Surrogate % Recovery	Avg RF	CCRF Hydrocarbons	%D Hydrocarbons	CCRF Surrogate	%D Surrogate
C8-C10	1.045	43524.95	87.55	———	497.2	———	———	———	———
Jet Fuel	2.220	206933.93	493.08	———	419.7	———	———	———	———
C12-C14	2.464	68815.25	138.42	———	497.2	———	———	———	———
C10-C18	2.528	176003.36	354.02	———	497.2	———	———	———	———
C9-C25	3.466	260471.38	523.93	———	497.2	———	———	———	———
C12-C22	3.567	209541.21	421.48	———	497.2	———	———	———	———
C13-C22	3.728	191029.83	384.25	———	497.2	———	———	———	———
C13-C23	3.854	194711.66	391.65	———	497.2	———	———	———	———
Diesel	3.966	247110.66	497.05	———	497.2	494.22	-0.59	———	———
C10-C28	3.966	247110.66	497.05	———	497.2	———	———	———	———
C13-C25	4.116	197720.90	397.71	———	497.2	———	———	———	———
C8-C40	4.846	301444.19	606.34	———	497.2	———	———	———	———
C18-C28	5.064	70680.48	142.17	———	497.2	———	———	———	———
p-Terphenyl	5.068	43513.43	69.78	87.22	623.6	———	———	543.92	-12.78
C10-C40	5.119	257919.24	518.79	———	497.2	———	———	———	———
C18-C36	5.963	81623.83	164.18	———	497.2	———	———	———	———
Motor Oil	5.963	81623.83	159.37	———	512.2	163.25	-68.13	———	———
C23-C32	6.286	11115.11	22.36	———	497.2	———	———	———	———
Hydraulic Oil	6.397	50857.75	106.59	———	477.2	———	———	———	———
C23-C36	6.671	16564.09	33.32	———	497.2	———	———	———	———
RRO	6.933	11371.51	44.74	———	254.2	———	———	———	———
C23-C40	7.027	18792.63	37.80	———	497.2	———	———	———	———
>C23	7.027	18792.63	37.80	———	497.2	———	———	———	———
C24-C40	7.152	15110.80	30.39	———	497.2	———	———	———	———
C28-C36	7.195	7741.93	15.57	———	497.2	———	———	———	———
C26-C40	7.422	12101.56	24.34	———	497.2	———	———	———	———
>C32	8.180	7677.52	15.44	———	497.2	———	———	———	———
C36-C40	8.460	3493.48	7.03	———	497.2	———	———	———	———
			6222.23						

Report stored in ASCII file: D:\GC-21\Data\O020813\o0208_022.TX0

Software Version : 6.3.1.0504
Sample Name : 500/80ppm,ICV
Instrument Name : GC-21
Rack/Vial : 1/99
Sample Amount : 1.000000
Cycle : 24

Date : 6/27/2013 9:09:40 AM
Data Acquisition Time : 2/8/2013 6:33:20 PM
Channel : A
Operator : gc
Dilution Factor : 1.000000

Result File : D:\GC-21\Data\O020813\o0208_023.rst
Sequence File : D:\GC-21\Sequence\O020813.seq

Instrument Run Log
547,"Not ready:","F inl pres 12.8 psi"," at runtime 0.13"
547,"Not ready:","F inl pres 13.5 psi"," at runtime 0.76"
614,"Not ready:","Host system"," at runtime 0.93"
0,"","","",""

Continuing Calibration Report

Component Name	Time [min]	Area [µV·s]	Final Conc PPM	Surrogate % Recovery	Avg RF	CCRF Hydrocarbons	%D Hydrocarbons	CCRF Surrogate	%D Surrogate
C8-C10	1.123	1532.50	32.21	------	47.6	------	------	------	------
Jet Fuel	2.331	2055.23	11.54	------	178.1	------	------	------	------
C12-C14	2.571	0.00	0.00	------	------	------	------	------	------
C10-C18	2.656	701.24	1.41	------	497.2	------	------	------	------
C9-C25	3.553	103014.55	207.21	------	497.2	------	------	------	------
C13-C22	3.801	26811.36	53.93	------	497.2	------	------	------	------
C13-C23	3.961	50028.88	100.63	------	497.2	------	------	------	------
Diesel	4.054	174999.69	352.01	------	497.2	350.00	-29.60	------	------
C10-C28	4.054	174999.69	352.01	------	497.2	------	------	------	------
C13-C25	4.196	92276.35	185.61	------	497.2	------	------	------	------
C8-C40	4.992	305217.97	613.93	------	497.2	------	------	------	------
p-Terphenyl	5.068	46603.60	74.73	93.41	623.6	------	------	582.55	-6.59
C18-C28	5.227	160552.03	322.94	------	497.2	------	------	------	------
C10-C40	5.279	303685.47	610.85	------	497.2	------	------	------	------
Motor Oil	6.098	294488.43	575.00	------	512.2	588.98	15.00	------	------
C18-C36	6.098	294488.43	592.35	------	497.2	------	------	------	------
C23-C32	6.420	223586.86	449.74	------	497.2	------	------	------	------
Hydraulic Oil	6.573	298221.68	1513.35	------	197.1	------	------	------	------
C23-C36	6.808	260981.55	524.95	------	497.2	------	------	------	------
C23-C40	7.216	269549.84	542.19	------	497.2	------	------	------	------
>C23	7.216	269549.84	542.19	------	497.2	------	------	------	------
C28-C36	7.354	129507.86	260.50	------	497.2	------	------	------	------
C24-C40	7.355	250528.32	503.93	------	497.2	------	------	------	------
C26-C40	7.604	197267.34	396.80	------	497.2	------	------	------	------
>C32	8.344	45962.98	92.45	------	497.2	------	------	------	------
C36-C40	8.652	12924.33	26.00	------	497.2	------	------	------	------
			8938.45						

Report stored in ASCII file: D:\GC-21\Data\O020813\o0208_023.TX0

Software Version : 6.3.1.0504
Sample Name : S3H0319-CCV1
Instrument Name : GC-21
Rack/Vial : 1/98
Sample Amount : 1.000000
Cycle : 3

Date : 8/28/2013 4:40:57 PM
Data Acquisition Time : 8/27/2013 9:19:27 AM
Channel : A
Operator : gc
Dilution Factor : 1.000000

Result File : D:\GC-21\Data\O082713\o0827_003.rst
Sequence File : D:\GC-21\Sequence\O082713.seq

Instrument Run Log
547,"Not ready:","F inl pres 12.8 psi"," at runtime 0.16"
614,"Not ready:","Host system"," at runtime 0.97"
547,"Not ready:","F inl pres 14.3 psi"," at runtime 0.99"
0,"","","",""

Continuing Calibration Report

Component Name	Time [min]	Area [µV·s]	Final Conc PPM	Surrogate % Recovery	Avg RF	CCRF Hydrocarbons	%D Hydrocarbons	CCRF Surrogate	%D Surrogate
C8-C10	1.076	20785.26	41.81	----------	497.2	----------	----------	----------	----------
Jet Fuel	2.257	187282.25	446.25	----------	419.7	----------	----------	----------	----------
C12-C14	2.464	71850.66	144.52	----------	497.2	----------	----------	----------	----------
C10-C18	2.616	174041.70	350.08	----------	497.2	----------	----------	----------	----------
C8-C22	2.953	233976.99	470.64	----------	497.2	----------	----------	----------	----------
C13-C20	3.464	167136.03	336.19	----------	497.2	----------	----------	----------	----------
C9-C25	3.466	231894.66	466.45	----------	497.2	----------	----------	----------	----------
C12-C22	3.567	191855.06	385.91	----------	497.2	----------	----------	----------	----------
C13-C22	3.615	173346.97	348.68	----------	497.2	----------	----------	----------	----------
C13-C23	3.743	175219.89	352.45	----------	497.2	----------	----------	----------	----------
Diesel	3.876	222913.14	448.38	----------	497.2	445.83	-10.32	----------	----------
C10-C28	3.876	222913.14	448.38	----------	497.2	----------	----------	----------	----------
C13-C25	4.116	177344.70	356.72	----------	497.2	----------	----------	----------	----------
C8-C40	4.755	242171.91	487.12	----------	497.2	----------	----------	----------	----------
C10-C36	4.763	224893.53	452.36	----------	497.2	----------	----------	----------	----------
p-Terphenyl	4.881	44805.85	71.85	89.81	623.6	----------	----------	560.07	-10.19
C13-C32	4.882	177344.70	356.72	----------	497.2	----------	----------	----------	----------
C18-C28	5.118	46019.32	92.57	----------	497.2	----------	----------	----------	----------
C10-C40	5.119	225008.48	452.60	----------	497.2	----------	----------	----------	----------
C13-C35	5.162	177557.97	357.15	----------	497.2	----------	----------	----------	----------
C13-C40	5.622	178670.32	359.39	----------	497.2	----------	----------	----------	----------
Motor Oil	5.876	53165.76	103.81	----------	512.2	106.33	-79.24	----------	----------
C18-C36	5.963	56332.07	113.31	----------	497.2	----------	----------	----------	----------
C23-C32	6.096	3997.73	8.04	----------	497.2	----------	----------	----------	----------
Hydraulic Oil	6.351	24330.87	50.99	----------	477.2	----------	----------	----------	----------
C23-C36	6.458	4211.00	8.47	----------	497.2	----------	----------	----------	----------
C22-C40	6.806	5323.36	10.71	----------	497.2	----------	----------	----------	----------
C23-C40	6.838	5323.36	10.71	----------	497.2	----------	----------	----------	----------
RRO	6.933	1512.30	5.95	----------	254.2	----------	----------	----------	----------
>C23	7.027	5323.36	10.71	----------	497.2	----------	----------	----------	----------
C24-C40	7.152	3068.99	6.17	----------	497.2	----------	----------	----------	----------
C28-C36	7.220	213.27	0.43	----------	497.2	----------	----------	----------	----------
C26-C40	7.422	1325.63	2.67	----------	497.2	----------	----------	----------	----------
C32-C40	8.079	1325.63	2.67	----------	497.2	----------	----------	----------	----------
>C32	8.180	1325.63	2.67	----------	497.2	----------	----------	----------	----------
C36-C40	8.398	1112.36	2.24	----------	497.2	----------	----------	----------	----------
			7565.75						

Report stored in ASCII file: D:\GC-21\Data\O082713\o0827_003.TX0

Software Version	: 6.3.1.0504	Date	: 8/28/2013 4:41:08 PM
Sample Name	: S3H0319-CCV2	Data Acquisition Time	: 8/27/2013 9:52:53 AM
Instrument Name	: GC-21	Channel	: A
Rack/Vial	: 1/99	Operator	: tcprocess
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 1		

Result File : D:\GC-21\Data\O082713\o0827_005.rst
Sequence File : D:\GC-21\Sequence\O082713.seq

Instrument Run Log
547,"Not ready:","F inl pres 12.8 psi"," at runtime 0.15"
547,"Not ready:","F inl pres 14.3 psi"," at runtime 0.97"
614,"Not ready:","Host system"," at runtime 0.98"
614,"Not ready:","Host system"," at runtime 3.98"
0,"","",""

Continuing Calibration Report

Component Name	Time [min]	Area [µV·s]	Final Conc PPM	Surrogate % Recovery	Avg RF	CCRF Hydrocarbons	%D Hydrocarbons	CCRF Surrogate	%D Surrogate
C8-C10	1.076	4591.50	9.24	--------	497.2	--------	--------	--------	--------
Jet Fuel	2.257	8626.35	20.55	--------	419.7	--------	--------	--------	--------
C12-C14	2.464	847.90	1.71	--------	497.2	--------	--------	--------	--------
C10-C18	2.616	4374.13	8.80	--------	497.2	--------	--------	--------	--------
C8-C22	2.953	46269.72	93.07	--------	497.2	--------	--------	--------	--------
C13-C20	3.464	10324.91	20.77	--------	497.2	--------	--------	--------	--------
C9-C25	3.466	118920.25	239.20	--------	497.2	--------	--------	--------	--------
C12-C22	3.567	39600.39	79.65	--------	497.2	--------	--------	--------	--------
C13-C22	3.615	27247.08	54.81	--------	497.2	--------	--------	--------	--------
C13-C23	3.743	44621.56	89.75	--------	497.2	--------	--------	--------	--------
Diesel	3.876	167219.34	336.36	--------	497.2	334.44	-32.73	--------	--------
C10-C28	3.876	167219.34	336.36	--------	497.2	--------	--------	--------	--------
C13-C25	4.116	112250.93	225.79	--------	497.2	--------	--------	--------	--------
C8-C40	4.755	304047.36	611.58	--------	497.2	--------	--------	--------	--------
C10-C36	4.763	290110.88	583.55	--------	497.2	--------	--------	--------	--------
p-Terphenyl	4.880	55357.85	88.77	110.96	623.6	--------	--------	691.97	10.96
C13-C32	4.882	250593.63	504.06	--------	497.2	--------	--------	--------	--------
C18-C28	5.118	162845.21	327.56	--------	497.2	--------	--------	--------	--------
C10-C40	5.119	299455.86	602.34	--------	497.2	--------	--------	--------	--------
C13-C35	5.162	281788.73	566.81	--------	497.2	--------	--------	--------	--------
C13-C40	5.622	297378.03	598.16	--------	497.2	--------	--------	--------	--------
Motor Oil	5.876	279831.71	546.38	--------	512.2	559.66	9.28	--------	--------
C18-C36	5.963	286222.09	575.72	--------	497.2	--------	--------	--------	--------
C23-C32	6.096	210577.17	423.57	--------	497.2	--------	--------	--------	--------
Hydraulic Oil	6.351	288009.46	603.60	--------	477.2	--------	--------	--------	--------
C23-C36	6.458	254541.66	512.00	--------	497.2	--------	--------	--------	--------
C22-C40	6.806	270130.96	543.36	--------	497.2	--------	--------	--------	--------
C23-C40	6.838	270130.96	543.36	--------	497.2	--------	--------	--------	--------
RRO	6.933	201275.25	791.92	--------	254.2	--------	--------	--------	--------
>C23	7.027	257777.64	518.51	--------	497.2	--------	--------	--------	--------
C24-C40	7.152	236917.52	476.55	--------	497.2	--------	--------	--------	--------
C28-C36	7.220	117445.97	236.24	--------	497.2	--------	--------	--------	--------
C26-C40	7.422	182660.38	367.41	--------	497.2	--------	--------	--------	--------
C32-C40	8.079	60495.59	121.68	--------	497.2	--------	--------	--------	--------
>C32	8.180	46784.40	94.10	--------	497.2	--------	--------	--------	--------
C36-C40	8.398	14790.55	29.75	--------	497.2	--------	--------	--------	--------
			11783.03						

Report stored in ASCII file: D:\GC-21\Data\O082713\o0827_005.TX0

Software Version : 6.3.1.0504
Sample Name : S3H0319-CCV3
Instrument Name : GC-21
Rack/Vial : 1/98
Sample Amount : 1.000000
Cycle : 1

Date : 8/28/2013 4:41:43 PM
Data Acquisition Time : 8/27/2013 1:52:02 PM
Channel : A
Operator : gc
Dilution Factor : 1.000000

Result File : D:\GC-21\Data\O082713\o0827_014.rst
Sequence File : D:\GC-21\Sequence\O082713.seq

Instrument Run Log
547,"Not ready:","F inl pres 12.8 psi"," at runtime 0.15"
547,"Not ready:","F inl pres 14.3 psi"," at runtime 0.94"
614,"Not ready:","Host system"," at runtime 0.98"
0,"","","",""

Continuing Calibration Report

Component Name	Time [min]	Area [µV·s]	Final Conc PPM	Surrogate % Recovery	Avg RF	CCRF Hydrocarbons	%D Hydrocarbons	CCRF Surrogate	%D Surrogate
C8-C10	1.076	25200.21	50.69	--------	497.2	--------	--------	--------	--------
Jet Fuel	2.257	208845.43	497.64	--------	419.7	--------	--------	--------	--------
C12-C14	2.464	78767.04	158.44	--------	497.2	--------	--------	--------	--------
C10-C18	2.616	191257.10	384.71	--------	497.2	--------	--------	--------	--------
C8-C22	2.953	263845.20	530.71	--------	497.2	--------	--------	--------	--------
C13-C20	3.464	183969.98	370.05	--------	497.2	--------	--------	--------	--------
C9-C25	3.466	259178.60	521.33	--------	497.2	--------	--------	--------	--------
C12-C22	3.567	211694.49	425.82	--------	497.2	--------	--------	--------	--------
C13-C22	3.615	191426.33	385.05	--------	497.2	--------	--------	--------	--------
C13-C23	3.743	192909.95	388.03	--------	497.2	--------	--------	--------	--------
Diesel	3.876	248039.59	498.92	--------	497.2	496.08	-0.22	--------	--------
C10-C28	3.876	248039.59	498.92	--------	497.2	--------	--------	--------	--------
C13-C25	4.116	197067.92	396.39	--------	497.2	--------	--------	--------	--------
C8-C40	4.755	271198.39	545.50	--------	497.2	--------	--------	--------	--------
C10-C36	4.763	250021.69	502.91	--------	497.2	--------	--------	--------	--------
C13-C32	4.882	197437.09	397.14	--------	497.2	--------	--------	--------	--------
p-Terphenyl	4.882	49813.60	79.88	99.85	623.6	--------	--------	622.67	-0.15
C18-C28	5.118	53351.45	107.31	--------	497.2	--------	--------	--------	--------
C10-C40	5.119	250303.48	503.48	--------	497.2	--------	--------	--------	--------
C13-C35	5.162	198271.54	398.82	--------	497.2	--------	--------	--------	--------
C13-C40	5.622	198779.53	399.84	--------	497.2	--------	--------	--------	--------
Motor Oil	5.876	61844.97	120.75	--------	512.2	123.69	-75.85	--------	--------
C18-C36	5.963	64573.15	129.89	--------	497.2	--------	--------	--------	--------
C23-C32	6.096	5963.56	12.00	--------	497.2	--------	--------	--------	--------
Hydraulic Oil	6.351	29314.80	61.44	--------	477.2	--------	--------	--------	--------
C23-C36	6.458	6845.20	13.77	--------	497.2	--------	--------	--------	--------
C22-C40	6.806	7353.19	14.79	--------	497.2	--------	--------	--------	--------
C23-C40	6.838	7353.19	14.79	--------	497.2	--------	--------	--------	--------
RRO	6.933	2145.73	8.44	--------	254.2	--------	--------	--------	--------
>C23	7.027	7353.19	14.79	--------	497.2	--------	--------	--------	--------
C24-C40	7.152	4596.90	9.25	--------	497.2	--------	--------	--------	--------
C28-C36	7.220	881.64	1.77	--------	497.2	--------	--------	--------	--------
C26-C40	7.422	1711.61	3.44	--------	497.2	--------	--------	--------	--------
C32-C40	8.079	1389.64	2.80	--------	497.2	--------	--------	--------	--------
>C32	8.180	1342.44	2.70	--------	497.2	--------	--------	--------	--------
C36-C40	8.398	507.99	1.02	--------	497.2	--------	--------	--------	--------
			8453.20						

Report stored in ASCII file: D:\GC-21\Data\O082713\o0827_014.TX0

Software Version : 6.3.1.0504
Sample Name : S3H0319-CCV4
Instrument Name : GC-21
Rack/Vial : 1/99
Sample Amount : 1.000000
Cycle : 2

Date : 8/28/2013 4:41:56 PM
Data Acquisition Time : 8/27/2013 2:08:51 PM
Channel : A
Operator : gc
Dilution Factor : 1.000000

Result File : D:\GC-21\Data\O082713\o0827_015.rst
Sequence File : D:\GC-21\Sequence\O082713.seq

Instrument Run Log
547,"Not ready:","F inl pres 12.8 psi"," at runtime 0.16"
614,"Not ready:","Host system"," at runtime 0.98"
0,"","","",""

Continuing Calibration Report

Component Name	Time [min]	Area [µV·s]	Final Conc PPM	Surrogate % Recovery	Avg RF	CCRF Hydrocarbons	%D Hydrocarbons	CCRF Surrogate	%D Surrogate
C8-C10	1.076	12336.91	24.82	--------	497.2	--------	--------	--------	--------
Jet Fuel	2.257	20403.38	48.62	--------	419.7	--------	--------	--------	--------
C12-C14	2.464	4564.69	9.18	--------	497.2	--------	--------	--------	--------
C10-C18	2.616	8851.05	17.80	--------	497.2	--------	--------	--------	--------
C8-C22	2.953	58001.26	116.67	--------	497.2	--------	--------	--------	--------
C13-C20	3.464	17224.04	34.65	--------	497.2	--------	--------	--------	--------
C9-C25	3.466	125822.21	253.09	--------	497.2	--------	--------	--------	--------
C12-C22	3.567	45664.35	91.85	--------	497.2	--------	--------	--------	--------
C13-C22	3.615	33423.78	67.23	--------	497.2	--------	--------	--------	--------
C13-C23	3.743	50329.73	101.24	--------	497.2	--------	--------	--------	--------
Diesel	3.876	162125.50	326.11	--------	497.2	324.25	-34.78	--------	--------
C10-C28	3.876	162125.50	326.11	--------	497.2	--------	--------	--------	--------
C13-C25	4.116	113053.58	227.40	--------	497.2	--------	--------	--------	--------
C8-C40	4.755	301679.42	606.82	--------	497.2	--------	--------	--------	--------
C10-C36	4.763	276340.25	555.85	--------	497.2	--------	--------	--------	--------
C13-C32	4.882	239110.32	480.96	--------	497.2	--------	--------	--------	--------
p-Terphenyl	4.882	50950.30	81.70	102.13	623.6	--------	--------	636.88	2.13
C18-C28	5.118	153274.46	308.31	--------	497.2	--------	--------	--------	--------
C10-C40	5.119	290375.66	584.08	--------	497.2	--------	--------	--------	--------
C13-C35	5.162	268872.74	540.83	--------	497.2	--------	--------	--------	--------
C13-C40	5.622	289943.95	583.21	--------	497.2	--------	--------	--------	--------
Motor Oil	5.876	261237.99	510.08	--------	512.2	522.48	2.02	--------	--------
C18-C36	5.963	268520.39	540.12	--------	497.2	--------	--------	--------	--------
C23-C32	6.096	194503.57	391.24	--------	497.2	--------	--------	--------	--------
Hydraulic Oil	6.351	269509.31	564.82	--------	477.2	--------	--------	--------	--------
C23-C36	6.458	235448.97	473.60	--------	497.2	--------	--------	--------	--------
C22-C40	6.806	255487.02	513.90	--------	497.2	--------	--------	--------	--------
C23-C40	6.838	255487.02	513.90	--------	497.2	--------	--------	--------	--------
RRO	6.933	187823.75	738.99	--------	254.2	--------	--------	--------	--------
>C23	7.027	244711.32	492.23	--------	497.2	--------	--------	--------	--------
C24-C40	7.152	225857.18	454.30	--------	497.2	--------	--------	--------	--------
C28-C36	7.220	109081.37	219.41	--------	497.2	--------	--------	--------	--------
C26-C40	7.422	174650.09	351.30	--------	497.2	--------	--------	--------	--------
C32-C40	8.079	62016.60	124.74	--------	497.2	--------	--------	--------	--------
>C32	8.180	50833.63	102.25	--------	497.2	--------	--------	--------	--------
C36-C40	8.398	18135.64	36.48	--------	497.2	--------	--------	--------	--------
			11413.87						

Report stored in ASCII file: D:\GC-21\Data\O082713\o0827_015.TX0

Software Version : 6.3.1.0504
Sample Name : S3H0319-CCV5
Instrument Name : GC-21
Rack/Vial : 1/98
Sample Amount : 1.000000
Cycle : 17

Date : 8/28/2013 4:42:15 PM
Data Acquisition Time : 8/27/2013 7:03:33 PM
Channel : A
Operator : tcprocess
Dilution Factor : 1.000000

Result File : D:\GC-21\Data\O082713\o0827_032.rst
Sequence File : D:\GC-21\Sequence\O082713.seq

Instrument Run Log
547,"Not ready:","F inl pres 12.7 psi"," at runtime 0.15"
614,"Not ready:","Host system"," at runtime 0.97"
0,"","","",""

Continuing Calibration Report

Component Name	Time [min]	Area [µV·s]	Final Conc PPM	Surrogate % Recovery	Avg RF	CCRF Hydrocarbons	%D Hydrocarbons	CCRF Surrogate	%D Surrogate
C8-C10	1.076	21808.29	43.87	--------	497.2	--------	--------	--------	--------
Jet Fuel	2.257	183415.40	437.04	--------	419.7	--------	--------	--------	--------
C12-C14	2.464	69704.94	140.21	--------	497.2	--------	--------	--------	--------
C10-C18	2.616	169465.98	340.87	--------	497.2	--------	--------	--------	--------
C8-C22	2.953	229702.90	462.04	--------	497.2	--------	--------	--------	--------
C13-C20	3.464	163463.86	328.80	--------	497.2	--------	--------	--------	--------
C9-C25	3.466	227809.90	458.23	--------	497.2	--------	--------	--------	--------
C12-C22	3.567	187482.85	377.11	--------	497.2	--------	--------	--------	--------
C13-C22	3.615	169639.23	341.22	--------	497.2	--------	--------	--------	--------
C13-C23	3.743	172087.46	346.15	--------	497.2	--------	--------	--------	--------
Diesel	3.876	218830.09	440.17	--------	497.2	437.66	-11.97	--------	--------
C10-C28	3.876	218830.09	440.17	--------	497.2	--------	--------	--------	--------
C13-C25	4.116	174397.49	350.79	--------	497.2	--------	--------	--------	--------
C8-C40	4.755	237895.46	478.52	--------	497.2	--------	--------	--------	--------
C10-C36	4.763	219583.23	441.68	--------	497.2	--------	--------	--------	--------
C13-C32	4.882	174444.68	350.89	--------	497.2	--------	--------	--------	--------
p-Terphenyl	4.884	44398.00	71.19	88.99	623.6	--------	--------	554.98	-11.01
C18-C28	5.118	46608.68	93.75	--------	497.2	--------	--------	--------	--------
C10-C40	5.119	219583.23	441.68	--------	497.2	--------	--------	--------	--------
C13-C35	5.162	174457.18	350.91	--------	497.2	--------	--------	--------	--------
C13-C40	5.622	174457.18	350.91	--------	497.2	--------	--------	--------	--------
Motor Oil	5.876	53721.06	104.89	--------	512.2	107.44	-79.02	--------	--------
C18-C36	5.963	55633.72	111.91	--------	497.2	--------	--------	--------	--------
C23-C32	6.096	4805.45	9.67	--------	497.2	--------	--------	--------	--------
Hydraulic Oil	6.351	23712.94	49.70	--------	477.2	--------	--------	--------	--------
C23-C36	6.458	4817.96	9.69	--------	497.2	--------	--------	--------	--------
C22-C40	6.806	4817.96	9.69	--------	497.2	--------	--------	--------	--------
C23-C40	6.838	4817.96	9.69	--------	497.2	--------	--------	--------	--------
RRO	6.933	561.58	2.21	--------	254.2	--------	--------	--------	--------
>C23	7.027	4817.96	9.69	--------	497.2	--------	--------	--------	--------
C24-C40	7.152	2168.90	4.36	--------	497.2	--------	--------	--------	--------
C28-C36	7.220	12.50	0.03	--------	497.2	--------	--------	--------	--------
C26-C40	7.422	59.70	0.12	--------	497.2	--------	--------	--------	--------
C32-C40	8.079	12.50	0.03	--------	497.2	--------	--------	--------	--------
>C32	8.180	12.50	0.03	--------	497.2	--------	--------	--------	--------
C36-C40	8.398	0.00	0.00	--------	--------	--------	--------	--------	--------
			7407.91						

Report stored in ASCII file: D:\GC-21\Data\O082713\o0827_032.TX0

Software Version : 6.3.1.0504
Sample Name : S3H0319-CCV6
Instrument Name : GC-21
Rack/Vial : 1/99
Sample Amount : 1.000000
Cycle : 18

Date : 8/28/2013 4:42:40 PM
Data Acquisition Time : 8/27/2013 7:20:11 PM
Channel : A
Operator : tcprocess
Dilution Factor : 1.000000

Result File : D:\GC-21\Data\O082713\o0827_033.rst
Sequence File : D:\GC-21\Sequence\O082713.seq

Instrument Run Log
547,"Not ready:","F inl pres 12.8 psi"," at runtime 0.15"
614,"Not ready:","Host system"," at runtime 0.98"
0,"","","",""

Continuing Calibration Report

Component Name	Time [min]	Area [µV·s]	Final Conc PPM	Surrogate % Recovery	Avg RF	CCRF Hydrocarbons	%D Hydrocarbons	CCRF Surrogate	%D Surrogate
C8-C10	1.076	4834.38	9.72	--------	497.2	--------	--------	--------	--------
Jet Fuel	2.257	7762.30	18.50	--------	419.7	--------	--------	--------	--------
C12-C14	2.464	585.04	1.18	--------	497.2	--------	--------	--------	--------
C10-C18	2.616	3237.07	6.51	--------	497.2	--------	--------	--------	--------
C8-C22	2.953	45826.34	92.18	--------	497.2	--------	--------	--------	--------
C13-C20	3.464	9396.77	18.90	--------	497.2	--------	--------	--------	--------
C9-C25	3.466	121121.03	243.63	--------	497.2	--------	--------	--------	--------
C12-C22	3.567	39461.76	79.38	--------	497.2	--------	--------	--------	--------
C13-C22	3.615	27950.83	56.22	--------	497.2	--------	--------	--------	--------
C13-C23	3.743	44029.56	88.56	--------	497.2	--------	--------	--------	--------
Diesel	3.876	171466.80	344.90	--------	497.2	342.93	-31.02	--------	--------
C10-C28	3.876	171466.80	344.90	--------	497.2	--------	--------	--------	--------
C13-C25	4.116	114653.44	230.62	--------	497.2	--------	--------	--------	--------
C8-C40	4.755	318203.71	640.05	--------	497.2	--------	--------	--------	--------
C10-C36	4.763	301850.72	607.16	--------	497.2	--------	--------	--------	--------
C13-C32	4.882	261020.41	525.03	--------	497.2	--------	--------	--------	--------
p-Terphenyl	4.883	59206.25	94.94	118.68	623.6	--------	--------	740.08	18.68
C18-C28	5.118	168229.74	338.39	--------	497.2	--------	--------	--------	--------
C10-C40	5.119	313794.26	631.18	--------	497.2	--------	--------	--------	--------
C13-C35	5.162	292994.21	589.35	--------	497.2	--------	--------	--------	--------
C13-C40	5.622	312161.05	627.90	--------	497.2	--------	--------	--------	--------
Motor Oil	5.876	291699.50	569.55	--------	512.2	583.40	13.91	--------	--------
C18-C36	5.963	299051.09	601.53	--------	497.2	--------	--------	--------	--------
C23-C32	6.096	218132.54	438.77	--------	497.2	--------	--------	--------	--------
Hydraulic Oil	6.351	302340.12	633.63	--------	477.2	--------	--------	--------	--------
C23-C36	6.458	265146.40	533.33	--------	497.2	--------	--------	--------	--------
C22-C40	6.806	283737.27	570.73	--------	497.2	--------	--------	--------	--------
C23-C40	6.838	283737.27	570.73	--------	497.2	--------	--------	--------	--------
RRO	6.933	212869.44	837.54	--------	254.2	--------	--------	--------	--------
>C23	7.027	272802.30	548.73	--------	497.2	--------	--------	--------	--------
C24-C40	7.152	251621.45	506.13	--------	497.2	--------	--------	--------	--------
C28-C36	7.220	124456.33	250.34	--------	497.2	--------	--------	--------	--------
C26-C40	7.422	195073.40	392.38	--------	497.2	--------	--------	--------	--------
C32-C40	8.079	66180.70	133.12	--------	497.2	--------	--------	--------	--------
>C32	8.180	51140.64	102.87	--------	497.2	--------	--------	--------	--------
C36-C40	8.398	17446.19	35.09	--------	497.2	--------	--------	--------	--------
			12313.66						

Report stored in ASCII file: D:\GC-21\Data\O082713\o0827_033.TX0

Software Version	: 6.3.1.0504	Date	: 9/4/2013 2:51:30 PM
Sample Name	: S3I0010-CCV1	Data Acquisition Time	: 9/4/2013 8:51:16 AM
Instrument Name	: GC-21	Channel	: A
Rack/Vial	: 1/98	Operator	: gc
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 3		

Result File : D:\GC-21\Data\O090413\o0904_003.rst
Sequence File : D:\GC-21\Sequence\O090413.seq

Instrument Run Log
547,"Not ready:","F inl pres 12.8 psi"," at runtime 0.16"
614,"Not ready:","Host system"," at runtime 0.97"
547,"Not ready:","F inl pres 14.3 psi"," at runtime 0.98"
0,"","","",""

Continuing Calibration Report

Component Name	Time [min]	Area [µV·s]	Final Conc PPM	Surrogate % Recovery	Avg RF	CCRF Hydrocarbons	%D Hydrocarbons	CCRF Surrogate	%D Surrogate
C8-C10	1.076	25823.75	51.94	--------	497.2	--------	--------	--------	--------
Jet Fuel	2.257	237640.00	566.25	--------	419.7	--------	--------	--------	--------
C12-C14	2.464	91441.02	183.93	--------	497.2	--------	--------	--------	--------
C10-C18	2.616	222194.29	446.94	--------	497.2	--------	--------	--------	--------
C8-C22	2.953	299162.54	601.75	--------	497.2	--------	--------	--------	--------
C13-C20	3.464	215453.10	433.38	--------	497.2	--------	--------	--------	--------
C9-C25	3.466	296871.19	597.14	--------	497.2	--------	--------	--------	--------
C12-C22	3.567	246406.55	495.64	--------	497.2	--------	--------	--------	--------
C13-C22	3.615	223111.43	448.78	--------	497.2	--------	--------	--------	--------
C13-C23	3.743	224885.31	452.35	--------	497.2	--------	--------	--------	--------
Diesel	3.876	285717.49	574.71	--------	497.2	571.43	14.94	--------	--------
C10-C28	3.876	285717.49	574.71	--------	497.2	--------	--------	--------	--------
C13-C25	4.116	228401.60	459.42	--------	497.2	--------	--------	--------	--------
C8-C40	4.755	311315.29	626.20	--------	497.2	--------	--------	--------	--------
C10-C36	4.763	289558.86	582.44	--------	497.2	--------	--------	--------	--------
C13-C32	4.882	228415.60	459.45	--------	497.2	--------	--------	--------	--------
p-Terphenyl	4.882	53160.30	85.25	106.56	623.6	--------	--------	664.50	6.56
C18-C28	5.118	59956.38	120.60	--------	497.2	--------	--------	--------	--------
C10-C40	5.119	290007.12	583.34	--------	497.2	--------	--------	--------	--------
C13-C35	5.162	230069.72	462.78	--------	497.2	--------	--------	--------	--------
C13-C40	5.622	231756.47	466.17	--------	497.2	--------	--------	--------	--------
Motor Oil	5.876	71181.29	138.98	--------	512.2	142.36	-72.20	--------	--------
C18-C36	5.963	74793.52	150.44	--------	497.2	--------	--------	--------	--------
C23-C32	6.096	5304.17	10.67	--------	497.2	--------	--------	--------	--------
Hydraulic Oil	6.351	32752.18	68.64	--------	477.2	--------	--------	--------	--------
C23-C36	6.458	6958.29	14.00	--------	497.2	--------	--------	--------	--------
C22-C40	6.806	8645.04	17.39	--------	497.2	--------	--------	--------	--------
C23-C40	6.838	8645.04	17.39	--------	497.2	--------	--------	--------	--------
RRO	6.933	3301.91	12.99	--------	254.2	--------	--------	--------	--------
>C23	7.027	8645.04	17.39	--------	497.2	--------	--------	--------	--------
C24-C40	7.152	5660.17	11.39	--------	497.2	--------	--------	--------	--------
C28-C36	7.220	1654.12	3.33	--------	497.2	--------	--------	--------	--------
C26-C40	7.422	3354.87	6.75	--------	497.2	--------	--------	--------	--------
C32-C40	8.079	3340.87	6.72	--------	497.2	--------	--------	--------	--------
>C32	8.180	3340.87	6.72	--------	497.2	--------	--------	--------	--------
C36-C40	8.398	1686.75	3.39	--------	497.2	--------	--------	--------	--------
			9759.33						

Report stored in ASCII file: D:\GC-21\Data\O090413\o0904_003.TX0

Software Version : 6.3.1.0504
Sample Name : S3I0010-CCV3
Instrument Name : GC-21
Rack/Vial : 1/98
Sample Amount : 1.000000
Cycle : 21

Date : 9/4/2013 2:53:39 PM
Data Acquisition Time : 9/4/2013 1:47:24 PM
Channel : A
Operator : gc
Dilution Factor : 1.000000

Result File : D:\GC-21\Data\O090413\o0904_021.rst
Sequence File : D:\GC-21\Sequence\O090413.seq

Instrument Run Log
547,"Not ready:","F inl pres 12.8 psi"," at runtime 0.15"
614,"Not ready:","Host system"," at runtime 0.98"
614,"Not ready:","Host system"," at runtime 1.33"
598,"Not ready:","Oven temp 315"," at runtime 8.27"
0,"","",""

Continuing Calibration Report

Component Name	Time [min]	Area [µV·s]	Final Conc PPM	Surrogate % Recovery	Avg RF	CCRF Hydrocarbons	%D Hydrocarbons	CCRF Surrogate	%D Surrogate
C8-C10	1.076	23388.07	47.04	--------	497.2	--------	--------	--------	--------
Jet Fuel	2.257	231042.50	550.53	--------	419.7	--------	--------	--------	--------
C12-C14	2.464	89696.46	180.42	--------	497.2	--------	--------	--------	--------
C10-C18	2.616	217247.23	436.98	--------	497.2	--------	--------	--------	--------
C8-C22	2.953	290553.29	584.44	--------	497.2	--------	--------	--------	--------
C13-C20	3.464	211283.00	424.99	--------	497.2	--------	--------	--------	--------
C9-C25	3.466	289361.72	582.04	--------	497.2	--------	--------	--------	--------
C12-C22	3.567	241003.60	484.77	--------	497.2	--------	--------	--------	--------
C13-C22	3.615	218646.87	439.80	--------	497.2	--------	--------	--------	--------
C13-C23	3.743	220216.10	442.96	--------	497.2	--------	--------	--------	--------
Diesel	3.876	279189.28	561.58	--------	497.2	558.38	12.32	--------	--------
C10-C28	3.876	279189.28	561.58	--------	497.2	--------	--------	--------	--------
C13-C25	4.116	224012.74	450.59	--------	497.2	--------	--------	--------	--------
C8-C40	4.755	309122.21	621.79	--------	497.2	--------	--------	--------	--------
C10-C36	4.763	288032.10	579.37	--------	497.2	--------	--------	--------	--------
C13-C32	4.882	226742.40	456.08	--------	497.2	--------	--------	--------	--------
p-Terphenyl	4.882	51032.50	81.83	102.29	623.6	--------	--------	637.91	2.29
C18-C28	5.118	58464.23	117.60	--------	497.2	--------	--------	--------	--------
C10-C40	5.119	290137.96	583.60	--------	497.2	--------	--------	--------	--------
C13-C35	5.162	230938.40	464.52	--------	497.2	--------	--------	--------	--------
C13-C40	5.622	234240.47	471.17	--------	497.2	--------	--------	--------	--------
Motor Oil	5.876	74120.51	144.72	--------	512.2	148.24	-71.06	--------	--------
C18-C36	5.963	78051.09	157.00	--------	497.2	--------	--------	--------	--------
C23-C32	6.096	7324.26	14.73	--------	497.2	--------	--------	--------	--------
Hydraulic Oil	6.351	38817.53	81.35	--------	477.2	--------	--------	--------	--------
C23-C36	6.458	12291.53	24.72	--------	497.2	--------	--------	--------	--------
C22-C40	6.806	15578.31	31.34	--------	497.2	--------	--------	--------	--------
C23-C40	6.838	15578.31	31.34	--------	497.2	--------	--------	--------	--------
RRO	6.933	8682.30	34.16	--------	254.2	--------	--------	--------	--------
>C23	7.027	15593.60	31.37	--------	497.2	--------	--------	--------	--------
C24-C40	7.152	12799.04	25.74	--------	497.2	--------	--------	--------	--------
C28-C36	7.220	6877.81	13.83	--------	497.2	--------	--------	--------	--------
C26-C40	7.422	10227.73	20.57	--------	497.2	--------	--------	--------	--------
C32-C40	8.079	8507.03	17.11	--------	497.2	--------	--------	--------	--------
>C32	8.180	7498.07	15.08	--------	497.2	--------	--------	--------	--------
C36-C40	8.398	3144.87	6.33	--------	497.2	--------	--------	--------	--------
			9773.07						

Report stored in ASCII file: D:\GC-21\Data\O090413\o0904_021.TX0

SUMMARY OF SURROGATE RECOVERIES

Advanced Technology Laboratories 3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

SYSTEM MONITORING COMPOUND SUMMARY

EPA 8015B

Client:	Ninyo & Moore - SD		
Work Order:	1302581	Matrix:	Soil
Project:	CLAIREMONT H.S., 105338071 & 105338088	Instrument:	GC-21

	p-terphenyl (55% - 153%)
1302581-15	95.4
1302581-19	107
1302581-21	106
1302581-22	91.9
B3H0499-BLK1	91.9
B3H0499-BS1	95.8
B3H0499-MS1	107
B3H0499-MSD1	110

BA 09/16/13

SYSTEM MONITORING COMPOUND SUMMARY

EPA 8015B

Client:	**Ninyo & Moore - SD**		
Work Order:	**1302545**	Matrix:	Soil
Project:	**CLAIREMONT H.S., 105338071 & 105338088**	Instrument:	GC-21

	p-terphenyl (55% - 153%)
1302545-01	139
1302545-05	118
1302545-11	100
1302545-17	104
B3I0015-BLK1	108
B3I0015-BS1	105
B3I0015-MS1	112
B3I0015-MSD1	103

BA 09/17/13

Method EPA 8081A

ANALYSIS RUN LOG

Injection Log

Data Directory: D:\13-07-30\

Line	Vial	FileName	SampleName	MiscInfo	Injected
1	95	C0730001.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	30 Jul 2013 2:37 pm
2	94	C0730002.D	,tricresyl phosphate,@A3A0074	1,PRIME	30 Jul 2013 2:50 pm
3	95	C0730003.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	30 Jul 2013 3:03 pm
4	96	C0730004.D	SEQ-PEM1@A2B0372	1,PEM (DECOMPOSITIO	30 Jul 2013 6:19 pm
5	1	C0730005.D	SEQ-ICAL1, 2/4 ppb*	1,A3E0284,	30 Jul 2013 6:32 pm
6	1	C0730006.D	SEQ-ICAL1, 2/4 ppb	1,A3E0284,	30 Jul 2013 6:46 pm
7	2	C0730007.D	SEQ-ICAL2, 5/10 ppb	1,A3E0285,	30 Jul 2013 6:59 pm
8	3	C0730008.D	SEQ-ICAL3, 20/40 ppb	1,A3E0286,	30 Jul 2013 7:12 pm
9	4	C0730009.D	SEQ-ICAL4, 50/100 ppb	1,A3E0287,	30 Jul 2013 7:25 pm
10	5	C0730010.D	SEQ-ICAL5, 100/200 ppb	1,A3E0288,	30 Jul 2013 7:38 pm
11	6	C0730011.D	SEQ-ICAL6, 150/300 ppb	1,A3E0289,	30 Jul 2013 7:51 pm
12	7	C0730012.D	SEQ-ICAL7, 200/400 ppb	1,A3E0290,	30 Jul 2013 8:04 pm
13	95	C0730013.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	30 Jul 2013 8:17 pm
14	8	C0730014.D	SEQ-ICV1, 100 ppb	1,A3E0291,	30 Jul 2013 8:31 pm
15	8	C0730015.D	SEQ-ICV1, 100 ppb } both passed	1,A3E0291,	30 Jul 2013 8:44 pm
16	97	C0730016.D	SEQ-CCV1@A3E0287,	1,PESTICIDE,	30 Jul 2013 8:57 pm
17	98	C0730017.D	SEQ-CCV2@A3B0454,CHLORDANE	1CHLORDANE,	30 Jul 2013 9:10 pm
18	99	C0730018.D	SEQ-CCV3@A3B0455,TOXAPHENE	1,TOXAPHENE,	30 Jul 2013 9:23 pm
19	95	C0730019.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	30 Jul 2013 9:36 pm
20	95	C0730020.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	30 Jul 2013 9:49 pm
21	95	C0730021.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	30 Jul 2013 10:02 pm

* not report, bad injection

INSTRUMENT ID.: GC-9
QUANT. METHOD: 8081 0730
CHLO 0730, TOX 0730
SIGNATURE: [illegible] INITIAL [illegible]

Injection Log

Data Directory: D:\13-08-28\

Line	Vial	FileName	SampleName	MiscInfo	Injected
1	95	C0828001.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	28 Aug 2013 8:37 am
2	94	C0828002.D	,tricresyl phosphate,@A3A0074	1,PRIME	28 Aug 2013 8:50 am
3	95	C0828003.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	28 Aug 2013 9:03 am
4	96	C0828004.D	SEQ-PEM1@A2B0372	1,PEM (DECOMPOSITIO	28 Aug 2013 9:16 am
5	97	C0828005.D	SEQ-CCV1@A3E0287,	1,PESTICIDE,	28 Aug 2013 9:29 am
6	98	C0828006.D	SEQ-CCV2@A3B0454,CHLORDANE	1CHLORDANE,	28 Aug 2013 9:43 am
7	99	C0828007.D	SEQ-CCV3@A3B0455,TOXAPHENE	1,TOXAPHENE,	28 Aug 2013 9:56 am
8	1	C0828008.D	B3H0508-BLK1	1,B3H0508	28 Aug 2013 10:09 am
9	2	C0828009.D	B3H0508-BS1	1,B3H0508	28 Aug 2013 10:22 am
10	3	C0828010.D	B3H0508-BSD1	1,B3H0508	28 Aug 2013 10:35 am
11	4	C0828011.D	1302559-01	1,B3H0508	28 Aug 2013 10:49 am
12	5	C0828012.D	1302573-01	1,B3H0508	28 Aug 2013 11:02 am
13	95	C0828013.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	28 Aug 2013 11:15 am
14	95	C0828014.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	28 Aug 2013 11:28 am
15	95	C0828015.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	28 Aug 2013 11:41 am
16	6	C0828016.D	B3H0528-BLK1	1,B3H0528,	28 Aug 2013 12:40 pm
17	7	C0828017.D	B3H0528-BS1	1,B3H0528,	28 Aug 2013 12:53 pm
18	8	C0828018.D	B3H0528-MS1	1,B3H0528,	28 Aug 2013 1:06 pm
19	9	C0828019.D	B3H0528-MSD1	1,B3H0528,	28 Aug 2013 1:20 pm
20	10	C0828020.D	1302581-19	1,B3H0528,	28 Aug 2013 1:33 pm
21	11	C0828021.D	1302476-07	1,B3H0528,	28 Aug 2013 1:46 pm
22	12	C0828022.D	1302617-01	1,B3H0528,	28 Aug 2013 1:59 pm
23	13	C0828023.D	1302617-02	1,B3H0528,	28 Aug 2013 2:12 pm
24	14	C0828024.D	1302581-21	1,B3H0528,	28 Aug 2013 2:26 pm
25	15	C0828025.D	1302581-22	1,B3H0528,	28 Aug 2013 2:39 pm
26	16	C0828026.D	1302581-15	1,B3H0528,	28 Aug 2013 2:52 pm
27	95	C0828027.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	28 Aug 2013 3:05 pm
28	95	C0828028.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	28 Aug 2013 3:18 pm
29	95	C0828029.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	28 Aug 2013 5:12 pm
30	17	C0828030.D	1302624-01	1,B3H0528,	28 Aug 2013 5:25 pm
31	95	C0828031.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	28 Aug 2013 5:38 pm
32	95	C0828032.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	28 Aug 2013 5:51 pm

INSTRUMENT ID.: GC-9
QUANT. METHOD: 80810820
ch100828, TOX0828
SIGNATURE: [illegible] INITIAL [illegible]

Injection Log

Data Directory: D:\13-09-04\

Line	Vial	FileName	SampleName	MiscInfo	Injected
1	95	C0904001.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	04 Sep 2013 5:39 am
2	94	C0904002.D	,tricresyl phosphate,@A3A0074	1,PRIME	04 Sep 2013 5:52 am
3	95	C0904003.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	04 Sep 2013 6:05 am
4	96	C0904004.D	SEQ-PEM1@~~A2B0372~~ A360387	1,PEM (DECOMPOSITIO	04 Sep 2013 6:18 am
5	97	C0904005.D	SEQ-CCV1@A3E0287,	1,PESTICIDE,	04 Sep 2013 6:32 am
6	98	C0904006.D	SEQ-CCV2@A3B0454, CHLORDANE	1CHLORDANE,	04 Sep 2013 6:45 am
7	99	C0904007.D	SEQ-CCV3@A3B0455,TOXAPHENE	1,TOXAPHENE,	04 Sep 2013 6:58 am
8	1	C0904008.D	B3I0018-BLK1	1,B3I0018,	04 Sep 2013 7:17 am
9	2	C0904009.D	B3I0018-BS1	1,B3I0018,	04 Sep 2013 7:43 am
10	3	C0904010.D	B3I0018-MS1	1,B3I0018,	04 Sep 2013 7:57 am
11	4	C0904011.D	B3I0018-MSD1	1,B3I0018,	04 Sep 2013 8:10 am
12	5	C0904012.D	1302547-05	1,B3I0018,	04 Sep 2013 9:07 am
13	6	C0904013.D	1302547-11	1,B3I0018,	04 Sep 2013 9:20 am
14	7	C0904014.D	1302547-12	1,B3I0018,	04 Sep 2013 9:33 am
15	8	C0904015.D	1302545-17	1,B3I0018,	04 Sep 2013 9:46 am
16	9	C0904016.D	1302545-11	1,B3I0018,	04 Sep 2013 10:00 am
17	10	C0904017.D	1302545-05	1,B3I0018,	04 Sep 2013 10:13 am
18	11	C0904018.D	1302545-01	1,B3I0018,	04 Sep 2013 10:26 am
19	95	C0904019.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	04 Sep 2013 10:39 am
20	95	C0904020.D	,SOLVENT BLANK,PESTICIDES,	1,HEXANE	04 Sep 2013 10:52 am

M 9/4/13

INSTRUMENT ID.: 0C9
QUANT. METHOD: 8081 0730, 8081 0730
0C00904, T080904
SIGNATURE: INITIAL M

ANALYSIS SEQUENCE

Sequence Comments:

S3I0024

Instrument: GC-04
Calibration ID: UNASSIGNED

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3I0024-PEM1	QC		1	A3H0358		
S3I0024-CCV1	QC		2	A3E0287	A3E0282	
S3I0024-CCV2	QC		3	A3H0357	A3E0282	
S3I0024-CCV3	QC		4	A3H0358	A3E0282	
B3I0018-BLK1	QC		5		A3E0282	
B3I0018-BS1	QC		6		A3E0282	
B3I0018-MS1	QC		7		A3E0282	
B3I0018-MSD1	QC		8		A3E0282	
1302547-05	8081	A	9		A3E0282	
1302547-11	8081	A	10		A3E0282	
1302547-12	8081	A	11		A3E0282	
1302545-17	8081	A	12		A3E0282	
1302545-11	8081	A	13		A3E0282	
1302545-05	8081	A	14		A3E0282	
1302545-01	8081	A	15		A3E0282	

Samples Loaded By — Date: 9/4/13

Data Processed By — Date: 9/4/13

SAMPLE PREPARATION LOG

PREPARATION BENCH SHEET

B3H0528

Advanced Technology Laboratories

Matrix: Soil
Date Prepared: 08/28/13 09:36
End Date/Time: 08/28/13 17:04

Prepared by: SM
IS Code: _____
IS Volume: 1

Prep Code: GCSEMI_PCB/PEST

Lab Number	Analysis	Sample pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Surrogate ID	ul Surrogate	Extraction Comments
1302476-07	8081		30.0	5						A3H0032	500	
1302581-15	8081		30.0	5						A3H0032	500	
1302581-19	8081		30.0	5						A3H0032	500	
1302581-19	8082		30.0	5						A3H0032	500	Added for BatchQC in: B3H0528
1302581-21	8081		30.0	5						A3H0032	500	
1302581-22	8081		30.0	5						A3H0032	500	
1302617-01	8081		30.0	5						A3H0032	500	
1302617-02	8081		30.0	5						A3H0032	500	
1302624-01	8081		30.0	5						A3H0032	500	
1302624-01	8082		30.0	5						A3H0032	500	
B3H0528-BLK1	QC		30.0	5						A3H0032	500	
B3H0528-BLK2	QC		30.0	5						A3H0032	500	
B3H0528-BS1	QC		30.0	5	A3G0340			500		A3H0032	500	
B3H0528-BS2	QC		30.0	5	A3D0057			500		A3H0032	500	
B3H0528-MS1	QC		30.0	5	A3G0340		1302581-19	500		A3H0032	500	
B3H0528-MS2	QC		30.0	5	A3D0057		1302624-01	500		A3H0032	500	
B3H0528-MSD1	QC		30.0	5	A3G0340		1302581-19	500		A3H0032	500	
B3H0528-MSD2	QC		30.0	5	A3D0057		1302624-01	500		A3H0032	500	

8-28-13
Prepared By — Date

8/29/13
Preparation Reviewed By — Date

8/28/13
Extracts Received By — Date

Printed: 8/28/2013 5:05:05PM :: bch_ATL_SVOA(2)

PREPARATION BENCH SHEET

B3H0528

Advanced Technology Laboratories

Matrix: Soil
Date Prepared: 08/28/13 15:20
End Date/Time: 08/28/13 17:04

Prepared by: SM
IS Code: _____
IS Volume: _____

Prep Code: GCSEMI_PCB/PEST

Lab Number	Analysis	Sample pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Surrogate ID	ul Surrogate	Extraction Comments

Number	Reagent Name
A3E0351	Sand
A3E0403	Acetone
A3G0434	Methylene Chloride
A3G0436	Sodium Sulfate
A3H0095	HEXANE

Prepared By: 8-28-13 Date

Preparation Reviewed By: 8/29/13 Date

Extracts Received By: 8/28/13 Date

Printed: 8/28/2013 5:05:05PM :: bch_ATL_SVOA(2)

CLEANUP BENCH SHEET

C3H2801

Advanced Technology Laboratories

Matrix: Soil | **Cleanup using: SVOA_PCB/PEST - EPA 3620B** | **Cleanup Date: 08/28/13**

Lab Number	Analysis	Cleaned By	Initial (mL)	Final (mL)	Client	Cleanup Comments
1302581-15	8081	SM	1	1	Ninyo & Moore - SD	
1302581-19	8081	SM	1	1	Ninyo & Moore - SD	
1302581-21	8081	SM	1	1	Ninyo & Moore - SD	
1302581-22	8081	SM	1	1	Ninyo & Moore - SD	
1302617-01	8081	SM	1	1	Excel Paving	
1302617-02	8081	SM	1	1	Excel Paving	
1302624-01	8081	SM	1	1	Northrop Grumman Space Technology	
B3H0528-BLK1	-	SM	1	1		
B3H0528-BS1	-	SM	1	1		
B3H0528-MS1	-	SM	1	1		
B3H0528-MSD1	-	SM	1	1		

Extracts Cleaned Up By: 8-28-13 Date

Cleanup Reviewed By: 8/29/13 Date

Printed: 8/28/2013 5:03:15PM :: cub_ATL_Default

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PREPARATION BENCH SHEET

B3I0018

Advanced Technology Laboratories

Matrix: Soil
Date Prepared: 09/03/13 11:37
End Date/Time: 09/03/13 16:18

Prepared by: AL
IS Code:
IS Volume:

Prep Code: GCSEMI_PCB/PEST

Lab Number	Analysis	Sample pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Surrogate ID	ul Surrogate	Extraction Comments
1302545-01	8081		30.0	5						A3H0032	500	
1302545-05	8081		30.0	5						A3H0032	500	
1302545-11	8081		30.0	5						A3H0032	500	
1302545-17	8081		30.0	5						A3H0032	500	
1302547-05	8081		30.0	5						A3H0032	500	
1302547-11	8081		30.0	5						A3H0032	500	
1302547-12	8081		30.0	5						A3H0032	500	
B3I0018-BLK1	QC		30.0	5						A3H0032	500	
B3I0018-BS1	QC		30.0	5	A3G0340			500		A3H0032	500	
B3I0018-MS1	QC		30.0	5	A3G0340		1302547-12	500		A3H0032	500	
B3I0018-MSD1	QC		30.0	5	A3G0340		1302547-12	500		A3H0032	500	

Number	Reagent Name
A3E0351	Sand
A3E0403	Acetone
A3G0434	Methylene Chloride
A3G0436	Sodium Sulfate
A3H0095	HEXANE

Prepared By	Date	Preparation Reviewed By	Date	Extracts Received By	Date
AL	9-3-13	[illegible]	9/5/13	[illegible]	9/3/13

Printed: 9/3/2013 4:18:54PM :: bch_ATL_SVOA(2)

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CLEANUP BENCH SHEET

C3I0305

Advanced Technology Laboratories

Matrix: Soil **Cleanup using: SVOA_PCB/PEST - EPA 3620B** **Cleanup Date: 09/03/13**

Lab Number	Analysis	Cleaned By	Initial (mL)	Final (mL)	Client	Cleanup Comments
1302545-01	8081	AL	1	1	Ninyo & Moore - SD	
1302545-11	8081	AL	1	1	Ninyo & Moore - SD	
1302545-17	8081	AL	1	1	Ninyo & Moore - SD	
1302547-05	8081	AL	1	1	Ninyo & Moore - SD	
B3I0018-BLK1	-	AL	1	1		
B3I0018-BS1	-	AL	1	1		

AL 9-3-13

Extracts Cleaned Up By Date

9/3/13

Cleanup Reviewed By Date

Printed: 9/3/2013 4:18:00PM :: cub_ATL_Default

SUMMARY RESULTS FOR DDT AND ENDRIN BREAKDOWN

Instrument Name	GC-09
Sample Name	SEQ-PEM1@A2B0372
Data File Name	C0730004.D
Date Acquired	7/30/2013 18:19

Signal #1

Name	Ret Time	Target Response
4,4' -DDE	6.21	28974800.18
4,4' -DDD	6.71	1792007.351
4,4' -DDT	6.96	639266564.8
	% Breakdown	**4.59**
Endrin aldehyde	7.07	3440071.961
Endrin ketone	7.70	18546897.39
Endrin	6.64	333418531.8
	% Breakdown	**6.19**

Signal #2

	Ret Time	Target Response
4,4' -DDE #2	5.58	18901199.77
4,4' -DDD #2	6.13	1113158.466
4,4' -DDT #2	6.37	401504972.7
	% Breakdown	**4.75**
Endrin aldehyde #2	6.61	1505084.35
Endrin ketone #2	7.17	13704046.62
Endrin #2	6.07	229681416.2
	% Breakdown	**6.21**

Instrument Name	GC-09
Sample Name	SEQ-PEM1@A2B0372
Data File Name	C0828004.D
Date Acquired	8/28/2013 9:16

Signal #1

Name	Ret Time	Target Response
4,4' -DDE	6.19	35251229.3
4,4' -DDD	6.69	4976770.131
4,4' -DDT	6.94	868987285.2
	% Breakdown	**4.42**
Endrin aldehyde	7.05	16298633.42
Endrin ketone	7.68	33300973.47
Endrin	6.61	422361907.8
	% Breakdown	**10.51**

Signal #2

	Ret Time	**Target Response**
4,4' -DDE #2	5.58	22527715.54
4,4' -DDD #2	6.13	3065248.992
4,4' -DDT #2	6.36	472667595.2
	% Breakdown	**5.14**
Endrin aldehyde #2	6.59	10651135.49
Endrin ketone #2	7.16	29488604.11
Endrin #2	6.05	258342500.1
	% Breakdown	**13.45**

Instrument Name	GC-09
Sample Name	SEQ-PEM1@~~A2B0372~~ A2G0387 [illegible] 9/4/13
Data File Name	C0904004.D
Date Acquired	9/4/2013 6:18

Signal #1

Name	Ret Time	Target Response
4,4' -DDE	6.19	34913527.26
4,4' -DDD	6.69	3808218.961
4,4' -DDT	6.94	804908908.2
	% Breakdown	**4.59**
Endrin aldehyde	7.05	9860636.899
Endrin ketone	7.68	25128600.71
Endrin	6.61	418075690.9
	% Breakdown	**7.72**

Signal #2

	Ret Time	Target Response
4,4' -DDE #2	5.57	22886135.88
4,4' -DDD #2	6.12	2230282.652
4,4' -DDT #2	6.36	455425119.1
	% Breakdown	**5.23**
Endrin aldehyde #2	6.59	6701057.415
Endrin ketone #2	7.16	20419276.74
Endrin #2	6.05	259840469.3
	% Breakdown	**9.45**

INITIAL CALIBRATION DATA SUMMARY

Response Factor Report GC-09

GC-9
ICAL

Method Path : C:\MSDCHEM\1\METHODS\PESTICIDES\
Method File : 80810730.M
Title : EPA 8081A Organoclorine Pesticides
Last Update : Wed Jul 31 05:49:48 2013
Response Via : Initial Calibration

Calibration Files
2 =C0730006.D 5 =C0730007.D 20 =C0730008.D
50 =C0730009.D 100 =C0730010.D 150 =C0730011.D

		Compound	2	5	20	50	100	150	Avg	%RSD
1)	I	1-Bromo-2-nitrobenzen	----------ISTD----------							
2)	S	Tetrachloro-m-xy	1.201	1.152	1.141	1.040	1.131	1.127	1.133	4.22
3)	T	alpha-BHC	1.441	1.495	1.534	1.582	1.808	1.876	1.665	11.87
4)	T	gamma-BHC	1.348	1.392	1.438	1.453	1.643	1.703	1.531	10.44
5)	T	beta-BHC	0.788	0.748	0.736	0.703	0.753	0.758	0.751	3.55
6)	T	Heptachlor	0.980	1.025	1.087	1.135	1.315	1.423	1.205	16.33
7)	T	delta-BHC	1.473	1.482	1.520	1.577	1.802	1.863	1.661	11.46
8)	T	Aldrin	1.555	1.566	1.540	1.553	1.707	1.781	1.645	7.23
9)	T	Heptachlor Epoxi	1.579	1.586	1.514	1.491	1.607	1.657	1.587	4.31
10)	T	gamma-Chlordane	1.611	1.635	1.576	1.568	1.704	1.760	1.663	5.29
11)	T	alpha-Chlordane	1.775	1.686	1.599	1.559	1.673	1.724	1.680	4.65
12)	T	Endosulfan I	1.564	1.558	1.481	1.452	1.567	1.613	1.552	4.19
13)	T	4,4' -DDE	1.548	1.545	1.577	1.579	1.708	1.755	1.642	6.20
14)	T	Dieldrin	1.663	1.629	1.619	1.624	1.750	1.793	1.699	4.95
15)	T	Endrin	1.357	1.396	1.387	1.357	1.412	1.450	1.403	2.98
16)	T	4,4' -DDD	1.406	1.328	1.363	1.313	1.375	1.433	1.384	4.08
17)	T	Endosulfan II	1.539	1.566	1.583	1.472	1.566	1.593	1.571	3.90
18)	T	4,4' -DDT	0.954	1.019	1.206	1.305	1.442	1.555	1.290	18.83
19)	T	Endrin aldehyde	1.241	1.168	1.109	1.060	1.096	1.175	1.148	5.46
20)	T	Endosulfan sulfa	1.335	1.398	1.334	1.315	1.388	1.454	1.385	4.38
21)	T	Methoxychlor	0.647	0.674	0.677	0.674	0.732	0.746	0.702	6.32
22)	T	Endrin ketone	1.611	1.643	1.580	1.525	1.662	1.651	1.623	3.41
23)	S	Decachlorobiphen	2.117	1.968	1.735	1.592	1.680	1.644	1.775	10.86

Signal #2 Calibration Files
2 =C0730006.D 5 =C0730007.D 20 =C0730008.D
50 =C0730009.D 100 =C0730010.D 150 =C0730011.D

		Compound	2	5	20	50	100	150	Avg	%RSD
1)	I	1-Bromo-2-nitrobenzen	----------ISTD----------							
2)	S	Tetrachloro-m-xy	1.261	1.258	1.199	1.041	1.089	1.084	1.146	7.96
3)	T	alpha-BHC	1.687	1.707	1.677	1.584	1.705	1.734	1.693	3.23
4)	T	gamma-BHC	1.564	1.574	1.541	1.437	1.527	1.556	1.538	3.10
5)	T	beta-BHC	0.729	0.719	0.697	0.750	0.760	0.745	0.734	2.88
6)	T	Heptachlor	0.960	0.987	1.038	1.050	1.179	1.262	1.110	12.05
7)	T	delta-BHC	1.527	1.621	1.604	1.636	1.749	1.775	1.672	5.97
8)	T	Aldrin	2.020	1.935	1.723	1.582	1.632	1.663	1.747	9.45
9)	T	Heptachlor Epoxi	2.006	1.903	1.666	1.522	1.550	1.563	1.682	11.55
10)	T	gamma-Chlordane	1.996	1.928	1.710	1.584	1.631	1.653	1.737	9.19
11)	T	alpha-Chlordane	2.081	1.999	1.724	1.569	1.603	1.619	1.745	11.95
12)	T	Endosulfan I	1.469	1.430	2.226	2.054	1.959	1.856	1.830	16.01
13)	T	4,4' -DDE	1.376	1.254	1.235	1.275	1.406	1.475	1.360	7.89
14)	T	Dieldrin	2.197	1.971	1.752	1.632	1.697	1.715	1.811	11.08
15)	T	Endrin	1.893	1.752	1.543	1.409	1.437	1.447	1.560	12.09
16)	T	4,4' -DDD	1.569	1.437	1.288	1.232	1.288	1.321	1.353	8.43
17)	T	Endosulfan II	1.960	1.862	1.529	1.412	1.485	1.582	1.630	12.44
18)	T	4,4' -DDT	1.251	1.156	1.178	1.175	1.274	1.335	1.246	6.42
19)	T	Endrin aldehyde	1.528	1.454	1.228	1.100	1.136	1.221	1.271	12.55
20)	T	Endosulfan sulfa	1.772	1.677	1.469	1.304	1.398	1.396	1.487	11.53
21)	T	Methoxychlor	0.770	0.730	0.691	0.642	0.709	0.689	0.708	5.63
22)	T	Endrin ketone	1.799	1.954	1.692	1.549	1.625	1.622	1.695	8.16

Response Factor Report GC-09

Method Path : C:\MSDCHEM\1\METHODS\PESTICIDES\
Method File : 80810730.M
Title : EPA 8081A Organoclorine Pesticides
Last Update : Wed Jul 31 05:49:48 2013
Response Via : Initial Calibration

Calibration Files

2	=C0730006.D	5	=C0730007.D	20	=C0730008.D
50	=C0730009.D	100	=C0730010.D	150	=C0730011.D

	Compound	2	5	20	50	100	150	Avg	%RSD
23) S	Decachlorobiphen	1.949	1.801	1.636	1.436	1.513	1.490	1.621	11.62

(#) = Out of Range ### Number of calibration levels exceeded format ###

Compound List Report GC-09

Method Path : C:\MSDCHEM\1\METHODS\PESTICIDES\
Method File : 80810730.M
Title : EPA 8081A Organoclorine Pesticides
Last Update : Wed Jul 31 05:49:48 2013
Response Via : Initial Calibration

Total Cpnds : 47

PK#		Compound Name	Exp_RT	Rel_RT	Cal	A/H	ID
1	I	1-Bromo-2-nitrobenzene	2.62	1.000	A	A	B
2	S	Tetrachloro-m-xylene	3.34	1.276	A	A	B
3	T	alpha-BHC	3.92	1.496	A	A	B
4	T	gamma-BHC	4.30	1.642	A	A	B
5	T	beta-BHC	4.39	1.676	A	A	B
6	T	Heptachlor	4.81	1.836	A	A	B
7	T	delta-BHC	4.73	1.807	A	A	B
8	T	Aldrin	5.17	1.976	A	A	B
9	T	Heptachlor Epoxide	5.75	2.195	A	A	B
10	T	gamma-Chlordane	5.93	2.265	A	A	B
11	T	alpha-Chlordane	6.06	2.316	A	A	B
12	T	Endosulfan I	6.12	2.338	A	A	B
13	T	4,4' -DDE	6.20	2.370	A	A	B
14	T	Dieldrin	6.36	2.431	A	A	B
15	T	Endrin	6.63	2.532	A	A	B
16	T	4,4' -DDD	6.70	2.559	A	A	B
17	T	Endosulfan II	6.80	2.598	A	A	B
18	T	4,4' -DDT	6.95	2.656	A	A	B
19	T	Endrin aldehyde	7.06	2.699	A	A	B
20	T	Endosulfan sulfate	7.28	2.780	A	A	B
21	T	Methoxychlor	7.47	2.853	A	A	B
22	T	Endrin ketone	7.69	2.939	A	A	B
23	S	Decachlorobiphenyl	8.56	3.269	A	A	B
24		Signal #2	0.51	0.195	A	A	B
25	I	1-Bromo-2-nitrobenzene #2	2.50	1.000	A	A	B
26	S	Tetrachloro-m-xylene #2	3.07	1.226	A	A	B
27	T	alpha-BHC #2	3.52	1.407	A	A	B
28	T	gamma-BHC #2	3.81	1.523	A	A	B
29	T	beta-BHC #2	3.91	1.564	A	A	B
30	T	Heptachlor #2	4.28	1.714	A	A	B
31	T	delta-BHC #2	4.09	1.637	A	A	B
32	T	Aldrin #2	4.61	1.844	A	A	B
33	T	Heptachlor Epoxide #2	5.24	2.098	A	A	B
34	T	gamma-Chlordane #2	5.38	2.151	A	A	B
35	T	alpha-Chlordane #2	5.50	2.202	A	A	B
36	T	Endosulfan I #2	5.63	2.254	A	A	B
37	T	4,4' -DDE #2	5.59	2.237	A	A	B
38	T	Dieldrin #2	5.86	2.343	A	A	B
39	T	Endrin #2	6.07	2.427	A	A	B
40	T	4,4' -DDD #2	6.14	2.456	A	A	B
41	T	Endosulfan II #2	6.26	2.506	A	A	B
42	T	4,4' -DDT #2	6.37	2.549	A	A	B
43	T	Endrin aldehyde #2	6.61	2.643	A	A	B
44	T	Endosulfan sulfate #2	6.95	2.780	A	A	B
45	T	Methoxychlor #2	6.77	2.708	A	A	B
46	T	Endrin ketone #2	7.17	2.869	A	A	B
47	S	Decachlorobiphenyl #2	7.91	3.164	A	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

Evaluate Continuing Calibration Report

Data Path : D:\13-07-30\
Data File : C0730014.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Jul 2013 8:31 pm
Operator : BB
Sample : SEQ-ICV1, 100 ppb
Misc : 1,A3E0291,
ALS Vial : 8 Sample Multiplier: 1
InstName : GC-09
DataAcq Meth:17MAY13.M

Integration File signal 1: AUTOINT1.E
Integration File signal 2: AUTOINT2.E
Quant Time: Jul 31 05:55:56 2013
Quant Method : C:\MSDCHEM\1\METHODS\PESTICIDES\80810730.M
Quant Title : EPA 8081A Organoclorine Pesticides
QLast Update : Wed Jul 31 05:49:48 2013
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : Stx-CLPesticides2 Signal #2 Phase: Stx-CLPesticides
Signal #1 Info : 30mx320umx0.25um Signal #2 Info : 30mx320umx0.5um

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	1-Bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00
2	S	Tetrachloro-m-xylene	1.133	0.967	14.7	100	0.00
3	T	alpha-BHC	1.665	1.558	6.4	100	0.00
4	T	gamma-BHC	1.531	1.462	4.5	100	0.00
5	T	beta-BHC	0.751	0.667	11.2	100	0.00
6	T	Heptachlor	1.205	1.181	2.0	100	0.00
7	T	delta-BHC	1.661	1.521	8.4	100	0.00
8	T	Aldrin	1.645	1.539	6.4	100	0.00
9	T	Heptachlor Epoxide	1.587	1.471	7.3	100	0.00
10	T	gamma-Chlordane	1.663	1.533	7.8	100	0.00
11	T	alpha-Chlordane	1.680	1.492	11.2	100	0.00
12	T	Endosulfan I	1.552	1.403	9.6	100	0.00
13	T	4,4' -DDE	1.642	1.525	7.1	100	0.00
14	T	Dieldrin	1.699	1.507	11.3	100	0.00
15	T	Endrin	1.403	1.076	23.3#	100	0.00
16	T	4,4' -DDD	1.384	1.242	10.3	100	0.00
17	T	Endosulfan II	1.571	1.428	9.1	100	0.00
18	T	4,4' -DDT	1.290	1.166	9.6	100	0.00
19	T	Endrin aldehyde	1.148	1.133	1.3	100	0.00
20	T	Endosulfan sulfate	1.385	1.261	9.0	100	0.00
21	T	Methoxychlor	0.702	0.588	16.2#	100	0.00
22	T	Endrin ketone	1.623	1.515	6.7	100	0.00
23	S	Decachlorobiphenyl	1.775	1.575	11.3	100	0.00

Signal #2

$\bar{x}$=9.30

1	I	1-Bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00
2	S	Tetrachloro-m-xylene	1.146	0.994	13.3	100	0.00
3	T	alpha-BHC	1.693	1.499	11.5	100	0.00
4	T	gamma-BHC	1.538	1.393	9.4	100	0.00
5	T	beta-BHC	0.734	0.693	5.6	100	0.00
6	T	Heptachlor	1.110	1.060	4.5	100	0.00
7	T	delta-BHC	1.672	1.522	9.0	100	0.00
8	T	Aldrin	1.747	1.499	14.2	100	0.00
9	T	Heptachlor Epoxide	1.682	1.449	13.9	100	0.00

Evaluate Continuing Calibration Report

Data Path : D:\13-07-30\
Data File : C0730014.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Jul 2013 8:31 pm
Operator : BB
Sample : SEQ-ICV1, 100 ppb
Misc : 1,A3E0291,
ALS Vial : 8 Sample Multiplier: 1
InstName : GC-09
DataAcq Meth:17MAY13.M

Integration File signal 1: AUTOINT1.E
Integration File signal 2: AUTOINT2.E
Quant Time: Jul 31 05:55:56 2013
Quant Method : C:\MSDCHEM\1\METHODS\PESTICIDES\80810730.M
Quant Title : EPA 8081A Organoclorine Pesticides
QLast Update : Wed Jul 31 05:49:48 2013
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : Stx-CLPesticides2 Signal #2 Phase: Stx-CLPesticides
Signal #1 Info : 30mx320umx0.25um Signal #2 Info : 30mx320umx0.5um

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
10	T	gamma-Chlordane	1.737	1.494	14.0	100	0.00
11	T	alpha-Chlordane	1.745	1.456	16.6#	100	0.00
12	T	Endosulfan I	1.830	1.721	6.0	100	0.00
13	T	4,4' -DDE	1.360	1.163	14.5	100	0.00
14	T	Dieldrin	1.811	1.515	16.3#	100	0.00
15	T	Endrin	1.560	1.144	26.7#	100	0.00
16	T	4,4' -DDD	1.353	1.248	7.8	100	0.00
17	T	Endosulfan II	1.630	1.511	7.3	100	0.00
18	T	4,4' -DDT	1.246	1.186	4.8	100	0.00
19	T	Endrin aldehyde	1.271	1.240	2.4	100	0.00
20	T	Endosulfan sulfate	1.487	1.323	11.0	100	0.00
21	T	Methoxychlor	0.708	0.670	5.4	100	0.01
22	T	Endrin ketone	1.695	1.559	8.0	100	0.00
23	S	Decachlorobiphenyl	1.621	1.442	11.0	100	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2 $\bar{x}$=10.6

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : D:\13-07-30\
Data File : C0730015.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Jul 2013 8:44 pm
Operator : BB
Sample : SEQ-ICV1, 100 ppb
Misc : 1,A3E0291,
ALS Vial : 8 Sample Multiplier: 1
InstName : GC-09
DataAcq Meth:17MAY13.M

Integration File signal 1: AUTOINT1.E
Integration File signal 2: AUTOINT2.E
Quant Time: Jul 31 05:51:48 2013
Quant Method : C:\MSDCHEM\1\METHODS\PESTICIDES\80810730.M
Quant Title : EPA 8081A Organoclorine Pesticides
QLast Update : Wed Jul 31 05:49:48 2013
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : Stx-CLPesticides2 Signal #2 Phase: Stx-CLPesticides
Signal #1 Info : 30mx320umx0.25um Signal #2 Info : 30mx320umx0.5um

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	1-Bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00
2	S	Tetrachloro-m-xylene	1.133	0.970	14.4	100	0.01
3	T	alpha-BHC	1.665	1.559	6.4	100	0.01
4	T	gamma-BHC	1.531	1.463	4.4	100	0.02
5	T	beta-BHC	0.751	0.664	11.6	100	0.02
6	T	Heptachlor	1.205	1.182	1.9	100	0.02
7	T	delta-BHC	1.661	1.516	8.7	100	0.02
8	T	Aldrin	1.645	1.530	7.0	100	0.02
9	T	Heptachlor Epoxide	1.587	1.465	7.7	100	0.02
10	T	gamma-Chlordane	1.663	1.522	8.5	100	0.02
11	T	alpha-Chlordane	1.680	1.482	11.8	100	0.02
12	T	Endosulfan I	1.552	1.395	10.1	100	0.02
13	T	4,4' -DDE	1.642	1.511	8.0	100	0.02
14	T	Dieldrin	1.699	1.495	12.0	100	0.02
15	T	Endrin	1.403	1.078	23.2#	100	0.02
16	T	4,4' -DDD	1.384	1.226	11.4	100	0.02
17	T	Endosulfan II	1.571	1.421	9.5	100	0.02
18	T	4,4' -DDT	1.290	1.158	10.2	100	0.02
19	T	Endrin aldehyde	1.148	1.118	2.6	100	0.02
20	T	Endosulfan sulfate	1.385	1.256	9.3	100	0.02
21	T	Methoxychlor	0.702	0.597	15.0	100	0.02
22	T	Endrin ketone	1.623	1.509	7.0	100	0.02
23	S	Decachlorobiphenyl	1.775	1.559	12.2	100	0.02

Signal #2 $\bar{Y}=9.68$

1	I	1-Bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.01
2	S	Tetrachloro-m-xylene	1.146	0.982	14.3	100	0.02
3	T	alpha-BHC	1.693	1.482	12.5	100	0.02
4	T	gamma-BHC	1.538	1.374	10.7	100	0.02
5	T	beta-BHC	0.734	0.685	6.7	100	0.02
6	T	Heptachlor	1.110	1.044	5.9	100	0.02
7	T	delta-BHC	1.672	1.494	10.6	100	0.03
8	T	Aldrin	1.747	1.471	15.8#	100	0.02
9	T	Heptachlor Epoxide	1.682	1.419	15.6#	100	0.02

Evaluate Continuing Calibration Report

Data Path : D:\13-07-30\
Data File : C0730015.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 30 Jul 2013 8:44 pm
Operator : BB
Sample : SEQ-ICV1, 100 ppb
Misc : 1,A3E0291,
ALS Vial : 8 Sample Multiplier: 1
InstName : GC-09
DataAcq Meth:17MAY13.M

Integration File signal 1: AUTOINT1.E
Integration File signal 2: AUTOINT2.E
Quant Time: Jul 31 05:51:48 2013
Quant Method : C:\MSDCHEM\1\METHODS\PESTICIDES\80810730.M
Quant Title : EPA 8081A Organoclorine Pesticides
QLast Update : Wed Jul 31 05:49:48 2013
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : Stx-CLPesticides2 Signal #2 Phase: Stx-CLPesticides
Signal #1 Info : 30mx320umx0.25um Signal #2 Info : 30mx320umx0.5um

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
10	T	gamma-Chlordane	1.737	1.459	16.0#	100	0.02
11	T	alpha-Chlordane	1.745	1.421	18.6#	100	0.02
12	T	Endosulfan I	1.830	1.692	7.5	100	0.02
13	T	4,4' -DDE	1.360	1.116	17.9#	100	0.03
14	T	Dieldrin	1.811	1.479	18.3#	100	0.02
15	T	Endrin	1.560	1.127	27.8#	100	0.02
16	T	4,4' -DDD	1.353	1.210	10.6	100	0.03
17	T	Endosulfan II	1.630	1.480	9.2	100	0.02
18	T	4,4' -DDT	1.246	1.157	7.1	100	0.02
19	T	Endrin aldehyde	1.271	1.201	5.5	100	0.02
20	T	Endosulfan sulfate	1.487	1.287	13.4	100	0.02
21	T	Methoxychlor	0.708	0.648	8.5	100	0.03
22	T	Endrin ketone	1.695	1.517	10.5	100	0.02
23	S	Decachlorobiphenyl	1.621	1.413	12.8	100	0.01

Evaluate Continuing Calibration Report - Not Founds

$\bar{x} = 12.54$

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : D:\13-08-28\
Data File : C0828005.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 28 Aug 2013 9:29 am
Operator : BB
Sample : SEQ-CCV1@A3E0287,
Misc : 1,PESTICIDE,
ALS Vial : 97 Sample Multiplier: 1
InstName : GC-09
DataAcq Meth:17MAY13.M

Integration File signal 1: AUTOINT1.E
Integration File signal 2: AUTOINT2.E
Quant Time: Aug 28 09:40:39 2013
Quant Method : C:\MSDCHEM\1\METHODS\PESTICIDES\80810730.M
Quant Title : EPA 8081A Organoclorine Pesticides
QLast Update : Thu Aug 22 07:01:29 2013
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : Stx-CLPesticides2 Signal #2 Phase: Stx-CLPesticides
Signal #1 Info : 30mx320umx0.25um Signal #2 Info : 30mx320umx0.5um

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	1-Bromo-2-nitrobenzene	1.000	1.000	0.0	118	0.00
2	S	Tetrachloro-m-xylene	1.133	1.143	-0.9	129	0.00
3	T	alpha-BHC	1.665	1.743	-4.7	130	0.00
4	T	gamma-BHC	1.531	1.576	-2.9	128	0.00
5	T	beta-BHC	0.751	0.729	2.9	122	0.00
6	T	Heptachlor	1.205	1.256	-4.2	130	0.00
7	T	delta-BHC	1.661	1.643	1.1	123	0.00
8	T	Aldrin	1.645	1.659	-0.9	126	0.00
9	T	Heptachlor Epoxide	1.587	1.576	0.7	124	0.00
10	T	gamma-Chlordane	1.663	1.679	-1.0	126	0.00
11	T	alpha-Chlordane	1.680	1.653	1.6	125	0.00
12	T	Endosulfan I	1.552	1.571	-1.2	127	0.00
13	T	4,4' -DDE	1.642	1.709	-4.1	127	0.00
14	T	Dieldrin	1.699	1.771	-4.2	128	0.00
15	T	Endrin	1.403	1.379	1.7	120	0.00
16	T	4,4' -DDD	1.384	1.431	-3.4	128	0.00
17	T	Endosulfan II	1.571	1.591	-1.3	127	0.00
18	T	4,4' -DDT	1.290	1.424	-10.4	128	0.00
19	T	Endrin aldehyde	1.148	1.119	2.5	124	0.00
20	T	Endosulfan sulfate	1.385	1.374	0.8	123	0.00
21	T	Methoxychlor	0.702	0.715	-1.9	125	0.00
22	T	Endrin ketone	1.623	1.660	-2.3	128	0.00
23	S	Decachlorobiphenyl	1.775	1.625	8.5	120	0.00

Signal #2

1	I	1-Bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00
2	S	Tetrachloro-m-xylene	1.146	1.121	2.2	108	0.00
3	T	alpha-BHC	1.693	1.712	-1.1	108	0.00
4	T	gamma-BHC	1.538	1.546	-0.5	108	0.00
5	T	beta-BHC	0.734	0.773	-5.3	103	0.00
6	T	Heptachlor	1.110	1.230	-10.8	117	0.00
7	T	delta-BHC	1.672	1.711	-2.3	105	0.00
8	T	Aldrin	1.747	1.688	3.4	107	0.00
9	T	Heptachlor Epoxide	1.682	1.602	4.8	105	0.00

Evaluate Continuing Calibration Report

Data Path : D:\13-08-28\
Data File : C0828005.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 28 Aug 2013 9:29 am
Operator : BB
Sample : SEQ-CCV1@A3E0287,
Misc : 1,PESTICIDE,
ALS Vial : 97 Sample Multiplier: 1
InstName : GC-09
DataAcq Meth:17MAY13.M

Integration File signal 1: AUTOINT1.E
Integration File signal 2: AUTOINT2.E
Quant Time: Aug 28 09:40:39 2013
Quant Method : C:\MSDCHEM\1\METHODS\PESTICIDES\80810730.M
Quant Title : EPA 8081A Organoclorine Pesticides
QLast Update : Thu Aug 22 07:01:29 2013
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : Stx-CLPesticides2 Signal #2 Phase: Stx-CLPesticides
Signal #1 Info : 30mx320umx0.25um Signal #2 Info : 30mx320umx0.5um

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
10 T	gamma-Chlordane	1.737	1.668	4.0	105	0.00
11 T	alpha-Chlordane	1.745	1.606	8.0	102	0.00
12 T	Endosulfan I	1.830	1.966	-7.4	96	0.00
13 T	4,4' -DDE	1.360	1.441	-6.0	113	0.00
14 T	Dieldrin	1.811	1.711	5.5	105	0.00
15 T	Endrin	1.560	1.438	7.8	102	0.00
16 T	4,4' -DDD	1.353	1.451	-7.2	118	0.00
17 T	Endosulfan II	1.630	1.583	2.9	112	0.00
18 T	4,4' -DDT	1.246	1.449	-16.3#	123	0.00
19 T	Endrin aldehyde	1.271	1.248	1.8	114	0.00
20 T	Endosulfan sulfate	1.487	1.401	5.8	108	0.00
21 T	Methoxychlor	0.708	0.708	0.0	110	0.00
22 T	Endrin ketone	1.695	1.724	-1.7	111	0.00
23 S	Decachlorobiphenyl	1.621	1.558	3.9	109	0.00

Evaluate Continuing Calibration Report - Not Founds

$\bar{x} = 4.94$

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : D:\13-08-28\
Data File : C0828006.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 28 Aug 2013 9:43 am
Operator : BB
Sample : SEQ-CCV2@A3B0454,CHLORDANE
Misc : 1CHLORDANE,
ALS Vial : 98 Sample Multiplier: 1
InstName : GC-09
DataAcq Meth:17MAY13.M

Integration File signal 1: autoint1.e
Integration File signal 2: AUTOINT2.E
Quant Time: Aug 28 09:54:25 2013
Quant Method : C:\MSDCHEM\1\METHODS\CHLORDANE\CHLO0828.M
Quant Title : Technical Chlordane by EPA 8081A
QLast Update : Wed Aug 28 09:54:18 2013
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : Stx-CLPesticides2 Signal #2 Phase: Stx-CLPesticides
Signal #1 Info : 30mx320umx0.25um Signal #2 Info : 30mx320umx0.25um

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	i	1-Bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00
2	S	Tetrachloro-m-xylene	0.953	0.953	0.0	100	0.00
3	L3m	CHLORDANE-1	0.042	0.042	0.0	100	0.00
4	L3m	CHLORDANE-2	0.051	0.051	0.0	100	0.00
5	L3m	CHLORDANE-3	0.161	0.161	0.0	100	0.00
6	L3m	CHLORDANE-4	0.110	0.110	0.0	100	0.00
7	L3m	CHLORDANE-5	0.140	0.140	0.0	100	0.00
8	S	Decachlorobiphenyl	1.432	1.432	0.0	100	0.00

Signal #2

1		1-Bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00
2	S	Tetrachloro-m-xylene	0.977	0.977	0.0	100	0.00
3	L3m	CHLORDANE-1	0.045	0.045	0.0	100	0.00
4	L3m	CHLORDANE-2	0.059	0.059	0.0	100	0.00
5	L3m	CHLORDANE-3	0.175	0.175	0.0	100	0.00
6	L3m	CHLORDANE-4	0.245	0.245	0.0	100	0.00
7	L3m	CHLORDANE-5	0.053	0.053	0.0	100	0.00
8	S	Decachlorobiphenyl	1.415	1.415	0.0	100	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : D:\13-08-28\
Data File : C0828007.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 28 Aug 2013 9:56 am
Operator : BB
Sample : SEQ-CCV3@A3B0455,TOXAPHENE
Misc : 1,TOXAPHENE,
ALS Vial : 99 Sample Multiplier: 1
InstName : GC-09
DataAcq Meth:17MAY13.M

Integration File signal 1: EVENTS.E
Integration File signal 2: EVENTS2.E
Quant Time: Aug 28 10:14:58 2013
Quant Method : C:\MSDCHEM\1\METHODS\TOXAPHENE\TOX0828.M
Quant Title :
QLast Update : Wed Aug 28 10:14:49 2013
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : Stx-CLPesticides2 Signal #2 Phase: Stx-CLPesticides
Signal #1 Info : 30mx320umx0.25um Signal #2 Info : 30mx320umx0.5um

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	1-Bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00
2 S	Tetrachloro-m-xylene	0.986	0.986	0.0	100	0.00
3 L1m	TOX-1	0.005	0.005	0.0	100	0.00
4 L1m	TOX-2	0.012	0.012	0.0	100	0.00
5 L1m	TOX-3	0.037	0.037	0.0	100	0.00
6 L1m	TOX-4	0.026	0.026	0.0	100	0.00
7 L1m	TOX-5	0.026	0.026	0.0	100	0.00
8 S	Decachlorobiphenyl	1.389	1.389	0.0	100	0.00

Signal #2

1	1-Bromo-2-nitrobenzene	1.000	1.000	0.0	100	0.00
2 S	Tetrachloro-m-xylene	0.965	0.965	0.0	100	0.00
3 L1m	TOX-1	0.011	0.011	0.0	100	0.00
4 L1m	TOX-2	0.014	0.014	0.0	100	0.00
5 L1m	TOX-3	0.023	0.023	0.0	100	0.00
6 L1m	TOX-4	0.024	0.024	0.0	100	0.00
7 L1m	TOX-5	0.027	0.027	0.0	100	0.00
8 S	Decachlorobiphenyl	1.362	1.362	0.0	100	0.00

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : D:\13-09-04\
Data File : C0904005.D
Signal(s) : Signal #1: ECD1A.CH Signal #2: ECD2B.CH
Acq On : 04 Sep 2013 6:32 am
Operator : BB
Sample : SEQ-CCV1@A3E0287,
Misc : 1,PESTICIDE,
ALS Vial : 97 Sample Multiplier: 1
InstName : GC-09
DataAcq Meth:17MAY13.M

Integration File signal 1: AUTOINT1.E
Integration File signal 2: AUTOINT2.E
Quant Time: Sep 04 13:51:46 2013
Quant Method : C:\MSDCHEM\1\METHODS\PESTICIDES\80810730.M
Quant Title : EPA 8081A Organoclorine Pesticides
QLast Update : Wed Sep 04 13:51:39 2013
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1uL
Signal #1 Phase : Stx-CLPesticides2 Signal #2 Phase: Stx-CLPesticides
Signal #1 Info : 30mx320umx0.25um Signal #2 Info : 30mx320umx0.5um

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	1-Bromo-2-nitrobenzene	1.000	1.000	0.0	108	0.00
2	S	Tetrachloro-m-xylene	1.133	1.185	-4.6	123	0.00
3	T	alpha-BHC	1.665	1.810	-8.7	124	0.00
4	T	gamma-BHC	1.531	1.635	-6.8	122	0.00
5	T	beta-BHC	0.751	0.754	-0.4	116	0.00
6	T	Heptachlor	1.205	1.287	-6.8	123	0.00
7	T	delta-BHC	1.661	1.690	-1.7	116	0.00
8	T	Aldrin	1.645	1.747	-6.2	122	0.00
9	T	Heptachlor Epoxide	1.587	1.637	-3.2	119	0.00
10	T	gamma-Chlordane	1.663	1.717	-3.2	119	0.00
11	T	alpha-Chlordane	1.680	1.693	-0.8	118	0.00
12	T	Endosulfan I	1.552	1.583	-2.0	118	0.00
13	T	4,4' -DDE	1.642	1.735	-5.7	119	0.00
14	T	Dieldrin	1.699	1.783	-4.9	119	0.00
15	T	Endrin	1.403	1.475	-5.1	118	0.00
16	T	4,4' -DDD	1.384	1.482	-7.1	122	0.00
17	T	Endosulfan II	1.571	1.684	-7.2	124	0.00
18	T	4,4' -DDT	1.290	1.474	-14.3	122	0.00
19	T	Endrin aldehyde	1.148	1.131	1.5	116	0.00
20	T	Endosulfan sulfate	1.385	1.424	-2.8	117	0.00
21	T	Methoxychlor	0.702	0.726	-3.4	117	0.00
22	T	Endrin ketone	1.623	1.659	-2.2	118	0.00
23	S	Decachlorobiphenyl	1.775	1.744	1.7	119	0.00

Signal #2

1	I	1-Bromo-2-nitrobenzene	1.000	1.000	0.0	92	0.00
2	S	Tetrachloro-m-xylene	1.146	1.176	-2.6	104	0.00
3	T	alpha-BHC	1.693	1.822	-7.6	106	0.00
4	T	gamma-BHC	1.538	1.635	-6.3	105	0.00
5	T	beta-BHC	0.734	0.809	-10.2	100	0.00
6	T	Heptachlor	1.110	1.300	-17.1#	114	0.00
7	T	delta-BHC	1.672	1.807	-8.1	102	0.00
8	T	Aldrin	1.747	1.792	-2.6	105	0.00
9	T	Heptachlor Epoxide	1.682	1.716	-2.0	104	0.00

10	T	gamma-Chlordane	1.737	1.804	-3.9	105	0.00
11	T	alpha-Chlordane	1.745	1.724	1.2	101	0.00
12	T	Endosulfan I	1.830	1.961	-7.2	88	0.00
13	T	4,4' -DDE	1.360	1.581	-16.2#	114	0.00
14	T	Dieldrin	1.811	1.848	-2.0	104	0.00
15	T	Endrin	1.560	1.584	-1.5	104	0.00
16	T	4,4' -DDD	1.353	1.549	-14.5	116	0.00
17	T	Endosulfan II	1.630	1.713	-5.1	112	0.00
18	T	4,4' -DDT	1.246	1.539	-23.5#	121	0.00
19	T	Endrin aldehyde	1.271	1.301	-2.4	109	0.00
20	T	Endosulfan sulfate	1.487	1.494	-0.5	106	0.00
21	T	Methoxychlor	0.708	0.736	-4.0	106	0.00
22	T	Endrin ketone	1.695	1.786	-5.4	106	0.00
23	S	Decachlorobiphenyl	1.621	1.699	-4.8	109	0.00

$\bar{X}$=6.76

Evaluate Continuing Calibration Report - Not Founds

Signal #2

(#) = Out of Range SPCC's out = 0 CCC's out = 0

80810730.M Wed Sep 04 13:51:50 2013

SUMMARY OF SURROGATE RECOVERIES

SYSTEM MONITORING COMPOUND SUMMARY

EPA 8081A

Client: Ninyo & Moore - SD
Work Order: 1302545 Matrix: Soil
Project: CLAIREMONT H.S., 105338071 & 105338088 Instrument: GC-04

	DCB (32% - 113%)	DCB[2] (32% - 113%)	TCMX (32% - 101%)	TCMX[2C] (32% - 101%)
1302545-01	65.3	74.9	83.8	81.9
1302545-05	72.6	84.4	89.8	87.3
1302545-11	80.0	93.7	90.3	86.5
1302545-17	77.7	84.9	84.9	83.0
B3I0018-BLK1	71.6	76.3	77.9	76.1
B3I0018-BS1	76.8	82.6	78.6	80.9
B3I0018-MS1	90.2	98.8	85.2	90.1
B3I0018-MSD1	86.9	96.2	85.0	90.0

DCB - Decachlorobiphenyl
TCMX - Tetrachloro-m-xylene

BA 09/17/13

SYSTEM MONITORING COMPOUND SUMMARY

EPA 8081A

Client: Ninyo & Moore - SD
Work Order: 1302547 Matrix: Soil
Project: CLAIREMONT H.S., 105338071 & 105338088 Instrument: GC-04

	DCB (32% - 113%)	DCB[2] (32% - 113%)	TCMX (32% - 101%)	TCMX[2C] (32% - 101%)
1302547-05	84.6	95.9	84.2	88.5
1302547-11	84.5	95.9	89.9	91.7
1302547-12	76.5	82.9	83.7	85.6
B3I0018-BLK1	71.6	76.3	77.9	76.1
B3I0018-BS1	76.8	82.6	78.6	80.9
B3I0018-MS1	90.2	98.8	85.2	90.1
B3I0018-MSD1	86.9	96.2	85.0	90.0

DCB - Decachlorobiphenyl
TCMX - Tetrachloro-m-xylene

BA 09/18/13

SYSTEM MONITORING COMPOUND SUMMARY

EPA 8081A

Client: Ninyo & Moore - SD
Work Order: 1302581 **Matrix:** Soil
Project: CLAIREMONT H.S., 105338071 & 105338088 **Instrument:** GC-09

	DCB (32% - 113%)	DCB[2] (32% - 113%)	TCMX (32% - 101%)	TCMX[2C] (32% - 101%)
1302581-15	67.0	74.4	93.6	92.6
1302581-19	73.4	80.7	84.0	83.4
1302581-21	58.4	66.6	82.3	83.6
1302581-22	57.1	68.9	79.6	82.9
B3H0528-BLK1	62.2	67.5	68.7	67.8
B3H0528-BS1	67.2	70.8	75.7	77.6
B3H0528-MS1	84.2	93.3	87.8	98.6
B3H0528-MSD1	75.1	85.7	85.2	86.1

DCB - Decachlorobiphenyl
TMX - Tetra-chloro-m-xylene

BA 09/23/13

INTERNAL STANDARD AREAS AND RT SUMMARY

Internal Standard Area and Retention Time Summary

GC-09
80810730.M

Calibration Level		Column 1 IS Response x10e6	RT, min		Column 2 IS Response x10e6	RT, min	
	2	451.3	2.62		295.6	2.50	
	5	451.1	2.62		300.1	2.50	
	20	451.0	2.62		298.5	2.50	
	50	467.6	2.62		309.7	2.50	
	100	460.0	2.62		305.8	2.50	
	150	474.9	2.62		314.6	2.50	
	200	450.6	2.62		299.8	2.50	
Average:		458.1	2.62		303.4	2.50	
Upper Limit		687.1			455.2		
Lower Limit		229.0			151.7		
SEQ-CCV1@A3E0287		506.3	2.61	PASS	285.8	2.49	PASS
B3I0018-BLK1		558.4	2.61	PASS	304.2	2.49	PASS
B3I0018-BS1		514.3	2.61	PASS	279.3	2.49	PASS
B3I0018-MS1		523.7	2.61	PASS	277.0	2.49	PASS
B3I00188-MSD1		535.7	2.61	PASS	283.0	2.49	PASS
1302545-01		582.0	2.61	PASS	311.2	2.49	PASS
1302545-05		585.7	2.61	PASS	322.3	2.49	PASS
1302545-11		523.6	2.61	PASS	292.1	2.49	PASS
1302545-17		524.1	2.61	PASS	284.2	2.49	PASS
1302547-08		546.4	2.62	PASS	268.1	2.49	PASS
1302547-11		563.1	2.61	PASS	283.7	2.49	PASS
1302547-12		572.1	2.61	PASS	301.9	2.49	PASS

Internal Standard Area and Retention Time Summary

GC-09
80810730.M

Calibration Level		Column 1 IS Response x10e6	RT, min		Column 2 IS Response x10e6	RT, min	
	2	451.3	2.62		295.6	2.50	
	5	451.1	2.62		300.1	2.50	
	20	451.0	2.62		298.5	2.50	
	50	467.6	2.62		309.7	2.50	
	100	460.0	2.62		305.8	2.50	
	150	474.9	2.62		314.6	2.50	
	200	450.6	2.62		299.8	2.50	
Average:		458.1	2.62		303.4	2.50	
Upper Limit		687.1			455.2		
Lower Limit		229.0			151.7		
SEQ-CCV1@A3E0287		549.9	2.61	PASS	310.0	2.50	PASS
B3H0528-BLK1		584.1	2.61	PASS	327.2	2.49	PASS
B3H0528-BS1		541.3	2.61	PASS	300.6	2.49	PASS
B3H0528-MS1		533.0	2.61	PASS	284.7	2.49	PASS
B3H0528-MSD1		603.6	2.61	PASS	320.8	2.49	PASS
1302581-15		665.6	2.61	PASS	357.0	2.49	PASS
1302581-19		608.1	2.61	PASS	320.9	2.49	PASS
1302581-21		652.3	2.61	PASS	347.4	2.49	PASS
1302581-22		678.0	2.61	PASS	349.6	2.49	PASS

Method EPA 8270/SIM

ANALYSIS RUN LOG

Injection Log

Directory: D:\Data\13-05-10b

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	96	U0510001.d	0.	SEQ-TUN1	1,TUNE,A3A0333	10 May 2013 11:47
2	1	U0510002.d	0.	SEQ-ICAL1,100ppb	1,A3E0031	10 May 2013 12:06
3	2	U0510003.d	0.	SEQ-ICAL2,500ppb	1,A3E0032	10 May 2013 12:31
4	3	U0510004.d	0.	SEQ-ICAL3,1000ppb	1,A3E0033	10 May 2013 12:57
5	4	U0510005.d	0.	SEQ-ICAL4,2000ppb	1,A3E0034	10 May 2013 13:23
6	5	U0510006.d	0.	SEQ-ICAL5,10000ppb	1,A3E0036	10 May 2013 13:49
7	6	U0510007.d	0.	SEQ-ICV1,1000ppb	1,A3E0037	10 May 2013 14:15

INSTRUMENT I.D.: MS-13
QUANT. METHOD: ICAL US1M130510
SUPR / IS CODE: 2250030 AMOUNT: 10uL
SIGNATURE: [signature] INITIAL: [initials]

Injection Log

Directory: D:\Data\13-08-27

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	100	U0827001.d	1.	SOLVENT BLANK	1,MeCl2	27 Aug 2013 13:20
2	100	U0827002.d	1.	SOLVENT BLANK	1,MeCl2	27 Aug 2013 13:46
3	96	U0827003.d	1.	SEQ-TUN1	1,TUNE,A3G0291	27 Aug 2013 14:08
4	96	U0827004.d	1.	SEQ-TUN1	1,TUNE,A3G0291	27 Aug 2013 14:25
5	97	U0827005.d	1.	SEQ-CCV1	1,A3H0029	27 Aug 2013 14:44
6	1	U0827006.d	1.	B3H0507-BLK1	1,B3H0507	27 Aug 2013 15:11
7	2	U0827007.d	1.	B3H0507-BS1	1,B3H0507	27 Aug 2013 15:37
8	3	U0827008.d	1.	B3H0507-BSD1	1,B3H0507	27 Aug 2013 16:03
9	4	U0827009.d	1.	1302553-01	1,B3H0507	27 Aug 2013 16:30
10	5	U0827010.d	1.	1302553-02	1,B3H0507	27 Aug 2013 16:56
11	6	U0827011.d	1.	1302559-01	1,B3H0507	27 Aug 2013 17:23
12	7	U0827012.d	1.	B3H0509-BLK1	1,B3H0509	27 Aug 2013 17:49
13	8	U0827013.d	1.	B3H0509-BS1	1,B3H0509	27 Aug 2013 18:16
14	9	U0827014.d	1.	B3H0509-MS1	1,B3H0509	27 Aug 2013 18:42
15	10	U0827015.d	1.	B3H0509-MSD1	1,B3H0509	27 Aug 2013 19:09
16	11	U0827016.d	1.	1302581-15	1,B3H0509	27 Aug 2013 19:35
17	12	U0827017.d	1.	1302581-19	1,B3H0509	27 Aug 2013 20:02
18	13	U0827018.d	1.	1302581-21	1,B3H0509	27 Aug 2013 20:29
19	14	U0827019.d	1.	1302581-22	1,B3H0509	27 Aug 2013 20:55
20	15	U0827020.d	1.	1302553-04	25,B3H0509,500/20...	27 Aug 2013 21:22
21	100	U0827021.d	1.	SOLVENT BLANK	1,MeCl2	27 Aug 2013 21:48
22	100	U0827022.d	1.	SOLVENT BLANK	1,MeCl2	27 Aug 2013 22:15
23	100	U0827023.d	1.	SOLVENT BLANK	1,MeCl2	27 Aug 2013 22:42

INSTRUMENT I.D.: MS-13
QUANT. METHOD: US1M130510
SURR / IS CODE: X3H094 AMOUNT: 10 ul
SIGNATURE: [signature] INITIAL: [initial]

ANALYSIS SEQUENCE

S3H0325

Sequence Comments:

Instrument: MS-13
Calibration ID: 3E14005

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3H0325-TUN1	QC		1	A3G0291		
S3H0325-CCV1	QC		2	A3H0029	A3E0030	
B3H0507-BLK1	QC		3		A3H0194	
B3H0507-BS1	QC		4		A3H0194	
B3H0507-BSD1	QC		5		A3H0194	
1302553-01	8270_SIM	E	6		A3H0194	
1302553-02	8270_SIM	E	7		A3H0194	
1302559-01	8270_SIM_Dioxane	B	8		A3H0194	
B3H0509-BLK1	QC		9		A3H0194	
B3H0509-BS1	QC		10		A3H0194	
B3H0509-MS1	QC		11		A3H0194	
B3H0509-MSD1	QC		12		A3H0194	
1302581-15	8270_SIM	A	13		A3H0194	
1302581-19	8270_SIM	A	14		A3H0194	
1302581-21	8270_SIM	A	15		A3H0194	
1302581-22	8270_SIM	A	16		A3H0194	
1302553-04	8270_SIM	A	17		A3H0194	

Samples Loaded By — Date: 9/25/13

Data Processed By — Date: 9/25/13

Printed: 9/25/2013 2:34:46PM :: C:\Program Files\Promium\Element\Print\seq_ATL_Default(2).rpt

Injection Log

Directory: D:\DATA\R130909A

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	96	R0909001.d	1.	SEQ-TUN1,A3G0291*	1,TUNE	9 Sep 2013 15:08
2	96	R0909002.d	1.	SEQ-TUN1,A3G0291	1,TUNE	9 Sep 2013 15:39
3	1	R0909003.d	1.	SEQ-ICAL1,100ppb*	1,SIM,A3I0365,	9 Sep 2013 16:01
4	2	R0909004.d	1.	SEQ-ICAL2,500ppb	1,SIM,A3I0366,	9 Sep 2013 16:42
5	1	R0909005.d	1.	SEQ-ICAL1,100ppb	1,SIM,A3I0365,	9 Sep 2013 17:09
6	3	R0909006.d	1.	SEQ-ICAL3,1000ppb	1,SIM,A3I0367,	9 Sep 2013 17:35
7	4	R0909007.d	1.	SEQ-ICAL4,2000ppb	1,SIM,A3I0368,	9 Sep 2013 18:02
8	5	R0909008.d	1.	SEQ-ICAL5,5000ppb	1,SIM,A3I0369,	9 Sep 2013 18:29
9	6	R0909009.d	1.	SEQ-ICAL6,10000ppb	1,SIM,A3I0370,	9 Sep 2013 18:55
10	7	R0909010.d	1.	SEQ-ICV1,1000ppb	1,SIM,A3I0371,	9 Sep 2013 19:22
11	8	R0909011.d	1.	I B3H0113-BLK1	1,B3H0113	9 Sep 2013 19:49
12	9	R0909012.d	1.	B3H0113-BS1	1,B3H0113	9 Sep 2013 20:17
13	10	R0909013.d	1.	B3H0113-BSD1	1,B3H0113	9 Sep 2013 20:43
14	11	R0909014.d	1.	1302664-04	1,B3H0113	9 Sep 2013 21:10
15	12	R0909015.d	1.	1302666-02	1,B3H0113 B3 9110113	9 Sep 2013 21:36
16	13	R0909016.d	1.	I B3H0021-BLK1	1,B3H0021 B3I0021	9 Sep 2013 22:03
17	14	R0909017.d	1.	B3H0021-BS1	1,B3H0021	9 Sep 2013 22:30
18	15	R0909018.d	1.	B3H0021-MS1	1,B3H0021	9 Sep 2013 22:58
19	16	R0909019.d	1.	B3H0021-MSD1	1,B3H0021	9 Sep 2013 23:24
20	17	R0909020.d	1.	1302547-12	1,B3H0021	9 Sep 2013 23:51
21	18	R0909021.d	1.	1302545-05	1,B3H0021	10 Sep 2013 00:17
22	19	R0909022.d	1.	1302547-11	1,B3H0021	10 Sep 2013 00:45
23	20	R0909023.d	1.	1302545-11	1,B3H0021	10 Sep 2013 01:12
24	21	R0909024.d	1.	1302545-17	1,B3H0021	10 Sep 2013 01:38
25	22	R0909025.d	1.	1302547-05	1,B3H0021	10 Sep 2013 02:05
26	23	R0909026.d	1.	1302545-01	10,B3H0021,500/50uL	10 Sep 2013 02:32
27	95	R0909027.d	1.	solvent blank	1,MeCl2	10 Sep 2013 02:59
28	95	R0909028.d	1.	solvent blank	1,MeCl2	10 Sep 2013 03:26
29	95	R0909029.d	1.	solvent blank	1,MeCl2	10 Sep 2013 03:52

* not Reported

INSTRUMENT I.D.: MS-15
QUANT. METHOD: RSIM130909
SURR / IS CODE: A3E0030 AMOUNT: 10uL
SIGNATURE: [illegible] INITIAL: RD

ANALYSIS SEQUENCE

S3I0074

Sequence Comments:

Instrument: MS-15
Calibration ID: UNASSIGNED

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3I0074-TUN1	QC		1	A3G0291		
S3I0074-CCV1	QC		2	A3H0029	A3E0030	
B3I0113-BLK1	QC		3		A3E0030	
B3I0113-BS1	QC		4		A3E0030	
B3I0113-BSD1	QC		5		A3E0030	
1302664-04	8270_SIM_Dioxane	A	6		A3E0030	
1302666-02	8270_SIM_Dioxane	D	7		A3E0030	
B3I0021-BLK1	QC		8		A3E0030	
B3I0021-BS1	QC		9		A3E0030	
B3I0021-MS1	QC		10		A3E0030	
B3I0021-MSD1	QC		11		A3E0030	
1302545-01	8270_SIM	A	12		A3E0030	
1302545-05	8270_SIM	A	13		A3E0030	
1302545-11	8270_SIM	A	14		A3E0030	
1302545-17	8270_SIM	A	15		A3E0030	
1302547-05	8270_SIM	A	16		A3E0030	
1302547-11	8270_SIM	A	17		A3E0030	
1302547-12	8270_SIM	A	18		A3E0030	

DGh 9/9/13
Samples Loaded By Date

DGh 9/10/13
Data Processed By Date

202

SAMPLE PREPARATION LOG

PREPARATION BENCH SHEET

B3H0509

Advanced Technology Laboratories

Matrix: Soil
Date Prepared: 08/27/13 14:00
End Date/Time: 08/27/13 15:51

Prep Code: MSSEMI_ISOTOPEDILN

Prepared by: SM
IS Code: _____
IS Volume: _____

Lab Number	Analysis	Sample pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Surrogate ID	ul Surrogate	Extraction Comments
1302553-04	8270_SIM		30	3						A3E0434	1000	dark extract/hard to filter
1302581-15	8270_SIM		30	1						A3E0434	1000	
1302581-19	8270_SIM		30	1						A3E0434	1000	
1302581-21	8270_SIM		30	1						A3E0434	1000	
1302581-22	8270_SIM		30	1						A3E0434	1000	
B3H0509-BLK1	QC		30	1						A3E0434	1000	
B3H0509-BS1	QC		30	1	A3G0320			1000		A3E0434	1000	
B3H0509-MS1	QC		30	1	A3G0320		1302581-19	1000		A3E0434	1000	
B3H0509-MSD1	QC		30	1	A3G0320		1302581-19	1000		A3E0434	1000	

BA 09/16/13

Number	Reagent Name
A1I3007	SAND
A2L0036	Sodium Sulfate
A3E0228	Methylene CHLORIDE
A3E0240	Acetone

Prepared By 8-27-13 Date

Preparation Reviewed By Date

Extracts Received By 8/27/13 Date

Printed: 8/27/2013 3:52:19PM :: bch_ATL_SVOA(2)

PREPARATION BENCH SHEET

B3I0021

Advanced Technology Laboratories

Matrix: Soil
Date Prepared: 09/03/13 11:10
End Date/Time: 08/28/13 12:24

Prep Code: MSSEMI

Prepared by: SM
IS Code: _____
IS Volume: _____

Lab Number	Analysis	Sample pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Surrogate ID	ul Surrogate	Extraction Comments
1302545-01	8270_SIM		30	1						A3E0434	1000	
1302545-05	8270_SIM		30	1						A3E0434	1000	
1302545-11	8270_SIM		30	1						A3E0434	1000	
1302545-17	8270_SIM		30	1						A3E0434	1000	
1302547-05	8270_SIM		30	1						A3E0434	1000	
1302547-11	8270_SIM		30	1						A3E0434	1000	
1302547-12	8270_SIM		30	1						A3E0434	1000	
B3I0021-BLK1	QC		30	1						A3E0434	1000	
B3I0021-BS1	QC		30	1	A3G0320			1000		A3E0434	1000	
B3I0021-MS1	QC		30	1	A3G0320		1302547-12	1000		A3E0434	1000	
B3I0021-MSD1	QC		30	1	A3G0320		1302547-12	1000		A3E0434	1000	

Number	Reagent Name
A1I3007	SAND
A2L0036	Sodium Sulfate
A3E0228	Methylene CHLORIDE
A3E0240	Acetone

BB for SM 09/10/13
Prepared By — Date

9/10/13
Preparation Reviewed By — Date

BB 9/10/13
Extracts Received By — Date

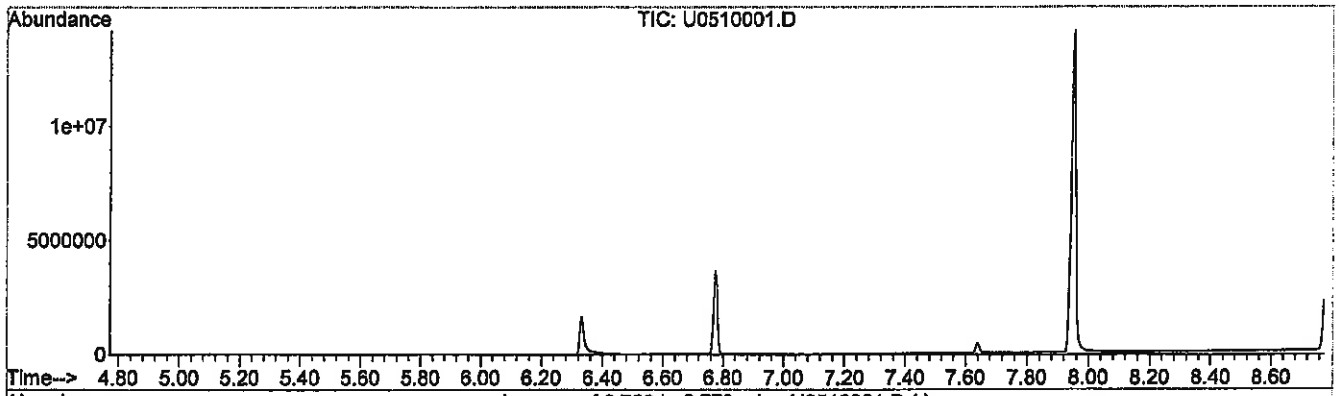
205

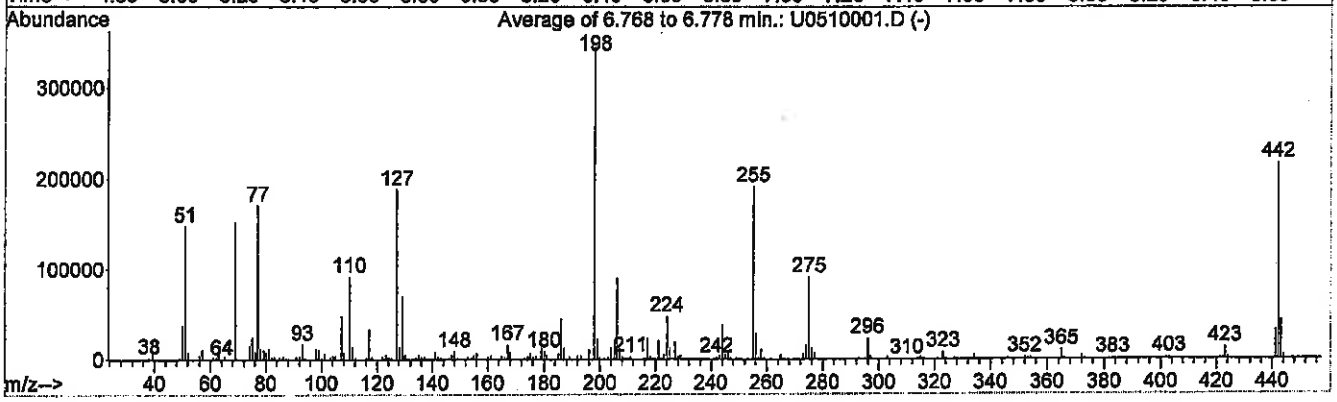
INSTRUMENT TUNING CHECK

Data Path : D:\Data\13-05-10b\
Data File : U0510001.D
Acq On : 10 May 2013 11:47 am
Operator : BB
Sample : SEQ-TUN1
Misc : 1,TUNE,A3A0333
ALS Vial : 96 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPF-8270.M
Title : EPA 8270C/625
Last Update : Thu Sep 29 10:13:58 2011





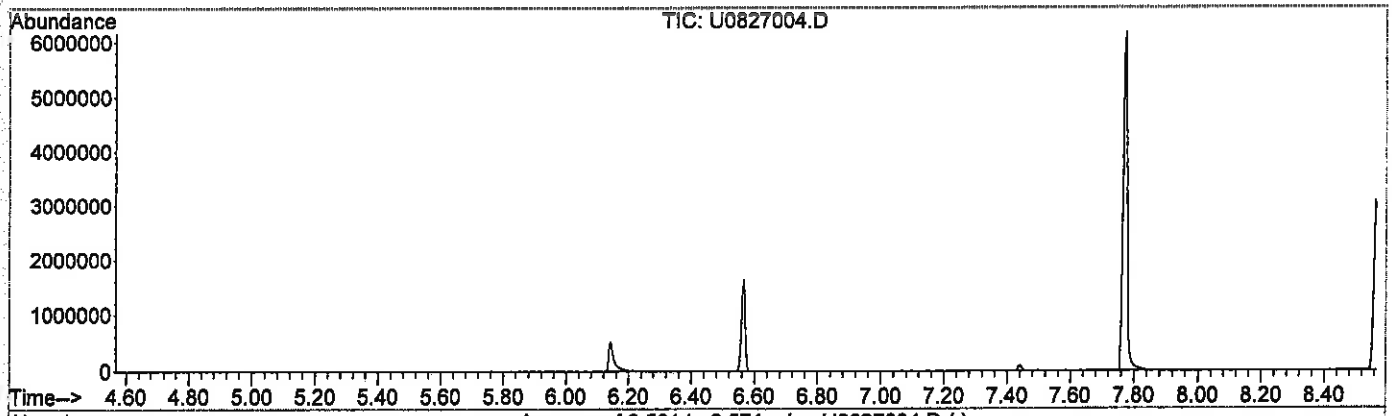
AutoFind: Scans 351, 352, 353; Background Corrected with Scan 346

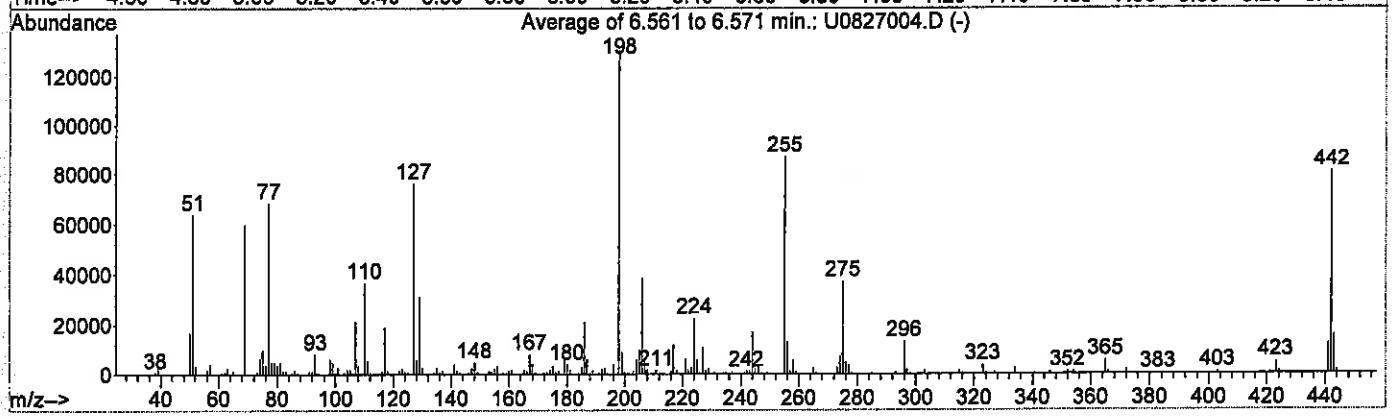
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	43.0	147992	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	44.3	152600	PASS
70	69	0.00	2	0.5	789	PASS
127	198	40	60	54.8	188522	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	344128	PASS
199	198	5	9	6.7	23120	PASS
275	198	10	30	26.5	91208	PASS
365	198	1	100	3.0	10454	PASS
441	443	0.01	100	74.9	32338	PASS
442	198	40	100	63.1	217005	PASS
443	442	17	23	19.9	43197	PASS

Data Path : D:\Data\13-08-27\
Data File : U0827004.D
Acq On : 27 Aug 2013 2:25 pm
Operator : MFR
Sample : SEQ-TUN1
Misc : 1,TUNE,A3G0291
ALS Vial : 96 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\DFTPPF-SIM.M
Title : EPA 8270C/625
Last Update : Tue May 11 17:53:47 2010





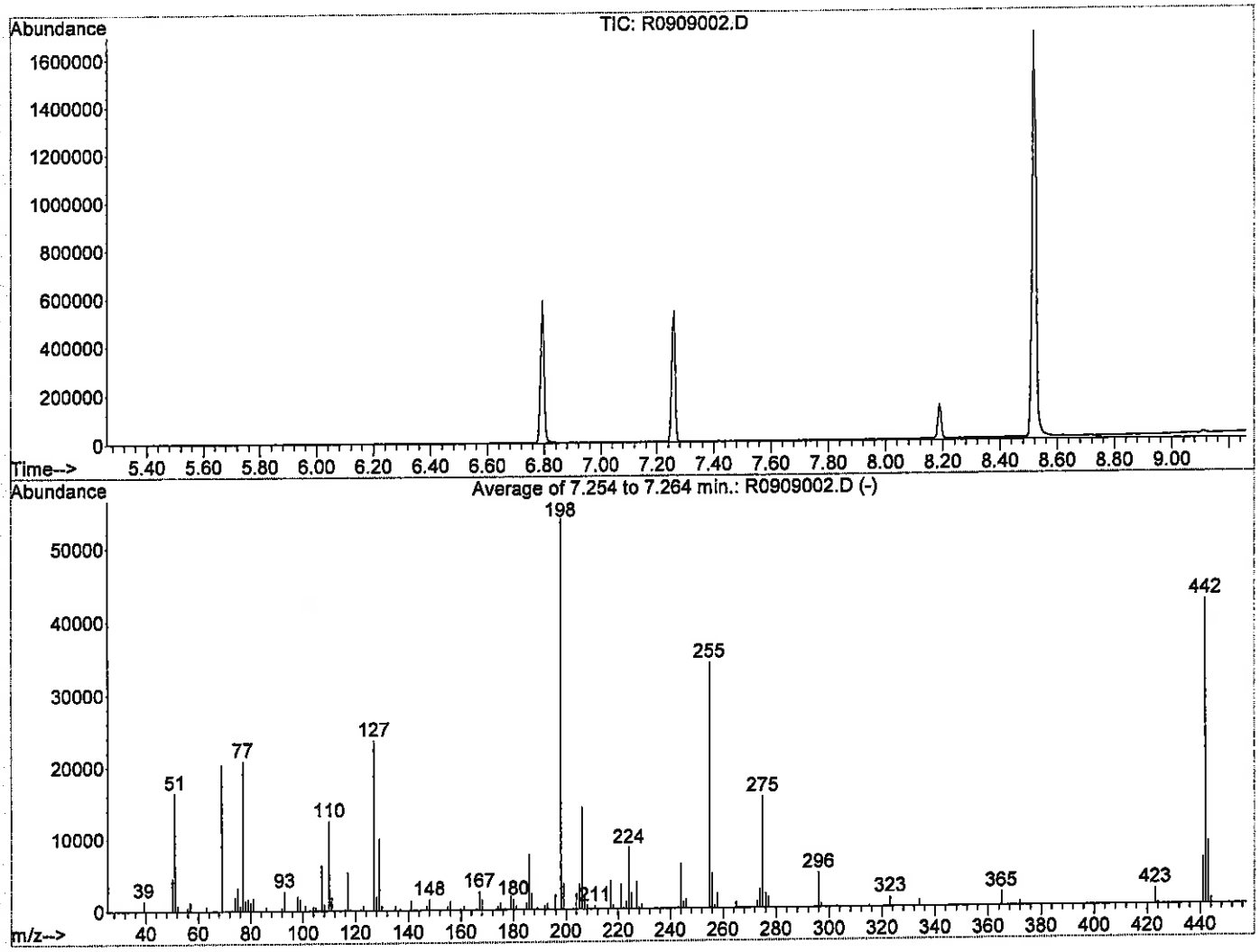
AutoFind: Scans 204, 205, 206; Background Corrected with Scan 198

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	48.6	63554	PASS
68	69	0.00	2	0.9	539	PASS
69	198	0.00	100	45.6	59696	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	58.2	76117	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	130808	PASS
199	198	5	9	6.7	8821	PASS
275	198	10	30	28.4	37130	PASS
365	198	1	100	4.1	5424	PASS
441	443	0.01	100	79.3	12359	PASS
442	198	40	100	61.8	80880	PASS
443	442	17	23	19.3	15578	PASS

DFTPP

Data File : D:\DATA\R130909A\R0909002.D
Acq On : 9 Sep 2013 3:39 pm
Sample : SEQ-TUN1,A3G0291
Misc : 1,TUNE
MS Integration Params: rteint.p
Method : C:\MSDCHEM\1\METHODS\RSIM130909.M (RTE Integrator)
Title : PAHs & 1,4-Dioxane by 8270 SIM

Vial: 96
Operator: BB
Inst : ms15
Multiplr: 1.00



AutoFind: Scans 660, 661, 662; Background Corrected with Scan 654

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	30.4	16412	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	37.9	20432	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	43.8	23592	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	53901	PASS
199	198	5	9	6.6	3570	PASS
275	198	10	30	28.8	15550	PASS
365	198	1	100	3.5	1908	PASS
441	443	0.01	100	74.6	6461	PASS
442	198	40	100	78.4	42245	PASS
443	442	17	23	20.5	8657	PASS

R0909002.D RSIM130909.M Tue Sep 10 09:05:18 2013

INITIAL CALIBRATION DATA SUMMARY

Response Factor Report MS-13

Method Path : C:\MSDCHEM\1\METHODS\
Method File : USIM130510.M
Title : 8270 by SIM
Last Update : Fri May 10 14:31:39 2013
Response Via : Initial Calibration

Calibration Files
100 =U0510002.D 500 =U0510003.D 1000=U0510004.D
2000=U0510005.D 10K =U0510006.D

		Compound	100	500	1000	2000	10K	Avg	%RSD
1)	I	1,4-Dioxane-d8	----------ISTD----------						
2)	T	1,4-Dioxane	1.226	1.215	1.166	1.121	1.067	1.159	5.71
3)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
4)	S	1,2-Dichlorobenzene	0.935	0.946	0.944	0.940	0.926	0.938	0.87
5)	S	Nitrobenzene-d5	0.755	0.800	0.855	0.926	1.091	0.885	14.85
6)	T	Naphthalene	3.740	3.666	3.677	3.668	3.643	3.679	0.99
7)	T	2-Methylnaphthalene	2.318	2.378	2.416	2.488	2.459	2.412	2.78
8)	I	Acenaphthene-d10	----------ISTD----------						
9)	S	2-Fluorobiphenyl	1.586	1.587	1.552	1.572	1.460	1.552	3.42
10)	T	Acenaphthylene	1.989	2.010	2.026	2.113	2.068	2.041	2.42
11)	MC	Acenaphthene	1.294	1.272	1.286	1.303	1.234	1.278	2.10
12)	T	Fluorene	1.426	1.490	1.524	1.542	1.466	1.489	3.12
13)	I	Phenanthrene-d10	----------ISTD----------						
14)	T	Phenanthrene	1.215	1.207	1.204	1.194	0.971	1.158	9.06
15)	T	Anthracene	1.023	1.071	1.089	1.112	0.961	1.051	5.73
16)	C	Fluoranthene	1.136	1.157	1.206	1.197	0.980	1.136	8.05
17)	T	Pyrene	1.162	1.181	1.184	1.204	1.019	1.150	6.51
18)	I	Chrysene-d12	----------ISTD----------						
19)	S	4-Terphenyl-d14	0.695	0.682	0.706	0.697	0.573	0.671	8.22
20)	T	Benzo[a]anthracene	1.177	1.157	1.169	1.183	1.026	1.142	5.74
21)	T	Chrysene	1.267	1.259	1.272	1.247	1.031	1.215	8.49
22)	I	Perylene-d12	----------ISTD----------						
23)	T	Benzo[b]fluoranthen	1.540	1.600	1.670	1.699	1.580	1.618	4.05
24)	T	Benzo[k]fluoranthen	1.354	1.359	1.326	1.414	1.303	1.351	3.10
25)	C	Benzo[a]pyrene	1.228	1.261	1.278	1.318	1.281	1.273	2.58
26)	T	Indeno[1,2,3-cd]pyr	1.309	1.658	1.377	1.417	1.367	1.426	9.51
27)	T	Dibenz[a,h]anthrace	1.110	1.361	1.180	1.224	1.178	1.211	7.70
28)	T	Benzo[g,h,i]perylen	1.202	1.588	1.213	1.249	1.170	1.284	13.38

(#) = Out of Range

5/14/13

Compound List Report MS-13

Method Path : C:\MSDCHEM\1\METHODS\
Method File : USIM130510.M
Title : 8270 by SIM
Last Update : Fri May 10 14:31:39 2013
Response Via : Initial Calibration

Total Cpnds : 28

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dioxane-d8	96	2.45	1.000	A	3	A	B
2	T	1,4-Dioxane	88	2.47	1.007	A	3	A	B
3	I	1,4-Dichlorobenzene-d4	152	4.98	1.000	A	2	A	B
4	S	1,2-Dichlorobenzene-d4	152	5.14	1.031	A	2	A	B
5	S	Nitrobenzene-d5	82	5.54	1.112	A	2	A	B
6	T	Naphthalene	128	6.33	1.271	A	2	A	B
7	T	2-Methylnaphthalene	142	7.08	1.422	A	1	A	B
8	I	Acenaphthene-d10	164	8.26	1.000	A	2	A	B
9	S	2-Fluorobiphenyl	172	7.48	0.906	A	1	A	B
10	T	Acenaphthylene	152	8.10	0.981	A	2	A	B
11	MC	Acenaphthene	154	8.29	1.004	A	2	A	B
12	T	Fluorene	166	8.87	1.074	A	2	A	B
13	I	Phenanthrene-d10	188	9.94	1.000	A	2	A	B
14	T	Phenanthrene	178	9.97	1.003	A	2	A	B
15	T	Anthracene	178	10.03	1.009	A	2	A	B
16	C	Fluoranthene	202	11.32	1.139	A	2	A	B
17	T	Pyrene	202	11.58	1.165	A	2	A	B
18	I	Chrysene-d12	240	12.93	1.000	A	2	A	B
19	S	4-Terphenyl-d14	244	11.71	0.906	A	2	A	B
20	T	Benzo[a]anthracene	228	12.91	0.999	A	2	A	B
21	T	Chrysene	228	12.96	1.002	A	2	A	B
22	I	Perylene-d12	264	14.58	1.000	A	2	A	B
23	T	Benzo[b]fluoranthene	252	14.10	0.967	A	2	A	B
24	T	Benzo[k]fluoranthene	252	14.13	0.969	A	2	A	B
25	C	Benzo[a]pyrene	252	14.51	0.995	A	2	A	B
26	T	Indeno[1,2,3-cd]pyrene	276	16.19	1.110	A	2	A	B
27	T	Dibenz[a,h]anthracene	278	16.19	1.110	A	2	A	B
28	T	Benzo[g,h,i]perylene	276	16.68	1.144	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

USIM130510.M Fri May 10 15:38:04 2013

Response Factor Report ms15

Method : C:\MSDCHEM\1\METHODS\RSIM130909.M (RTE Integrator)
Title : PAHs & 1,4-Dioxane by 8270 SIM
Last Update : Tue Sep 10 06:19:54 2013
Response via : Initial Calibration

MS-17 ICAL
8270 SIM

Calibration Files
100 =R0909005.D 500 =R0909004.D 1000 =R0909006.D
2000 =R0909007.D 5000 =R0909008.D 10K =R0909009.D

		Compound	100	500	1000	2000	5000	10K	Avg	%RSD
1)	I	1,4-Dioxane-d8	----------ISTD----------							
2)	T	1,4-Dioxane	1.102	1.060	1.381	1.162	1.159	1.219	1.181	9.52
3)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
4)	S	1,2-Dichloroben	0.963	0.928	1.107	0.967	0.948	0.963	0.979	6.55
5)	S	Nitrobenzene-d5	1.168	1.256	1.538	1.400	1.378	1.451	1.365	9.80
6)	T	Naphthalene	3.645	3.637	4.299	3.760	3.507	3.557	3.734	7.76
7)	T	2-Methylnaphtha	2.332	2.239	2.740	2.413	2.382	2.463	2.428	7.03
8)	I	Acenaphthene-d10	----------ISTD----------							
9)	S	2-Fluorobipheny	1.520	1.524	1.852	1.659	1.554	1.577	1.614	7.85
10)	T	Acenaphthylene	1.849	1.854	2.311	2.077	1.993	2.018	2.017	8.46
11)	MC	Acenaphthene	1.192	1.119	1.375	1.222	1.157	1.194	1.210	7.31
12)	T	Fluorene	1.361	1.358	1.707	1.518	1.451	1.518	1.486	8.74
13)	I	Phenanthrene-d10	----------ISTD----------							
14)	MT	Phenanthrene	0.982	1.035	1.252	1.101	1.132	1.111	1.102	8.34
15)	T	Anthracene	0.980	1.023	1.263	1.112	1.107	1.124	1.102	8.84
16)	TC	Fluoranthene	1.065	1.087	1.355	1.180	1.206	1.208	1.183	8.78
17)	MT	Pyrene	1.068	1.098	1.372	1.189	1.183	1.224	1.189	9.02
18)	I	Chrysene-d12	----------ISTD----------							
19)	S	4-Terphenyl-d14	0.857	0.816	0.945	0.841	0.866	0.859	0.864	5.03
20)	T	Benzo(a)anthrac	0.935	0.964	1.205	1.062	1.124	1.187	1.079	10.46
21)	T	Chrysene	1.369	1.228	1.396	1.215	1.177	1.209	1.265	7.30
22)	I	Perylene-d12	----------ISTD----------							
23)	T	Benzo(b)fluoran	1.382	1.319	1.740	1.405	1.542	1.683	1.512	11.36
24)	T	Benzo(k)fluoran	1.339	1.464	1.651	1.639	1.616	1.706	1.569	8.86
25)	TC	Benzo(a)pyrene	1.214	1.202	1.425	1.301	1.374	1.512	1.338	9.10
26)	T	Indeno(1,2,3-cd	1.403	1.403	1.608	1.511	1.580	1.730	1.539	8.25
27)	T	Dibenz(a,h)anth	1.111	1.144	1.298	1.232	1.292	1.418	1.249	8.99
28)	T	benzo(g,h,i)per	1.370	1.322	1.515	1.415	1.444	1.552	1.436	6.02

9/10/13

(#) = Out of Range

Compound List Report ms15

Method : C:\MSDCHEM\1\METHODS\RSIM130909.M (RTE Integrator)
Title : PAHs & 1,4-Dioxane by 8270 SIM
Last Update : Tue Sep 10 06:19:54 2013
Response via : Initial Calibration
Total Cpnds : 28

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dioxane-d8	96	2.59	1.000	A	3	A	B
2	T	1,4-Dioxane	88	2.62	1.009	A	3	A	B
3	I	1,4-Dichlorobenzene-d4	152	5.18	1.000	A	2	A	B
4	S	1,2-Dichlorobenzene-d4	152	5.34	1.031	A	2	A	B
5	S	Nitrobenzene-d5	82	5.73	1.106	A	2	A	B
6	T	Naphthalene	128	6.55	1.264	A	2	A	B
7	T	2-Methylnaphthalene	142	7.31	1.411	A	1	A	B
8	I	Acenaphthene-d10	164	8.50	1.000	A	2	A	B
9	S	2-Fluorobiphenyl	172	7.71	0.907	A	1	A	B
10	T	Acenaphthylene	152	8.33	0.981	A	2	A	B
11	MC	Acenaphthene	154	8.53	1.004	A	2	A	B
12	T	Fluorene	166	9.12	1.073	A	2	A	B
13	I	Phenanthrene-d10	188	10.21	1.000	A	2	A	B
14	T	Phenanthrene	178	10.25	1.003	A	2	A	B
15	T	Anthracene	178	10.30	1.009	A	2	A	B
16	T	Fluoranthene	202	11.67	1.143	A	2	A	B
17	T	Pyrene	202	11.96	1.171	A	2	A	B
18	I	Chrysene-d12	240	13.43	1.000	A	2	A	B
19	S	4-Terphenyl-d14	244	12.11	0.902	A	2	A	B
20	T	Benzo(a)anthracene	228	13.42	0.999	A	2	A	B
21	T	Chrysene	228	13.46	1.002	A	2	A	B
22	I	Perylene-d12	264	15.27	1.000	A	2	A	B
23	T	Benzo(b)fluoranthene	252	14.73	0.965	A	2	A	B
24	T	Benzo(k)fluoranthene	252	14.77	0.967	A	2	A	B
25	T	Benzo(a)pyrene	252	15.19	0.995	A	2	A	B
26	T	Indeno(1,2,3-cd)pyrene	276	17.09	1.119	A	2	A	B
27	T	Dibenz(a,h)anthracene	278	17.10	1.120	A	2	A	B
28	T	benzo(g,h,i)perylene	276	17.64	1.155	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

RSIM130909.M Tue Sep 10 08:41:04 2013

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

Evaluate Continuing Calibration Report

InstName : MS-13

Data Path : D:\DATA\13-05-10B\
Data File : U0510007.D
Acq On : 10 May 2013 2:15 pm
Operator : BB
Sample : SEQ-ICV1,1000ppb
Misc : 1,A3E0037
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 10 14:55:14 2013
Quant Method : C:\MSDCHEM\1\METHODS\USIM130510.M
Quant Title : 8270 by SIM
QLast Update : Fri May 10 14:31:39 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dioxane-d8	1.000	1.000	0.0	100	0.00
2	T	1,4-Dioxane	1.159	1.158	0.1	100	0.00
3	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00
4	S	1,2-Dichlorobenzene-d4	0.938	0.933	0.5	96	0.00
5	S	Nitrobenzene-d5	0.885	0.925	-4.5	105	0.00
6	T	Naphthalene	3.679	3.776	-2.6	100	0.00
7	T	2-Methylnaphthalene	2.412	2.677	-11.0	108	0.00
8	I	Acenaphthene-d10	1.000	1.000	0.0	96	0.00
9	S	2-Fluorobiphenyl	1.552	1.603	-3.3	99	0.00
10	T	Acenaphthylene	2.041	1.984	2.8	94	0.00
11	MC	Acenaphthene	1.278	1.348	-5.5	100	0.00
12	T	Fluorene	1.489	1.548	-4.0	97	0.00
13	I	Phenanthrene-d10	1.000	1.000	0.0	92	0.00
14	T	Phenanthrene	1.158	1.339	-15.6	102	0.00
15	T	Anthracene	1.051	1.172	-11.5	99	0.00
16	C	Fluoranthene	1.136	1.273	-12.1	97	0.00
17	T	Pyrene	1.150	1.294	-12.5	100	0.00
18	I	Chrysene-d12	1.000	1.000	0.0	93	0.00
19	S	4-Terphenyl-d14	0.671	0.727	-8.3	96	0.00
20	T	Benzo[a]anthracene	1.142	1.223	-7.1	97	0.00
21	T	Chrysene	1.215	1.354	-11.4	99	0.00
22	I	Perylene-d12	1.000	1.000	0.0	91	0.00
23	T	Benzo[b]fluoranthene	1.618	1.798	-11.1	98	0.00
24	T	Benzo[k]fluoranthene	1.351	1.514	-12.1	104	0.00
25	C	Benzo[a]pyrene	1.273	1.407	-10.5	100	0.00
26	T	Indeno[1,2,3-cd]pyrene	1.426	1.521	-6.7	101	0.00
27	T	Dibenz[a,h]anthracene	1.211	1.266	-4.5	98	0.00
28	T	Benzo[g,h,i]perylene	1.284	1.322	-3.0	99	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

InstName : MS-13

Data Path : D:\Data\13-08-27\
Data File : U0827005.D
Acq On : 27 Aug 2013 2:44 pm
Operator : MFR
Sample : SEQ-CCV1
Misc : 1,A3H0029
ALS Vial : 97 Sample Multiplier: 1

Quant Time: Aug 27 15:20:09 2013
Quant Method : C:\MSDCHEM\1\METHODS\USIM130510.M
Quant Title : 8270 by SIM
QLast Update : Tue Aug 20 07:29:20 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dioxane-d8	1.000	1.000	0.0	60	0.00
2	T	1,4-Dioxane	1.159	1.170	-0.9	60	0.00
3	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	50	0.00
4	S	1,2-Dichlorobenzene-d4	0.938	0.983	-4.8	52	0.00
5	S	Nitrobenzene-d5	0.885	1.268	-43.3#	74	0.00
6	T	Naphthalene	3.679	4.671	-27.0	64	0.00
7	T	2-Methylnaphthalene	2.412	3.020	-25.2	63	0.00
8	I	Acenaphthene-d10	1.000	1.000	0.0	73	0.00
9	S	2-Fluorobiphenyl	1.552	1.419	8.6	67	0.00
10	T	Acenaphthylene	2.041	1.781	12.7	64	0.00
11	MC	Acenaphthene	1.278	1.135	11.2	64	-0.02
12	T	Fluorene	1.489	1.320	11.3	63	0.00
13	I	Phenanthrene-d10	1.000	1.000	0.0	67	0.00
14	T	Phenanthrene	1.158	1.050	9.3	59	0.00
15	T	Anthracene	1.051	1.113	-5.9	69	0.00
16	C	Fluoranthene	1.136	1.151	-1.3	64	0.00
17	T	Pyrene	1.150	1.175	-2.2	67	0.00
18	I	Chrysene-d12	1.000	1.000	0.0	81	0.00
19	S	4-Terphenyl-d14	0.671	0.748	-11.5	86	0.00
20	T	Benzo[a]anthracene	1.142	0.909	20.4	63	-0.02
21	T	Chrysene	1.215	1.260	-3.7	80	0.00
22	I	Perylene-d12	1.000	1.000	0.0	91	0.00
23	T	Benzo[b]fluoranthene	1.618	1.198	26.0	66	0.00
24	T	Benzo[k]fluoranthene	1.351	1.333	1.3	92	0.00
25	C	Benzo[a]pyrene	1.273	1.131	11.2	81	0.00
26	T	Indeno[1,2,3-cd]pyrene	1.426	1.255	12.0	83	0.00
27	T	Dibenz[a,h]anthracene	1.211	1.091	9.9	85	-0.02
28	T	Benzo[g,h,i]perylene	1.284	1.091	15.0	82	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\DATA\R130909A\R0909010.D
Acq On : 9 Sep 2013 7:22 pm
Sample : SEQ-ICV1,1000ppb
Misc : 1,SIM,A3H0
MS Integration Params: rteint.p

Vial: 7
Operator: BB
Inst : ms15
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\RSIM130909.M (RTE Integrator)
Title : PAHs & 1,4-Dioxane by 8270 SIM
Last Update : Tue Sep 10 06:19:54 2013
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dioxane-d8	1.000	1.000	0.0	104	0.00
2	T	1,4-Dioxane	1.181	1.292	-9.4	97	0.00
3	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	92	0.00
4	S	1,2-Dichlorobenzene-d4	0.979	1.022	-4.4	85	0.00
5	S	Nitrobenzene-d5	1.365	1.422	-4.2	85	0.00
6	T	Naphthalene	3.734	3.999	-7.1	85	0.00
7	T	2-Methylnaphthalene	2.428	2.457	-1.2	82	0.00
8	I	Acenaphthene-d10	1.000	1.000	0.0	91	0.00
9	S	2-Fluorobiphenyl	1.614	1.697	-5.1	83	0.00
10	T	Acenaphthylene	2.017	2.064	-2.3	81	0.00
11	MC	Acenaphthene	1.210	1.241	-2.6	82	0.00
12	T	Fluorene	1.486	1.517	-2.1	80	0.00
13	I	Phenanthrene-d10	1.000	1.000	0.0	88	0.00
14	MT	Phenanthrene	1.102	1.105	-0.3	78	0.00
15	T	Anthracene	1.102	1.075	2.5	75	0.00
16	TC	Fluoranthene	1.183	1.162	1.8	75	0.00
17	MT	Pyrene	1.189	1.147	3.5	73	0.00
18	I	Chrysene-d12	1.000	1.000	0.0	81	0.00
19	S	4-Terphenyl-d14	0.864	0.867	-0.3	74	0.00
20	T	Benzo(a)anthracene	1.079	1.004	7.0	68	0.00
21	T	Chrysene	1.265	1.252	1.0	73	0.00
22	I	Perylene-d12	1.000	1.000	0.0	80	0.00
23	T	Benzo(b)fluoranthene	1.512	1.476	2.4	68	0.00
24	T	Benzo(k)fluoranthene	1.569	1.505	4.1	73	0.00
25	TC	Benzo(a)pyrene	1.338	1.242	7.2	70	0.00
26	T	Indeno(1,2,3-cd)pyrene	1.539	1.460	5.1	73	0.00
27	T	Dibenz(a,h)anthracene	1.249	1.175	5.9	73	0.00
28	T	benzo(g,h,i)perylene	1.436	1.412	1.7	75	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
R0909010.D RSIM130909.M Tue Sep 10 09:14:00 2013

SUMMARY OF SURROGATE RECOVERIES

SYSTEM MONITORING COMPOUND SUMMARY

EPA 8270C SIM

Client: Ninyo & Moore - SD
Work Order: 1302545 **Matrix:** Soil
Project: CLAIREMONT H.S., 105338071 & 105338088 **Instrument:** MS-15

	DCB212D4 (28% - 96%)	NO2BZD5 (29% - 106%)	PHEN2F (36% - 113%)	PHENPD14 (39% - 138%)
1302545-01	56.1	42.9	63.3	67.3
1302545-05	71.2	61.9	80.9	82.8
1302545-11	66.7	57.8	79.7	81.8
1302545-17	62.6	56.9	80.6	84.5
B3I0021-BLK1	45.8	40.8	51.6	82.6
B3I0021-BS1	54.9	49.6	61.0	72.8
B3I0021-MS1	63.6	59.3	73.5	76.3
B3I0021-MSD1	65.2	59.7	74.6	72.7

DCB212D4 - 1,2-Dichlorobenzene-d4
NO2BZD5 - Nitrobenzene-d5
PHEN2F - 2-Fluorobiphenyl
PHENPD14 - 4-Terphenyl-d14

BA 09/17/13

SYSTEM MONITORING COMPOUND SUMMARY

EPA 8270C SIM

Client: Ninyo & Moore - SD
Work Order: 1302547 Matrix: Soil
Project: CLAIREMONT H.S., 105338071 & 105338088 Instrument: MS-15

	DCB212D4 (28% - 96%)	NO2B2D5 (29% - 106%)	PHEN2F (36% - 113%)	PHENPD14 (39% - 138%)
1302547-05	59.3	55.2	74.0	76.2
1302547-11	68.3	59.5	78.5	78.6
1302547-12	72.6	64.9	84.6	84.3
B3I0021-BLK1	45.8	40.8	51.6	82.6
B3I0021-BS1	54.9	49.6	61.0	72.8
B3I0021-MS1	63.6	59.3	73.5	76.3
B3I0021-MSD1	65.2	59.7	74.6	72.7

DCB212D4 - 1,2-Dichlorobenzene-d4
NO2B2D5 - Nitrobenzene-d5
PHEN2F - 2-Fluorobiphenyl
PHENPD14 - 4-Terphenyl-d14

SYSTEM MONITORING COMPOUND SUMMARY

EPA 8270C SIM

Client: Ninyo & Moore - SD
Work Order: 1302581 Matrix: Soil
Project: CLAIREMONT H.S., 105338071 & 105338088 Instrument: MS-13

	DCB2i2D4 (28% - 96%)	NO2B2D5 (29% - 106%)	PHEN2F (36% - 113%)	PHENPD14 (39% - 138%)
1302581-15	68.4	77.9	75.1	112
1302581-19	76.0	80.5	75.8	119
1302581-21	81.3	88.1	80.1	123
1302581-22	69.6	77.0	72.6	111
B3H0509-BLK1	64.4	78.5	44.8	99.8
B3H0509-BS1	68.5	76.6	69.4	98.3
B3H0509-MS1	66.7	90.2	73.8	106
B3H0509-MSD1	72.5	94.9	77.3	121

DCB2i2D4 - 1,2-Dichlorobenzene-d4
NO2B2D5 - Nitrobenzene-d5
PHEN2F - 2-Fluorobiphenyl
PHENPD14 - 4-Terphenyl-d14

BA05/16/B

INTERNAL STANDARD AREAS AND RT SUMMARY

8 - FORM VIII
INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270C SIM

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 1053380
Sequence:	S3I0074	Instrument:	MS-15
		Calibration:	UNASSIGNED

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DRAFT: T-12-9.5 (1302545-05)			*Lab File ID: R0909021.D*			*Analyzed: 09/10/13 00:17*			
Acenaphthene-d10	5982	8.5	8684	8.5	69	50 - 200	0.0000	+/-0.50	
Chrysene-d12	10327	13.43	11976	13.43	86	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	3341	5.17	4773	5.18	70	50 - 200	-0.0100	+/-0.50	
1,4-Dioxane-d8	870	2.59	2512	2.59	35	50 - 200	0.0000	+/-0.50	*
Perylene-d12	7602	15.27	7868	15.27	97	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	11589	10.21	15803	10.21	73	50 - 200	0.0000	+/-0.50	
DRAFT: T-13-4 (1302545-11)			*Lab File ID: R0909023.D*			*Analyzed: 09/10/13 01:12*			
Acenaphthene-d10	5964	8.5	8684	8.5	69	50 - 200	0.0000	+/-0.50	
Chrysene-d12	10482	13.43	11976	13.43	88	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	3326	5.17	4773	5.18	70	50 - 200	-0.0100	+/-0.50	
1,4-Dioxane-d8	630	2.59	2512	2.59	25	50 - 200	0.0000	+/-0.50	*
Perylene-d12	9310	15.27	7868	15.27	118	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	11975	10.21	15803	10.21	76	50 - 200	0.0000	+/-0.50	
DRAFT: T-14-21 (1302545-17)			*Lab File ID: R0909024.D*			*Analyzed: 09/10/13 01:38*			
Acenaphthene-d10	7143	8.5	8684	8.5	82	50 - 200	0.0000	+/-0.50	
Chrysene-d12	12576	13.43	11976	13.43	105	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	4020	5.17	4773	5.18	84	50 - 200	-0.0100	+/-0.50	
1,4-Dioxane-d8	571	2.59	2512	2.59	23	50 - 200	0.0000	+/-0.50	*
Perylene-d12	10552	15.27	7868	15.27	134	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	14111	10.21	15803	10.21	89	50 - 200	0.0000	+/-0.50	

8 - FORM VIII
INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270C SIM

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 1053380
Sequence:	S3I0074	Instrument:	MS-15
		Calibration:	UNASSIGNED

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DRAFT: T-12-S (1302545-01)			*Lab File ID: R0909026.D*			*Analyzed: 09/10/13 02:32*			
Acenaphthene-d10	6012	8.5	8684	8.5	69	50 - 200	0.0000	+/-0.50	
Chrysene-d12	9480	13.43	11976	13.43	79	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	3364	5.17	4773	5.18	70	50 - 200	-0.0100	+/-0.50	
1,4-Dioxane-d8	54	2.59	2512	2.59	2	50 - 200	0.0000	+/-0.50	*
Perylene-d12	8976	15.27	7868	15.27	114	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	11784	10.21	15803	10.21	75	50 - 200	0.0000	+/-0.50	

1,4-Dioxane-d8 not used BA 09/17/13

8 - FORM VIII
INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270C SIM

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 1053380
Sequence:	S3I0074	Instrument:	MS-15
		Calibration:	UNASSIGNED

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DRAFT: T-16-12 (1302547-12)			*Lab File ID: R0909020.D*			*Analyzed: 09/09/13 23:51*			
Acenaphthene-d10	6439	8.5	8684	8.5	74	50 - 200	0.0000	+/-0.50	
Chrysene-d12	9816	13.43	11976	13.43	82	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	3778	5.17	4773	5.18	79	50 - 200	-0.0100	+/-0.50	
1,4-Dioxane-d8	1098	2.59	2512	2.59	44	50 - 200	0.0000	+/-0.50	*
Perylene-d12	7306	15.27	7868	15.27	93	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	12311	10.21	15803	10.21	78	50 - 200	0.0000	+/-0.50	
DRAFT: T-16-9 (1302547-11)			*Lab File ID: R0909022.D*			*Analyzed: 09/10/13 00:45*			
Acenaphthene-d10	6137	8.5	8684	8.5	71	50 - 200	0.0000	+/-0.50	
Chrysene-d12	10165	13.43	11976	13.43	85	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	3527	5.17	4773	5.18	74	50 - 200	-0.0100	+/-0.50	
1,4-Dioxane-d8	824	2.59	2512	2.59	33	50 - 200	0.0000	+/-0.50	*
Perylene-d12	7579	15.27	7868	15.27	96	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	11727	10.21	15803	10.21	74	50 - 200	0.0000	+/-0.50	
DRAFT: T-15-14 (1302547-05)			*Lab File ID: R0909025.D*			*Analyzed: 09/10/13 02:05*			
Acenaphthene-d10	7157	8.5	8684	8.5	82	50 - 200	0.0000	+/-0.50	
Chrysene-d12	13070	13.43	11976	13.43	109	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	3879	5.17	4773	5.18	81	50 - 200	-0.0100	+/-0.50	
1,4-Dioxane-d8	515	2.59	2512	2.59	21	50 - 200	0.0000	+/-0.50	*
Perylene-d12	11062	15.26	7868	15.27	141	50 - 200	-0.0100	+/-0.50	
Phenanthrene-d10	14512	10.21	15803	10.21	92	50 - 200	0.0000	+/-0.50	

8 - FORM VIII
INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270C SIM

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 1053380
Sequence:	S3H0325	Instrument:	MS-13
		Calibration:	3E14005

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DRAFT: T-22-1 (1302581-15)			*Lab File ID: U0827016.D*			*Analyzed: 08/27/13 19:35*			
Acenaphthene-d10	19423	7.91	21852	7.91	89	50 - 200	0.0000	+/-0.50	
Chrysene-d12	26536	12.57	35198	12.57	75	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	8386	4.69	9293	4.68	90	50 - 200	0.0100	+/-0.50	
1,4-Dioxane-d8	2839	2.21	4980	2.2	57	50 - 200	0.0100	+/-0.50	
Perylene-d12	23961	14.14	28849	14.14	83	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	30200	9.59	35656	9.59	85	50 - 200	0.0000	+/-0.50	
DRAFT: T-23-3 (1302581-19)			*Lab File ID: U0827017.D*			*Analyzed: 08/27/13 20:02*			
Acenaphthene-d10	19763	7.91	21852	7.91	90	50 - 200	0.0000	+/-0.50	
Chrysene-d12	25489	12.58	35198	12.57	72	50 - 200	0.0100	+/-0.50	
1,4-Dichlorobenzene-d4	8081	4.68	9293	4.68	87	50 - 200	0.0000	+/-0.50	
1,4-Dioxane-d8	2972	2.2	4980	2.2	60	50 - 200	0.0000	+/-0.50	
Perylene-d12	22531	14.14	28849	14.14	78	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	30123	9.59	35656	9.59	84	50 - 200	0.0000	+/-0.50	
DRAFT: Dup-2 (1302581-21)			*Lab File ID: U0827018.D*			*Analyzed: 08/27/13 20:29*			
Acenaphthene-d10	17786	7.91	21852	7.91	81	50 - 200	0.0000	+/-0.50	
Chrysene-d12	23826	12.58	35198	12.57	68	50 - 200	0.0100	+/-0.50	
1,4-Dichlorobenzene-d4	7449	4.69	9293	4.68	80	50 - 200	0.0100	+/-0.50	
1,4-Dioxane-d8	3167	2.2	4980	2.2	64	50 - 200	0.0000	+/-0.50	
Perylene-d12	21321	14.14	28849	14.14	74	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	27242	9.59	35656	9.59	76	50 - 200	0.0000	+/-0.50	

8 - FORM VIII
INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270C SIM

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 1053380
Sequence:	S3H0325	Instrument:	MS-13
		Calibration:	3E14005

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DRAFT: Dup-1 (1302581-22)			*Lab File ID: U0827019.D*			*Analyzed: 08/27/13 20:55*			
Acenaphthene-d10	17693	7.91	21852	7.91	81	50 - 200	0.0000	+/-0.50	
Chrysene-d12	24135	12.57	35198	12.57	69	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	7146	4.69	9293	4.68	77	50 - 200	0.0100	+/-0.50	
1,4-Dioxane-d8	2405	2.2	4980	2.2	48	50 - 200	0.0000	+/-0.50	*
Perylene-d12	22655	14.14	28849	14.14	79	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	26819	9.59	35656	9.59	75	50 - 200	0.0000	+/-0.50	

1,4- Dioxane- d8 not used BA 09/16/13

Method EPA 6010B (Total)

ANALYSIS RUN LOG

WinLab32 - Off-Line ICP Continuous - Data Reprocessing

File Edit Tools Analysis Options Window Help

MethEd | SamInfo | Spectra | Results | Calib | Examine | Reproc | Method: 120828_A | Sample Info: Untitled

Data Reprocessing

Analysis Progress | Step: idle

Reprocess | Data Set To Reprocess: ICP8_130824-01 | Browse... | Print Log

Reprocessed Data Set | Browse... | Hide Empty Columns

	Seq	Sample ID	Date Time	Initial Sample Wt.	Initial Sample Vol.	Sample
1		IBL1	8/24/2013 9:31:25 AM			
2		CAL1	8/24/2013 9:35:11 AM			
3		CAL2	8/24/2013 9:38:58 AM			
4		CAL3	8/24/2013 9:42:09 AM			
5		ICV1	8/24/2013 9:48:22 AM			
6		ICB1	8/24/2013 9:51:35 AM			
7		IFA1	8/24/2013 9:55:22 AM			
8		IFB1	8/24/2013 9:59:40 AM			
9		CCV1	8/24/2013 10:03:21 AM			
10		CCB1	8/24/2013 10:06:31 AM			
11		B3H0462-BLK1	8/24/2013 10:17:21 AM		25	mg/L
12		B3H0462-BS1	8/24/2013 10:21:09 AM		25	mg/L
13		1302545-01	8/24/2013 10:25:03 AM		25	mg/L
14		B3H0462-MS1	8/24/2013 10:28:13 AM		25	mg/L
15		B3H0462-MSD1	8/24/2013 10:31:39 AM		25	mg/L
16		1302584-16	8/24/2013 10:35:07 AM		25	mg/L
17		1302584-22	8/24/2013 10:38:47 AM		25	mg/L
18		S3H0300-CCV2	8/24/2013 10:42:27 AM		25	
19		S3H0300-CCB2	8/24/2013 10:45:40 AM		25	
20		B3H0461-BLK1	8/24/2013 10:49:27 AM		25	
21		B3H0461-BS1	8/24/2013 10:53:14 AM		25	
22		1302584-01	8/24/2013 10:57:09 AM		25	
23		B3H0461-MS1	8/24/2013 11:00:48 AM		25	
24		B3H0462-MSD1	8/24/2013 11:04:13 AM		25	
25		1302584-04	8/24/2013 11:08:06 AM		25	
26		1302584-07	8/24/2013 11:11:45 AM		25	
27		1302584-10	8/24/2013 11:15:34 AM		25	
28		1302584-13	8/24/2013 11:19:12 AM		25	
29		1302584-19	8/24/2013 11:22:50 AM		25	
30		S3H0300-CCV3	8/24/2013 11:26:59 AM		25	
31		S3H0300-CCB3	8/24/2013 11:30:11 AM		25	
32		IFA2	8/24/2013 11:33:58 AM			
33		IFB2	8/24/2013 11:38:17 AM			
34		CCV-	8/24/2013 11:41:58 AM			
35		CCB-	8/24/2013 11:45:08 AM			
36						
37						
38						
39						
40						

*Parameters marked with an asterisk override settings in the method.

For Help, press F1

ANALYSIS SEQUENCE

Sequence Comments:

S3H0300

Instrument: ICP-08
Calibration ID: 3H26002

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3H0300-IBL1	QC		1		A3B0015	
S3H0300-CAL1	QC		2	A3H0196	A3B0015	
S3H0300-CAL2	QC		3	A3G0205	A3B0015	
S3H0300-CAL3	QC		4	A3G0206	A3B0015	
S3H0300-ICV1	QC		5	A3H0268	A3B0015	
S3H0300-ICB1	QC		6		A3B0015	
S3H0300-IFA1	QC		7	A3G0427	A3B0015	
S3H0300-IFB1	QC		8	A3G0444	A3B0015	
S3H0300-CCV1	QC		9	A3H0219	A3B0015	
S3H0300-CCB1	QC		10		A3B0015	
B3H0462-BLK1	QC		11		A3B0015	
B3H0462-BS1	QC		12		A3B0015	
1302545-01	6010	A	13		A3B0015	BatchQC
1302545-01	6010_CAM	A	14		A3B0015	
B3H0462-MS1	QC		15		A3B0015	
B3H0462-MSD1	QC		16		A3B0015	
1302584-16	6010	A	17		A3B0015	
1302584-22	6010	A	18		A3B0015	
S3H0300-CCV2	QC		19	A3H0268	A3B0015	
S3H0300-CCB2	QC		20		A3B0015	
B3H0461-BLK1	QC		21		A3B0015	
B3H0461-BS1	QC		22		A3B0015	
1302584-01	200.7	A	23		A3B0015	
B3H0461-MS1	QC		24		A3B0015	
B3H0461-MSD1	QC		25			
1302584-04	200.7	A	26		A3B0015	
1302584-07	200.7	A	27		A3B0015	
1302584-10	200.7	A	28		A3B0015	
1302584-13	200.7	A	29		A3B0015	
1302584-19	200.7	A	30		A3B0015	
S3H0300-CCV3	QC		31	A3H0268	A3B0015	
S3H0300-CCB3	QC		32		A3B0015	

GB 9/20/13
Samples Loaded By Date

GB 9/20/13
Data Processed By Date

ANALYSIS SEQUENCE

Sequence Comments:

S3H0300

Instrument: ICP-08
Calibration ID: 3H26002

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3H0300-IFA2	QC		33	A3G0427	A3B0015	
S3H0300-IFB2	QC		34	A3G0444	A3B0015	
S3H0300-CCV4	QC		35	A3H0268	A3B0015	
S3H0300-CCB4	QC		36		A3B0015	

GS 9/20/13
Samples Loaded By Date

GS 9/20/13
Data Processed By Date

WinLab32 - Off Line ICP Continuous - Data Reprocessing

File Edit Tools Analysis Options Window Help

MethEd | SamInfo | Spectra | Results | Calib | DataMan | Reproc

Method: ICP10_13082601

Sample Info: Untitled

Data Reprocessing

Analysis Progress | Step: Idle

Reprocess | Data Set To Reprocess: ICP10_13082601 | Browse | Browse

☑ Print Log

☐ Hide Empty Columns

☐ Only show samples with Universal Data

	Seq.	Sample ID	Date Time	Initial Sample Wt.	Initial Sample Vol.	Sample Units *	Weight Units	Sam Prep.
1		CALBLK,CAL0,200.7	8/26/2013 11:36:28 AM				g	
2		CAL1,CAL1,200.7	8/26/2013 11:38:40 AM				g	
3		CAL2,CAL2,200.7	8/26/2013 11:41:03 AM				g	
4		CAL3,CAL3,200.7	8/26/2013 11:42:36 AM				g	
5		ICV,ICV,200.7	8/26/2013 11:44:38 AM		25	mg/L	g	25
6		ICB,ICB,200.7	8/26/2013 11:46:11 AM		25	mg/L	g	25
7		~~ICSA,ICSA,200.7~~ NR	8/26/2013 11:48:19 AM				g	
8		ICSA,ICSA,200.7	8/26/2013 11:52:35 AM				g	
9		ICSAB,ICSAB,200.7	8/26/2013 11:55:02 AM				g	
10		CCV (0.25),CCV,200.7	8/26/2013 11:56:14 AM				g	
11		CCB,CCB,200.7	8/26/2013 11:57:46 AM		25	mg/L	g	25
12		B3H0427-BLK1	8/26/2013 11:59:54 AM		25	mg/L	g	25
13		B3H0427-BS1	8/26/2013 12:02:02 PM		25	mg/L	g	25
14		1302486-01@10	8/26/2013 12:03:36 PM		25	mg/L	g	25
15		B3H0427-DUP1@10	8/26/2013 12:05:44 PM		25	mg/L	g	25
16		B3H0427-MS1@10	8/26/2013 12:07:52 PM		25	mg/L	g	25
17		B3H0427-MSD1@10	8/26/2013 12:09:24 PM		25	mg/L	g	25
18		1302486-02@10	8/26/2013 12:10:56 PM		25	mg/L	g	25
19		1302487-01@10	8/26/2013 12:13:04 PM		25	mg/L	g	25
20		1302487-02@10	8/26/2013 12:15:13 PM		25	mg/L	g	25
21		1302487-03@10	8/26/2013 12:17:21 PM		25	mg/L	g	25
22		S3H0307-CCV2	8/26/2013 12:19:29 PM		25	mg/L	g	25
23		S3H0307-CCB2	8/26/2013 12:21:03 PM		25	mg/L	g	25
24		1302488-01@10	8/26/2013 12:23:11 PM		25	mg/L	g	25
25		1302488-02@10	8/26/2013 12:25:21 PM		25	mg/L	g	25
26		1302486-01RE1	8/26/2013 12:27:29 PM		25		g	25
27		B3H0427-DUP2	8/26/2013 12:29:07 PM		25		g	25
28		B3H0427-MS2	8/26/2013 12:30:46 PM		25		g	25
29		B3H0427-MSD2	8/26/2013 12:32:06 PM		25		g	25
30		1302486-02RE1	8/26/2013 12:33:26 PM		25		g	25
31		1302487-01RE1	8/26/2013 12:35:05 PM		25		g	25
32		1302487-02RE1	8/26/2013 12:36:45 PM		25		g	25
33		1302487-03RE1	8/26/2013 12:38:24 PM		25		g	25
34		S3H0307-CCV3	8/26/2013 12:40:04 PM		25		g	25
35		S3H0307-CCB3	8/26/2013 12:41:38 PM		25		g	25
36		1302488-01RE1@2	8/26/2013 12:43:46 PM		25		g	25
37		1302488-02RE1	8/26/2013 12:45:21 PM		25		g	25
38		ICSA,ICSA,200.7	8/26/2013 12:47:15 PM				g	
39		ICSAB,ICSAB,200.7	8/26/2013 12:49:43 PM				g	
40		CCV,CCV,200.7	8/26/2013 12:50:56 PM		25	mg/L	g	25
41		CCB,CCB,200.7	8/26/2013 12:52:30 PM		25	mg/L	g	25
42		1302545-03	8/26/2013 1:08:32 PM		25	mg/L	g	25
43		~~1302545-05~~ NR	8/26/2013 1:10:08 PM		25	mg/L	g	25
44		1302545-09	8/26/2013 1:11:30 PM		25	mg/L	g	25
45		1302545-10	8/26/2013 1:13:03 PM		25	mg/L	g	25
46		1302545-11	8/26/2013 1:14:37 PM		25	mg/L	g	25
47		1302545-13	8/26/2013 1:16:34 PM		25	mg/L	g	25
48		1302545-14	8/26/2013 1:18:07 PM		25	mg/L	g	25
49		1302545-17	8/26/2013 1:19:40 PM		25	mg/L	g	25
50		1302547-02	8/26/2013 1:20:58 PM		25	mg/L	g	25
51		1302547-05	8/26/2013 1:22:31 PM		25	mg/L	g	25

*Parameters marked with an asterisk override settings in the method.
>Samples marked with a ">" contain universal data.

For Help, press F1

Start | WinLab32 - Off Line ... | WinLab32 - Off Line ... | ESI SC Autoprep | Task Manager - Data ... | Inbox

WinLab32 Off Line ICP Continuous Data Reprocessing

File Edit Tools Analysis Options Window Help

Method: ICP10_130826-01

Sample Info: Unnamed

Data Reprocessing

Analysis Progress

Step: idle

Reprocess

Data Set To Reprocess: ICP10_130826-01 Browse

Browse

Print Log

Hide Empty Columns

Only show samples with Universal Data

	Seq	Sample ID	Date Time	Initial Sample Wt	Initial Sample Vol	Sample Units *	Weight Units	Sam Prep
30		~~1302486-02RE1~~	8/26/2013 12:33:26 PM		25		g	25
31		1302487-01RE1	8/26/2013 12:35:05 PM		25		g	25
32		1302487-02RE1	8/26/2013 12:36:45 PM		25		g	25
33		1302487-03RE1	8/26/2013 12:38:24 PM		25		g	25
34		S3H0307-CCV3	8/26/2013 12:40:04 PM		25		g	25
35		S3H0307-CCB3	8/26/2013 12:41:38 PM		25		g	25
36		1302488-01RE1@5	8/26/2013 12:43:46 PM		25		g	25
37		1302488-02RE1	8/26/2013 12:45:21 PM		25		g	25
38		ICSA,ICSA,200.7	8/26/2013 12:47:15 PM				g	
39		ICSAB,ICSAB,200.7	8/26/2013 12:49:43 PM				g	
40		CCV,CCV,200.7	8/26/2013 12:50:56 PM		25	mg/L	g	25
41		CCB,CCB,200.7	8/26/2013 12:52:30 PM		25	mg/L	g	25
42		1302545-03	8/26/2013 1:08:32 PM		25	mg/L	g	25
43		1302545-05	8/26/2013 1:10:08 PM		25	mg/L	g	25
44		1302545-09	8/26/2013 1:11:30 PM		25	mg/L	g	25
45		1302545-10	8/26/2013 1:13:03 PM		25	mg/L	g	25
46		1302545-11	8/26/2013 1:14:37 PM		25	mg/L	g	25
47		1302545-13	8/26/2013 1:16:34 PM		25	mg/L	g	25
48		1302545-14	8/26/2013 1:18:07 PM		25	mg/L	g	25
49		1302545-17	8/26/2013 1:19:40 PM		25	mg/L	g	25
50		1302547-02	8/26/2013 1:20:58 PM		25	mg/L	g	25
51		~~1302547-05~~	8/26/2013 1:22:31 PM		25	mg/L	g	25
52		~~S3H0307-CCV5~~ NR	8/26/2013 1:23:49 PM		25	mg/L	g	25
53		S3H0307-CCV5	8/26/2013 1:39:45 PM		25	mg/L	g	25
54		S3H0307-CCB5	8/26/2013 1:41:28 PM		25	mg/L	g	25
55		1302547-07	8/26/2013 1:43:37 PM		25	mg/L	g	25
56		1302547-08	8/26/2013 1:45:12 PM		25	mg/L	g	25
57		1302547-09	8/26/2013 1:46:45 PM		25	mg/L	g	25
58		1302547-11	8/26/2013 1:48:18 PM		25	mg/L	g	25
59		~~1302547-12~~ NR	8/26/2013 1:49:33 PM		25	mg/L	g	25
60		1302545-05@5	8/26/2013 1:51:06 PM		25		g	25
61		1302545-17RE1@5	8/26/2013 1:52:39 PM		25		g	25
62		1302547-05RE1@5	8/26/2013 1:54:12 PM		25		g	25
63		~~1302547-12~~ NR	8/26/2013 1:55:45 PM		25		g	25
64		1302547-12@2	8/26/2013 1:59:50 PM		25	mg/L	g	25
65		ICSA,ICSA,200.7	8/26/2013 2:01:31 PM				g	
66		ICSAB,ICSAB,200.7	8/26/2013 2:03:58 PM				g	
67		CCV,CCV,200.7	8/26/2013 2:05:11 PM		25	mg/L	g	25
68		CCB,CCB,200.7	8/26/2013 2:06:45 PM		25	mg/L	g	25
69								
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80								

*Parameters marked with an asterisk override settings in the method.
>Samples marked with a ">" contain universal data.

For Help, press F1

ANALYSIS SEQUENCE

S3H0307

Sequence Comments:

Instrument: ICP-10
Calibration ID: 3H26005

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3H0307-IBL1	QC		1		A3B0015	
S3H0307-CAL1	QC		2	A3H0196	A3B0015	
S3H0307-CAL2	QC		3	A3G0205	A3B0015	
S3H0307-CAL3	QC		4	A3G0206	A3B0015	
S3H0307-ICV1	QC		5	A3H0268	A3B0015	
S3H0307-ICB1	QC		6		A3B0015	
S3H0307-IFA1	QC		7	A3G0427	A3B0015	
S3H0307-IFB1	QC		8	A3G0444	A3B0015	
S3H0307-CCV1	QC		9	A3H0219	A3B0015	
S3H0307-CCB1	QC		10		A3B0015	
B3H0427-BLK1	QC		11		A3B0015	
B3H0427-BS1	QC		12		A3B0015	
1302486-01	6010	A	13		A3B0015	
B3H0427-DUP1	QC		14		A3B0015	
B3H0427-MS1	QC		15		A3B0015	
B3H0427-MSD1	QC		16		A3B0015	
1302486-02	6010	A	17		A3B0015	
1302487-01	6010	A	18		A3B0015	
1302487-02	6010	A	19		A3B0015	
1302487-03	6010	A	20		A3B0015	
S3H0307-CCV2	QC		21	A3H0268	A3B0015	
S3H0307-CCB2	QC		22		A3B0015	
1302488-01	6010	A	23		A3B0015	
1302488-02	6010	A	24		A3B0015	
1302486-01RE1	6010	A	25		A3B0015	Added 8/26/2013 by SB
B3H0427-DUP2	QC		26		A3B0015	
B3H0427-MS2	QC		27		A3B0015	
B3H0427-MSD2	QC		28		A3B0015	
1302486-02RE1	6010	A	29		A3B0015	Added 8/26/2013 by SB
1302487-01RE1	6010	A	30		A3B0015	Added 8/26/2013 by SB
1302487-02RE1	6010	A	31		A3B0015	Added 8/26/2013 by SB
1302487-03RE1	6010	A	32		A3B0015	Added 8/26/2013 by SB

SB 8-26-13
Samples Loaded By Date

SB 8-26-13
Data Processed By Date

Printed: 8/26/2013 6:27:15PM :: C:\Program Files\Promium\Element\Print\seq_ATL_Default(2).rpt

ANALYSIS SEQUENCE

S3H0307

Sequence Comments:

Instrument: ICP-10
Calibration ID: 3H26005

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3H0307-CCV3	QC		33	A3H0268	A3B0015	
S3H0307-CCB3	QC		34		A3B0015	
1302488-01RE1	6010	A	35		A3B0015	Added 8/26/2013 by SB
1302488-02RE1	6010	A	36		A3B0015	Added 8/26/2013 by SB
S3H0307-IFA2	QC		37	A3G0427	A3B0015	
S3H0307-IFB2	QC		38	A3G0444	A3B0015	
S3H0307-CCV4	QC		39	A3H0268	A3B0015	
S3H0307-CCB4	QC		40		A3B0015	
1302545-03	6010	A	41		A3B0015	Pb
1302545-09	6010	A	42		A3B0015	Pb
1302545-10	6010_CAM	A	43		A3B0015	
1302545-11	6010	A	44		A3B0015	Pb
1302545-13	6010_CAM	A	45		A3B0015	
1302545-14	6010	A	46		A3B0015	Pb
1302545-17	6010_CAM	A	47		A3B0015	
1302547-02	6010	A	48		A3B0015	Pb
1302547-05	6010_CAM	A	49		A3B0015	
S3H0307-CCV5	QC		50	A3H0268	A3B0015	
S3H0307-CCB5	QC		51		A3B0015	
1302547-07	6010_CAM	A	52		A3B0015	
1302547-08	6010	A	53		A3B0015	Pb
1302547-09	6010	A	54		A3B0015	Pb
1302547-11	6010_CAM	A	55		A3B0015	
1302545-05	6010	A	56		A3B0015	Pb
1302545-17RE1	6010_CAM	A	57		A3B0015	Added 8/26/2013 by SB
1302547-05RE1	6010_CAM	A	58		A3B0015	Added 8/26/2013 by SB
1302547-12	6010_CAM	A	59		A3B0015	
S3H0307-IFA3	QC		60	A3G0427	A3B0015	
S3H0307-IFB3	QC		61	A3G0444	A3B0015	
S3H0307-CCV6	QC		62	A3H0268	A3B0015	
S3H0307-CCB6	QC		63		A3B0015	

SB 8-26-13
Samples Loaded By Date

SB 8-26-13
Data Processed By Date

Printed: 8/26/2013 6:27:15PM :: C:\Program Files\Promium\Element\Print\seq_ATL_Default(2).rpt

WinLab32 - Off-Line ICP Continuous - Data Reprocessing

File Edit Tools Analysis Options Window Help

MethEd SamInfo Spectra Results Calib Examine Reproc Report

Method: ICP10_130801

Sample Info: Untitled

Data Reprocessing

Analysis Progress

Step: Idle

Reprocess

Data Set To Reprocess: ICP10_130827-01 Browse

Reprocess calibration set: Browse

Print Log

Save Reprocessed Data

Hide Empty Columns

Only show samples with Universal Data

	Seq.	Sample ID	Date Time	Initial Sample Wt	Initial Sample Vol	Sample Units *	
1		CALBLK,CAL0,200.7	8/27/2013 7:18:27 AM				g
2		~~CAL1,CAL1,200.7~~	8/27/2013 7:20:35 AM				g
3		CAL1,CAL1,200.7	8/27/2013 7:24:11 AM				g
4		CAL2,CAL2,200.7	8/27/2013 7:26:28 AM				g
5		CAL3,CAL3,200.7	8/27/2013 7:28:01 AM				g
6		ICV,ICV,200.7	8/27/2013 7:29:53 AM				g
7		ICB,ICB,200.7	8/27/2013 7:31:26 AM				g
8		ICSA,ICSA,200.7	8/27/2013 7:33:34 AM				g
9		ICSAB,ICSAB,200.7	8/27/2013 7:36:01 AM				g
10		CCV (0.25),CCV,200.7	8/27/2013 7:36:57 AM				g
11		CCB,CCB,200.7	8/27/2013 7:38:29 AM				g
12		S3H0313-CCV2	8/27/2013 9:36:35 AM		25	mg/L	g
13		S3H0313-CCB2	8/27/2013 9:38:12 AM		25	mg/L	g
14		B3H0480-BLK1	8/27/2013 9:40:20 AM		25	mg/L	g
15		B3H0480-BS1	8/27/2013 9:42:28 AM		25	mg/L	g
16		1302600-13	8/27/2013 9:44:23 AM		25	mg/L	g
17		B3H0480-MS1	8/27/2013 9:45:57 AM		25	mg/L	g
18		B3H0480-MSD1	8/27/2013 9:47:55 AM		25	mg/L	g
19		1302600-17	8/27/2013 9:49:53 AM		25	mg/L	g
20		1302600-18	8/27/2013 9:51:27 AM		25	mg/L	g
21		1302600-19	8/27/2013 9:53:01 AM		25	mg/L	g
22		1302600-20	8/27/2013 9:54:52 AM		25	mg/L	g
23		1302600-24	8/27/2013 9:56:49 AM		25	mg/L	g
24		S3H0313-CCV3	8/27/2013 9:58:24 AM		25	mg/L	g
25		S3H0313-CCB3	8/27/2013 9:59:58 AM		25	mg/L	g
26		1302600-25	8/27/2013 10:02:06 AM		25	mg/L	g
27		S3H0313-CCV4	8/27/2013 10:03:42 AM		25		g
28		S3H0313-CCB4	8/27/2013 10:09:02 AM		25		g
29		S3H0313-CCV5	8/27/2013 6:10:14 PM		25	mg/L	g
30		S3H0313-CCB5	8/27/2013 6:11:51 PM		25	mg/L	g
31		B3H0501-BLK1	8/27/2013 6:32:44 PM		25	mg/L	g
32		B3H0501-BS1	8/27/2013 6:34:56 PM		25	mg/L	g
33		1302553-04	8/27/2013 6:36:30 PM		25	mg/L	g
34		B3H0501-MS1	8/27/2013 6:38:24 PM		25	mg/L	g
35		B3H0501-MSD1	8/27/2013 6:39:43 PM		25	mg/L	g
36		1302565-01	8/27/2013 6:41:03 PM		25		g
37		1302581-01	8/27/2013 6:43:01 PM		25		g
38		1302581-02	8/27/2013 6:44:35 PM		25		g
39		1302581-03	8/27/2013 6:46:09 PM		25		g
40		1302581-04	8/27/2013 6:47:43 PM		25		g
41		S3H0313-CCV6	8/27/2013 6:49:16 PM		25		g
42		S3H0313-CCB6	8/27/2013 6:50:50 PM		25		g
43		1302581-05	8/27/2013 6:52:58 PM		25		g
44		1302581-06	8/27/2013 6:54:33 PM		25		g
45		1302581-07	8/27/2013 6:56:02 PM		25		g
46		1302581-08	8/27/2013 6:57:35 PM		25		g
47		1302581-09	8/27/2013 6:59:09 PM		25		g
48		1302581-10	8/27/2013 7:00:43 PM		25		g
49		1302581-11	8/27/2013 7:02:16 PM		25		g
50		1302581-12	8/27/2013 7:03:50 PM		25		g
51		1302581-13	8/27/2013 7:05:24 PM		25		g

WinLab32 - Off-Line ICP Continuous - Data Reprocessing

File Edit Tools Analysis Options Window Help

MethEd | SamInfo | Spectra | Results | Calib | Examine | Reproc | Print

Method: ICP10_130801

Sample Info.: Untitled

Data Reprocessing

Analysis Progress

Step: Idle

Reprocess

Data Set To Reprocess: ICP10_130827-01

Browse...

Reprocess Data Set

Browse...

☑ Print Log

☐ Save Reprocessed Data

☐ Hide Empty Columns

☐ Only show samples with Universal Data

	Seq.	Sample ID	Date Time	Initial Sample Wt.	Initial Sample Vol.	Sample Units *	
29		~~S3H0313-CCB5~~	~~8/27/2013 6:11:51 PM~~		~~25~~	~~mg/L~~	~~g~~
31		B3H0501-BLK1	8/27/2013 6:32:44 PM		25	mg/L	g
32		B3H0501-BS1	8/27/2013 6:34:56 PM		25	mg/L	g
33		1302553-04	8/27/2013 6:36:30 PM		25	mg/L	g
34		B3H0501-MS1	8/27/2013 6:38:24 PM		25	mg/L	g
35		B3H0501-MSD1	8/27/2013 6:39:43 PM		25	mg/L	g
36		1302565-01	8/27/2013 6:41:03 PM		25		g
37		1302581-01	8/27/2013 6:43:01 PM		25		g
38		1302581-02	8/27/2013 6:44:35 PM		25		g
39		1302581-03	8/27/2013 6:46:09 PM		25		g
40		1302581-04	8/27/2013 6:47:43 PM		25		g
41		S3H0313-CCV6	8/27/2013 6:49:16 PM		25		g
42		S3H0313-CCB6	8/27/2013 6:50:50 PM		25		g
43		1302581-05	8/27/2013 6:52:58 PM		25		g
44		1302581-06	8/27/2013 6:54:33 PM		25		g
45		1302581-07	8/27/2013 6:56:02 PM		25		g
46		1302581-08	8/27/2013 6:57:35 PM		25		g
47		1302581-09	8/27/2013 6:59:09 PM		25		g
48		1302581-10	8/27/2013 7:00:43 PM		25		g
49		1302581-11	8/27/2013 7:02:16 PM		25		g
50		1302581-12	8/27/2013 7:03:50 PM		25		g
51		~~1302581-13~~	~~8/27/2013 7:05:24 PM~~		~~25~~		~~g~~
52		1302581-14	8/27/2013 7:06:57 PM		25		g
53		S3H0313-CCV7	8/27/2013 7:08:26 PM		25		g
54		S3H0313-CCB7	8/27/2013 7:10:00 PM		25		g
55		1302581-15	8/27/2013 7:12:08 PM		25		g
56		1302581-16	8/27/2013 7:13:43 PM		25		g
57		1302581-17	8/27/2013 7:15:17 PM		25		g
58		1302581-18	8/27/2013 7:16:51 PM		25		g
59		B3H0502-BLK1	8/27/2013 7:18:24 PM		25		g
60		B3H0502-BS1	8/27/2013 7:20:31 PM		25		g
61		1302581-19	8/27/2013 7:22:22 PM		25		g
62		B3H0502-MS1	8/27/2013 7:23:56 PM		25		g
63		B3H0502-MSD1	8/27/2013 7:25:16 PM		25		g
64		1302581-20	8/27/2013 7:27:08 PM		25		g
65		S3H0313-CCV8	8/27/2013 7:28:43 PM		25		g
66		S3H0313-CCB8	8/27/2013 7:30:17 PM		25		g
67		1302581-21	8/27/2013 7:32:25 PM		25		g
68		1302581-22	8/27/2013 7:34:00 PM		25		g
69		ICSA,ICSA,200.7 2	8/27/2013 7:35:33 PM				g
70		ICSAB,ICSAB,200.7 2	8/27/2013 7:38:02 PM				g
71		CCV,CCV,200.7 9	8/27/2013 7:39:13 PM		25	mg/L	g
72		CCB,CCB,200.7 9	8/27/2013 7:40:47 PM		25	mg/L	g
73							
74							
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78							
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80							

ANALYSIS SEQUENCE

S3H0313

Sequence Comments:

Instrument: ICP-10
Calibration ID: 3H28002

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3H0313-IBL1	QC		1		A3B0015	
S3H0313-CAL1	QC		2	A3H0196	A3B0015	
S3H0313-CAL2	QC		3	A3G0205	A3B0015	
S3H0313-CAL3	QC		4	A3G0206	A3B0015	
S3H0313-ICV1	QC		5	A3H0268	A3B0015	
S3H0313-ICB1	QC		6		A3B0015	
S3H0313-IFA1	QC		7	A3G0427	A3B0015	
S3H0313-IFB1	QC		8	A3G0444	A3B0015	
S3H0313-CCV1	QC		9	A3H0219	A3B0015	
S3H0313-CCB1	QC		10		A3B0015	
S3H0313-CCV2	QC		11	A3H0268	A3B0015	
S3H0313-CCB2	QC		12		A3B0015	
B3H0480-BLK1	QC		13		A3B0015	
B3H0480-BS1	QC		14		A3B0015	
1302600-13	6010	A	15		A3B0015	
B3H0480-MS1	QC		16		A3B0015	
B3H0480-MSD1	QC		17		A3B0015	
1302600-17	6010	A	18		A3B0015	
1302600-18	6010	A	19		A3B0015	
1302600-19	6010	A	20		A3B0015	
1302600-20	6010	A	21		A3B0015	
1302600-24	6010	A	22		A3B0015	
S3H0313-CCV3	QC		23	A3H0268	A3B0015	
S3H0313-CCB3	QC		24		A3B0015	
1302600-25	6010	A	25		A3B0015	
S3H0313-CCV4	QC		26	A3H0268	A3B0015	
S3H0313-CCB4	QC		27		A3B0015	
S3H0313-CCV5	QC		28	A3H0268	A3B0015	
S3H0313-CCB5	QC		29		A3B0015	
B3H0501-BLK1	QC		30		A3B0015	
B3H0501-BS1	QC		31		A3B0015	
1302553-04	6010	A	32		A3B0015	BatchQC

AG 8/28/13
Samples Loaded By Date

AG 8/28/13
Data Processed By Date

ANALYSIS SEQUENCE

S3H0313

Sequence Comments:

Instrument: ICP-10
Calibration ID: 3H28002

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
1302553-04	6010_CAM	A	33		A3B0015	
B3H0501-MS1	QC		34		A3B0015	
B3H0501-MSD1	QC		35		A3B0015	
1302565-01	6010_CAM	A	36		A3B0015	
1302581-01	6010	A	37		A3B0015	
1302581-02	6010_CAM	A	38		A3B0015	
1302581-03	6010	A	39		A3B0015	
1302581-04	6010_CAM	A	40		A3B0015	
S3H0313-CCV6	QC		41	A3H0268	A3B0015	
S3H0313-CCB6	QC		42		A3B0015	
1302581-05	6010	A	43		A3B0015	
1302581-06	6010	A	44		A3B0015	
1302581-07	6010_CAM	A	45		A3B0015	
1302581-08	6010	A	46		A3B0015	
1302581-09	6010	A	47		A3B0015	
1302581-10	6010	A	48		A3B0015	
1302581-11	6010_CAM	A	49		A3B0015	
1302581-12	6010	A	50		A3B0015	
1302581-13	6010_CAM	A	51		A3B0015	
1302581-14	6010	A	52		A3B0015	
S3H0313-CCV7	QC		53	A3H0268	A3B0015	
S3H0313-CCB7	QC		54		A3B0015	
1302581-15	6010_CAM	A	55		A3B0015	
1302581-16	6010	A	56		A3B0015	
1302581-17	6010	A	57		A3B0015	
1302581-18	6010	A	58		A3B0015	
B3H0502-BLK1	QC		59		A3B0015	
B3H0502-BS1	QC		60		A3B0015	
1302581-19	6010	A	61		A3B0015	BatchQC
1302581-19	6010_CAM	A	62		A3B0015	
B3H0502-MS1	QC		63		A3B0015	
B3H0502-MSD1	QC		64		A3B0015	

AG 8/28/13
Samples Loaded By Date

AG 8/28/13
Data Processed By Date

Printed: 8/28/2013 1:48:12PM :: C:\Program Files\Promium\Element\Print\seq_ATL_Default(2).rpt

ANALYSIS SEQUENCE

S3H0313

Sequence Comments:

Instrument: ICP-10
Calibration ID: 3H28002

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
1302581-20	6010	A	65		A3B0015	
S3H0313-CCV8	QC		66	A3H0268	A3B0015	
S3H0313-CCB8	QC		67		A3B0015	
1302581-21	6010_CAM	A	68		A3B0015	
1302581-22	6010_CAM	A	69		A3B0015	
S3H0313-IFA2	QC		70	A3G0427	A3B0015	
S3H0313-IFB2	QC		71	A3G0444	A3B0015	
S3H0313-CCV9	QC		72	A3H0268	A3B0015	
S3H0313-CCB9	QC		73		A3B0015	

AG 8/28/13
Samples Loaded By Date

AG 8/28/13
Data Processed By Date

Printed: 8/28/2013 1:48:12PM :: C:\Program Files\Promium\Element\Print\seq_ATL_Default(2).rpt

Winlab32 - Off-Line ICP Continuous - Data Reprocessing

File Edit Tools Analysis Options Window Help

MethEd | SamInfo | Spectra | Results | Calib | Examine | Reproc | Print | Method: ICP10_130820 | Sample Info: Untitled

Data Reprocessing

Analysis Progress | Step: Idle

Reprocess | Data Set To Reprocess: ICP10_130828-03 | Browse... | Browse | Print Log | Hide Empty Columns | Only show samples with Universal Data

	Seq	Sample ID	Date Time	Initial Sample Wt.	Initial Sample Vol.	Sample Units *	
1		CALBLK,CAL0,200.7	8/28/2013 7:49:37 AM				g
2		~~CAL1,CAL1,200.7~~	8/28/2013 7:51:44 AM				g
3		CAL1,CAL1,200.7	8/28/2013 7:54:29 AM				g
4		CAL2,CAL2,200.7	8/28/2013 7:56:48 AM				g
5		CAL3,CAL3,200.7	8/28/2013 7:58:21 AM				g
6		ICV,ICV,200.7	8/28/2013 8:01:35 AM				g
7		ICB,ICB,200.7	8/28/2013 8:03:08 AM				g
8		ICSA,ICSA,200.7	8/28/2013 8:05:16 AM				g
9		ICSAB,ICSAB,200.7	8/28/2013 8:07:42 AM				g
10		CCV (0.25),CCV,200.7	8/28/2013 8:08:55 AM				g
11		CCB,CCB,200.7	8/28/2013 8:10:28 AM				g
12		1302565-01RE1@20	8/28/2013 8:12:36 AM		25		g
13		S3H0331-CCV2	8/28/2013 8:14:44 AM		25		g
14		S3H0331-CCB2	8/28/2013 8:16:17 AM		25		g
15		S3H0331-CCV3	8/28/2013 9:17:09 AM		25		g
16		S3H0331-CCB3	8/28/2013 9:18:42 AM		25		g
17		B3H0512-BLK1	8/28/2013 9:20:50 AM		25		g
18		B3H0512-BS1	8/28/2013 9:22:59 AM		25		g
19		1302610-09	8/28/2013 9:24:49 AM		25		g
20		B3H0512-MS1	8/28/2013 9:26:45 AM		25		g
21		B3H0512-MSD1	8/28/2013 9:28:10 AM		25		g
22		B3H0497-BLK1	8/28/2013 9:29:31 AM		25		g
23		B3H0497-BS1	8/28/2013 9:31:38 AM		25		g
24		1302502-01	8/28/2013 9:33:29 AM		25		g
25		B3H0497-DUP1	8/28/2013 9:34:30 AM		25		g
26		B3H0497-MS1	8/28/2013 9:35:31 AM		25		g
27		S3H0331-CCV4	8/28/2013 9:36:50 AM		25		g
28		S3H0331-CCB4	8/28/2013 9:38:26 AM		25		g
29		B3H0497-MSD1	8/28/2013 9:40:34 AM		25		g
30		1302502-02	8/28/2013 9:41:57 AM		25		g
31		1302502-03	8/28/2013 9:43:39 AM		25		g
32		1302502-04	8/28/2013 9:45:35 AM		25		g
33		1302537-01	8/28/2013 9:47:15 AM		25		g
34		1302537-02	8/28/2013 9:48:53 AM		25		g
35		1302537-03	8/28/2013 9:50:31 AM		25		g
36		1302537-04	8/28/2013 9:52:13 AM		25		g
37		1302537-05	8/28/2013 9:53:50 AM		25		g
38		B3H0521-BLK1	8/28/2013 9:57:34 AM		25	mg/L	g
39		S3H0331-CCV5	8/28/2013 9:59:47 AM		25	mg/L	g
40		S3H0331-CCB5	8/28/2013 10:01:21 AM		25	mg/L	g
41		B3H0521-BS1	8/28/2013 10:03:29 AM		25	mg/L	g
42		1302613-07	8/28/2013 10:05:20 AM		25	mg/L	g
43		1302613-13	8/28/2013 10:06:53 AM		25	mg/L	g
44		1302613-19	8/28/2013 10:08:26 AM		25	mg/L	g
45		B3H0521-MS1	8/28/2013 10:10:35 AM		25	mg/L	g
46		B3H0521-MSD1	8/28/2013 10:12:33 AM		25	mg/L	g
47		1302502-01RE1@20	8/28/2013 10:14:31 AM		25		g
48		1302502-02RE1@20	8/28/2013 10:16:40 AM		25		g
49		1302502-03RE1@20	8/28/2013 10:18:48 AM		25		g
50		1302502-04RE1@20	8/28/2013 10:20:20 AM		25		g
51		S3H0331-CCV6	8/28/2013 10:21:52 AM		25		g

WinLab32 - Off Line ICP Continuous - Data Reprocessing

File Edit Tools Analysis Options Window Help

MethEd | SamInfo | Spectra | Results | Calib | Estimate | Reproc | Start | Method: ICP10_130801 | Sample Info.: Untitled

Data Reprocessing

Analysis Progress | Step: Idle

Reprocess | Data Set To Reprocess: ICP10_130828-03 | Browse... | Reprocess Data Set | Browse...

☑ Print Log
☐ Save RFC Data
☐ Hide Empty Columns
☑ Only show samples with Universal Data

	Seq	Sample ID	Date Time	Initial Sample Wt	Initial Sample Vol	Sample Units *	
50		1302502-04RE1@20	8/28/2013 10:20:20 AM		25		g
51		S3H0331-CCV6	8/28/2013 10:21:52 AM		25		g
52		S3H0331-CCB6	8/28/2013 10:23:26 AM		25		g
53		1302537-01RE1@20	8/28/2013 10:25:34 AM		25		g
54		1302537-02RE1@20	8/28/2013 10:27:43 AM		25		g
55		1302537-03RE1@20	8/28/2013 10:29:51 AM		25		g
56		1302537-04RE1@20	8/28/2013 10:31:59 AM		25		g
57		1302537-05RE1@20	8/28/2013 10:34:07 AM		25		g
58		B3H0497-DUP2@20	8/28/2013 10:36:15 AM		25		g
59		B3H0497-MS2@20	8/28/2013 10:38:23 AM		25		g
60		B3H0497-MSD2@20	8/28/2013 10:40:31 AM		25		g
61		1302537-05RE2@2	8/28/2013 10:51:33 AM		25	mg/L	g
62		S3H0331-CCV7	8/28/2013 10:53:12 AM		25	mg/L	g
63		S3H0331-CCB7	8/28/2013 10:54:46 AM		25	mg/L	g
64		S3H0331-CCV8	8/28/2013 2:41:41 PM		25	mg/L	g
65		S3H0331-CCB8	8/28/2013 2:43:18 PM		25	mg/L	g
66		1302565-01@5	8/28/2013 2:45:26 PM		25	mg/L	g
67		1302581-17@5	8/28/2013 2:47:35 PM		25	mg/L	g
68		1302581-20@5	8/28/2013 2:49:43 PM		25	mg/L	g
69		~~B3H0553~~-BLK1@20 B3H0533	8/28/2013 2:51:51 PM		25	mg/L	g
70		~~B3H0553~~-BS1@20 ↓	8/28/2013 2:54:03 PM		25	mg/L	g
71		1302480-01@20	8/28/2013 2:56:15 PM		25	mg/L	g
72		~~B3H0553~~-MS1@20 B3H0533	8/28/2013 2:58:27 PM		25	mg/L	g
73		~~B3H0553~~-MSD1@20 ↓	8/28/2013 3:00:40 PM		25	mg/L	g
74		1302565-01@20	8/28/2013 3:02:53 PM		25	mg/L	g
75		S3H0331-CCV9	8/28/2013 3:05:05 PM		25		g
76		S3H0331-CCB9	8/28/2013 3:06:39 PM		25		g
77		~~B3H054~~-BLK1 B3H0549	8/28/2013 5:17:35 PM		25	mg/L	g
78		~~B3H054~~-BS1 ↓	8/28/2013 5:19:47 PM		25	mg/L	g
79		1302620-01	8/28/2013 5:21:21 PM		25		g
80		1302620-02	8/28/2013 5:23:21 PM		25		g
81		1302615-01	8/28/2013 5:25:23 PM		25		g
82		~~B3H054~~-MS1 B3H0549	8/28/2013 5:26:56 PM		25		g
83		~~B3H054~~-MSD1 ↓	8/28/2013 5:28:53 PM		25		g
84		1302615-02	8/28/2013 5:30:51 PM		25		g
85		1302615-03	8/28/2013 5:32:26 PM		25		g
86		1302617-01	8/28/2013 5:34:00 PM		25		g
87		S3H0331-CCVA	8/28/2013 5:35:55 PM		25		g
88		S3H0331-CCBA	8/28/2013 5:37:30 PM		25		g
89		1302617-02	8/28/2013 5:39:38 PM		25		g
90		ICSAJICSA,200.7 2	8/28/2013 5:41:19 PM				g
91		ICSAB,ICSAB,200.7 2	8/28/2013 5:43:47 PM				g
92		CCV,CCV,200.7 B	8/28/2013 5:45:01 PM		25	mg/L	g
93		CCB,CCB,200.7 B	8/28/2013 5:46:35 PM		25	mg/L	g
94							
95							
96							
97							
98							
99							
100							

ANALYSIS SEQUENCE

S3H0331

Sequence Comments:

Instrument: ICP-10
Calibration ID: 3H29001

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3H0331-IBL1	QC		1		A3B0015	
S3H0331-CAL1	QC		2	A3H0196	A3B0015	
S3H0331-CAL2	QC		3	A3G0205	A3B0015	
S3H0331-CAL3	QC		4	A3G0206	A3B0015	
S3H0331-ICV1	QC		5	A3H0268	A3B0015	
S3H0331-ICB1	QC		6		A3B0015	
S3H0331-IFA1	QC		7	A3G0427	A3B0015	
S3H0331-IFB1	QC		8	A3G0444	A3B0015	
S3H0331-CCV1	QC		9	A3H0219	A3B0015	
S3H0331-CCB1	QC		10		A3B0015	
1302565-01RE1	6010_CAM	A	11		A3B0015	Added 8/28/2013 by AG
S3H0331-CCV2	QC		12	A3H0268	A3B0015	
S3H0331-CCB2	QC		13		A3B0015	
S3H0331-CCV3	QC		14	A3H0268	A3B0015	
S3H0331-CCB3	QC		15		A3B0015	
B3H0512-BLK1	QC		16		A3B0015	
B3H0512-BS1	QC		17		A3B0015	
1302610-09	6010_CAM	A	18		A3B0015	
B3H0512-MS1	QC		19		A3B0015	
B3H0512-MSD1	QC		20		A3B0015	
B3H0497-BLK1	QC		21		A3B0015	
B3H0497-BS1	QC		22		A3B0015	
1302502-01	6010	A	23		A3B0015	
B3H0497-DUP1	QC		24		A3B0015	
B3H0497-MS1	QC		25		A3B0015	
S3H0331-CCV4	QC		26	A3H0268	A3B0015	
S3H0331-CCB4	QC		27		A3B0015	
B3H0497-MSD1	QC		28		A3B0015	
1302502-02	6010	A	29		A3B0015	
1302502-03	6010	A	30		A3B0015	
1302502-04	6010	A	31		A3B0015	
1302537-01	6010	A	32		A3B0015	

AL 8/29/13
Samples Loaded By Date

AL 8/29/13
Data Processed By Date

Printed: 8/29/2013 10:52:58AM :: C:\Program Files\Promium\Element\Print\seq_ATL_Default(2).rpt

ANALYSIS SEQUENCE

S3H0331

Sequence Comments:

Instrument: ICP-10
Calibration ID: 3H29001

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
1302537-02	6010	A	33		A3B0015	
1302537-03	6010	A	34		A3B0015	
1302537-04	6010	A	35		A3B0015	
1302537-05	6010	A	36		A3B0015	
B3H0521-BLK1	QC		37		A3B0015	
S3H0331-CCV5	QC		38	A3H0268	A3B0015	
S3H0331-CCB5	QC		39		A3B0015	
B3H0521-BS1	QC		40		A3B0015	
1302613-07	6010	A	41		A3B0015	
1302613-13	6010	A	42		A3B0015	
1302613-19	6010	A	43		A3B0015	
B3H0521-MS1	QC		44		A3B0015	
B3H0521-MSD1	QC		45		A3B0015	
1302502-01RE1	6010	A	46		A3B0015	Added 8/28/2013 by AG
1302502-02RE1	6010	A	47		A3B0015	Added 8/28/2013 by AG
1302502-03RE1	6010	A	48		A3B0015	Added 8/28/2013 by AG
1302502-04RE1	6010	A	49		A3B0015	Added 8/28/2013 by AG
S3H0331-CCV6	QC		50	A3H0268	A3B0015	
S3H0331-CCB6	QC		51		A3B0015	
1302537-01RE1	6010	A	52		A3B0015	Added 8/28/2013 by AG
1302537-02RE1	6010	A	53		A3B0015	Added 8/28/2013 by AG
1302537-03RE1	6010	A	54		A3B0015	Added 8/28/2013 by AG
1302537-04RE1	6010	A	55		A3B0015	Added 8/28/2013 by AG
1302537-05RE1	6010	A	56		A3B0015	Added 8/28/2013 by AG
B3H0497-DUP2	QC		57		A3B0015	
B3H0497-MS2	QC		58		A3B0015	
B3H0497-MSD2	QC		59		A3B0015	
1302537-05RE2	6010	A	60		A3B0015	Added 8/28/2013 by AG
S3H0331-CCV7	QC		61	A3H0268	A3B0015	
S3H0331-CCB7	QC		62		A3B0015	
S3H0331-CCV8	QC		63	A3H0268	A3B0015	
S3H0331-CCB8	QC		64		A3B0015	

AG 8/29/13
Samples Loaded By Date

AG 8/29/13
Data Processed By Date

ANALYSIS SEQUENCE

S3H0331

Sequence Comments:

Instrument: ICP-10
Calibration ID: 3H29001

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
1302565-01	6010_CAM	A	65			
1302581-17	6010	A	66			
1302581-20	6010	A	67			
B3H0533-BLK1	QC		68		A3B0015	
B3H0533-BS1	QC		69		A3B0015	
1302480-01	6010_STLC	A 01	70		A3B0015	
B3H0533-MS1	QC		71		A3B0015	
B3H0533-MSD1	QC		72		A3B0015	
S3H0331-CCV9	QC		73	A3H0268	A3B0015	
S3H0331-CCB9	QC		74		A3B0015	
B3H0549-BLK1	QC		75		A3B0015	
B3H0549-BS1	QC		76		A3B0015	
1302620-01	6010_CAM	A	77		A3B0015	
1302620-02	6010_CAM	A	78		A3B0015	
1302615-01	6010_CAM	A	79		A3B0015	
B3H0549-MS1	QC		80		A3B0015	
B3H0549-MSD1	QC		81		A3B0015	
1302615-02	6010_CAM	A	82		A3B0015	
1302615-03	6010_CAM	A	83		A3B0015	
1302617-01	6010_CAM	B	84		A3B0015	
S3H0331-CCVA	QC		85	A3H0268	A3B0015	
S3H0331-CCBA	QC		86		A3B0015	
1302617-02	6010_CAM	B	87		A3B0015	
S3H0331-IFA2	QC		88	A3G0427	A3B0015	
S3H0331-IFB2	QC		89	A3G0444	A3B0015	
S3H0331-CCVB	QC		90	A3H0268	A3B0015	
S3H0331-CCBB	QC		91		A3B0015	

AG 8/29/13
Samples Loaded By Date

AG 8/29/13
Data Processed By Date

SAMPLE PREPARATION LOG

Advanced Technology Laboratories 3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

PREPARATION BENCH SHEET

B3H0462

Advanced Technology Laboratories

Lab Matrix: Soil
Date Prepared: 08/24/13 08:31
End Date/Time: 08/24/13 10:03

Prepared by: MS

Prep Code: EPA 3050B

Bottle Lot No.: J142812-203 J147542-264

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
1302545-01	6010	Soil		2.01	100						
1302545-01	6010_CAM	Soil		2.01	100						Added for BatchQC in: B3H0462
1302545-03	6010	Soil		2.00	100						
1302545-05	6010	Soil		2.01	100						Pb
1302545-09	6010	Soil		2.01	100						Pb
1302545-10	6010_CAM	Soil		2.01	100						Pb
1302545-11	6010	Soil		2.01	100						
1302545-13	6010_CAM	Soil		2.00	100						Pb
1302545-14	6010	Soil		2.00	100						
1302545-17	6010_CAM	Soil		2.00	100						Pb
1302547-02	6010	Soil		2.00	100						
1302547-05	6010_CAM	Soil		2.01	100						Pb
1302547-07	6010_CAM	Soil		2.00	100						
1302547-08	6010	Soil		2.00	100						
1302547-09	6010	Soil		1.99	100						Pb
1302547-11	6010_CAM	Soil		2.00	100						Pb
1302547-12	6010_CAM	Soil		2.00	100						
1302584-16	6010	Solid		2.02	100						
1302584-22	6010	Solid		2.05	100						
B3H0462-BLK1	QC			2.00	100						

MJ — Prepared By
8-24-13 — Date

GB 8/24/13 — Preparation Reviewed By — Date

GB 8/24/13 — Digestates Received By — Date

Printed: 8/24/2013 10:03:36AM bch_ATL_Metals(2)

PREPARATION BENCH SHEET

B3H0462

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/24/13 08:31

End Date/Time: 08/24/13 10:03

Prepared by: MS

Prep Code: EPA 3050B

Bottle Lot No.: J162812-243 J147542-264

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
B3H0462-BS1	QC			2.00	100	A3H0160					
B3H0462-MS1	QC			2.00	100	A3H0011	A3H0009	1302545-01			
B3H0462-MSD1	QC			2.00	100	A3H0011	A3H0009	1302545-01			

DB-04-49
TEMP 93C

Number	Reagent Name
A3E0267	HYDROGEN PEROXIDE
A3F0359	nitric acid
A3G0127	hydrochloric acid

MS 8.24.13
Prepared By Date

GB 8/24/13
Preparation Reviewed By Date

GB 8/24/13
Digestates Received By Date

Printed: 8/24/2013 10:03:36AM :: bch_ATL_Metals(2)

PREPARATION BENCH SHEET

B3H0462

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/24/13 08:31

End Date/Time:

Prepared by: MS

Prep Code: EPA 3050B

Bottle Lot No.: T162812-263 T141592-264

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
1302545-01	6010	Soil		~~2.00~~ 2.01	100						Added for BatchQC in: B3H0462
1302545-01	6010_CAM	Soil		~~2.00~~ 2.01	100						
1302545-03	6010	Soil		2.00	100						Pb
1302545-05	6010	Soil		~~2.00~~ 2.01	100						Pb
1302545-09	6010	Soil		~~2.00~~ 2.01	100						Pb
1302545-10	6010_CAM	Soil		~~2.00~~ 2.01	100						
1302545-11	6010	Soil		~~2.00~~ 2.01	100						Pb
1302545-13	6010_CAM	Soil		2.00	100						
1302545-14	6010	Soil		2.00	100						Pb
1302545-17	6010_CAM	Soil		2.00	100						
1302547-02	6010	Soil		2.00	100						Pb
1302547-05	6010_CAM	Soil		~~2.00~~ 2.01	100						
1302547-07	6010_CAM	Soil		2.00	100						
1302547-08	6010	Soil		2.00	100						Pb
1302547-09	6010	Soil		~~2.00~~ 1.49	100						Pb
1302547-11	6010_CAM	Soil		2.00	100						
1302547-12	6010_CAM	Soil		2.00	100						
1302584-16	6010	Solid		~~2.00~~ 2.02	100						
1302584-22	6010	Solid		~~2.00~~ 2.03	100						
B3H0462-BLK1	QC			2.00	100						

MS 8-24-13
Prepared By Date

BB 8/24/13
Preparation Reviewed By Date

BB 8/24/13
Digestates Received By Date

Printed: 8/24/2013 9:40:01AM :: bch_ATL_Metals(2)

PREPARATION BENCH SHEET

B3H0462

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/24/13 08:31

End Date/Time:

Prepared by: MS

Prep Code: EPA 3050B

Bottle Lot No.: J162812-263 J147542-264

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
B3H0462-BS1	QC			2.00	100	A3H0160					
B3H0462-MS1	QC			2.00	100	A3H0011	A3H0009	1302545-01			
B3H0462-MSD1	QC			2.00	100	A3H0011	A3H0009	1302545-01			

Number	Reagent Name
A3E0267	HYDROGEN PEROXIDE
A3F0359	nitric acid
A3G0127	hydrochloric acid

MS 8-24-13
Prepared By Date

BB 8/24/13
Preparation Reviewed By Date

CB 8/24/13
Digestates Received By Date

Printed: 8/24/2013 9:40:01AM :: bch_ATL_Metals(2)

PREPARATION BENCH SHEET

B3H0501

Advanced Technology Laboratories

Lab Matrix: Soil
Date Prepared: 08/27/13 10:12
End Date/Time: 08/27/13 13:35

Prepared by: MS

Prep Code: EPA 3050B

Bottle Lot No.: J147592-264 J162812-263

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
1302553-04	6010	Soil		2.00	100						Added for BatchQC in: B3H0501
1302553-04	6010_CAM	Soil		2.00	100						
1302565-01	6010_CAM	Soil		2.00	100						
1302581-01	6010	Soil		2.01	100						
1302581-02	6010_CAM	Soil		2.01	100						
1302581-03	6010	Soil		2.01	100						
1302581-04	6010_CAM	Soil		2.00	100						
1302581-05	6010	Soil		2.00	100						
1302581-06	6010	Soil		2.00	100						
1302581-07	6010_CAM	Soil		2.01	100						
1302581-08	6010	Soil		2.00	100						
1302581-09	6010	Soil		2.00	100						
1302581-10	6010	Soil		2.00	100						
1302581-11	6010_CAM	Soil		2.01	100						
1302581-12	6010	Soil		2.00	100						
1302581-13	6010_CAM	Soil		2.00	100						
1302581-14	6010	Soil		2.00	100						
1302581-15	6010_CAM	Soil		2.01	100						
1302581-16	6010	Soil		2.00	100						
1302581-17	6010	Soil		2.01	100						

MS 8-27-13
Prepared By Date

SB 8.27.13
Preparation Reviewed By Date

SB 8.27.13
Digestates Received By Date

Printed: 8/27/2013 3:57:03PM :: bch_ATL_Metals(2)

PREPARATION BENCH SHEET

B3H0501

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/27/13 10:12

End Date/Time: 08/27/13 13:35

Prep Code: EPA 3050B

Prepared by: MS

Bottle Lot No.: J162812-263 J162592-264

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
1302581-18	6010	Soil		2.01	100						
B3H0501-BLK1	QC			2.00	100						
B3H0501-BS1	QC			2.00	100	A3H0323					
B3H0501-MS1	QC			1.99	100	A3H0011	A3H0009	1302553-04	5000	4000	
B3H0501-MSD1	QC			1.99	100	A3H0011	A3H0009	1302553-04	5000	4000	

DB-01-19
TEMP 94C

Number	Reagent Name
A3E0267	HYDROGEN PEROXIDE
A3F0360	nitric acid
A3G0127	hydrochloric acid

MS 8.27.13
Prepared By Date

SB 8.27.13
Preparation Reviewed By Date

SB 8.27.13
Digestates Received By Date

Printed: 8/27/2013 3:57:03PM :: bch_ATL_Metals(2)

PREPARATION BENCH SHEET

B3H0502

Advanced Technology Laboratories

Lab Matrix: Soil
Date Prepared: 08/27/13 10:13
End Date/Time: 08/27/13 13:45

Prepared by: MS
Prep Code: EPA 3050B
Bottle Lot No.: J167812-267 J1425562-264

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
1302581-19	6010	Soil		2.00	100						Added for BatchQC in: B3H0502
1302581-19	6010_CAM	Soil		2.00	100						
1302581-20	6010	Soil		2.00	100						
1302581-21	6010_CAM	Soil		2.00	100						
1302581-22	6010_CAM	Soil		2.00	100						
B3H0502-BLK1	QC			2.00	100						
B3H0502-BS1	QC			2.00	100	A3H0323			1000		
B3H0502-MS1	QC			2.00	100	A3H0011	A3H0009	1302581-19	5000	4000	
B3H0502-MSD1	QC			2.00	100	A3H0011	A3H0009	1302581-19	5000	4000	

DB-01-5
TEMP 93C

Number	Reagent Name
A3E0267	HYDROGEN PEROXIDE
A3F0360	nitric acid
A3G0127	hydrochloric acid

MS 8-27-13
Prepared By Date

SB 8.27.13
Preparation Reviewed By Date

SB 8.27.13
Digestates Received By Date

Printed: 8/27/2013 3:57:12PM :: bch_ATL_Metals(2)

PREPARATION BENCH SHEET

B3H0501

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/27/13 10:12

End Date/Time:

Prepared by: MS

Prep Code: EPA 3050B

Bottle Lot No.: J162812-263 J147592-264

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
1302553-04	6010	Soil		2.00	100						Added for BatchQC in: B3H0501
1302553-04	6010_CAM	Soil		2.00	100						
1302565-01	6010_CAM	Soil		2.00	100						
1302581-01	6010	Soil		~~2.00~~ 2.01	100						
1302581-02	6010_CAM	Soil		~~2.00~~ 2.01	100						
1302581-03	6010	Soil		~~2.00~~ 2.01	100						
1302581-04	6010_CAM	Soil		2.00	100						
1302581-05	6010	Soil		2.00	100						
1302581-06	6010	Soil		2.00	100						
1302581-07	6010_CAM	Soil		~~2.00~~ 2.01	100						
1302581-08	6010	Soil		2.00	100						
1302581-09	6010	Soil		2.00	100						
1302581-10	6010	Soil		2.00	100						
1302581-11	6010_CAM	Soil		~~2.00~~ 2.01	100						
1302581-12	6010	Soil		2.00	100						
1302581-13	6010_CAM	Soil		2.00	100						
1302581-14	6010	Soil		2.00	100						
1302581-15	6010_CAM	Soil		~~2.00~~ 2.01	100						
1302581-16	6010	Soil		2.00	100						
1302581-17	6010	Soil		~~2.00~~ 2.01	100						

MS 8-27-13
Prepared By Date

SB 827.13
Preparation Reviewed By Date

SB 827.13
Digestates Received By Date

Printed: 8/27/2013 2:45:01PM :: bch_ATL_Metals(2)

PREPARATION BENCH SHEET

B3H0501

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/27/13 10:12

End Date/Time:

Prepared by: MS

Prep Code: EPA 3050B

Bottle Lot No.: J167812-263 J147592-264

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
1302581-18	6010	Soil		~~2.00~~ 3.00	100						
B3H0501-BLK1	QC			2.00	100						
B3H0501-BS1	QC			2.00	100	~~A3H0160~~ A3H0127					
B3H0501-MS1	QC			2.00	100	A3H0011	A3H0009	1302553-04	5000	4000	
B3H0501-MSD1	QC			2.00	100	A3H0011	A3H0009	1302553-04	5000	4000	

Number	Reagent Name
A3E0267	HYDROGEN PEROXIDE
A3F0360	nitric acid
A3G0127	hydrochloric acid

MS 8-27-13
Prepared By Date

SB 827.13
Preparation Reviewed By Date

SB 8.27.13
Digestates Received By Date

Printed: 8/27/2013 2:45:01PM :: bch_ATL_Metals(2)

INITIAL CALIBRATION DATA SUMMARY

ATL Number: 1302545, 1302547 BA 09/25/13

INITIAL CALIBRATION
EPA 6010B

Instrument ID: ICP8
Date(s) Analyzed: 8/24/2013

Analyte	INTENSITY			
	STD1*	STD2(0.5mg/L)	STD3(1.0mg/L)	r2
Silver	971.3605496	161126.1627	321095.1638	0.999998853
Arsenic	48.121116	2575.166537	5132.1059	0.999998834
Barium	271.2119917	49219.51916	97790.73909	0.999996464
Beryllium	733.9837189	126219.0499	248173.736	0.999976462
Cadmium	817.6641955	155784.4875	307000.3053	0.999982379
Cobalt	249.5199585	47526.84868	93377.99367	0.999974412
Chromium	462.5435083	86491.31897	171212.2464	0.999991466
Copper	1320.163723	137630.1547	273397.7139	0.999996284
Molybdenum	213.0280549	22805.88193	44953.48982	0.999982916
Nickel	380.3051602	34697.12625	68865.30236	0.999995189
Lead	67.00080826	6990.263845	13564.57331	0.999925695
Antimony	30.90270115	1625.579283	3221.649011	0.999993241
Selenium	57.60406755	2886.177065	5682.921599	0.99998031
Thallium	60.38302346	2957.147445	5783.445606	0.999959362
Vanadium	565.4245848	72671.72874	144351.5381	0.999995436
Zinc	1044.526248	47697.10031	93420.77356	0.999964093

*0.0025 mg/L: Ba, Be, Cd, Cr, Co, Ag, V 0.005 mg/L: Sb, Cu, Pb, Mo, Ni 0.01 mg/L: As, Se, Tl, Zn, Mn

0.5 mg/L: Ca, Fe, K, Na

Standard Concentration:	STD1*	0.5 mg/L	1.0 mg/L
Standard ID:	A3H0196	A3G0205	A3G0206

Calibration Acceptance Criteria: > 0.995 Correlation

ATL Number: 1302545, 1302547 BA 09/25/13

INITIAL CALIBRATION
EPA 6010B

Instrument ID: ICP10
Date(s) Analyzed: 8/26/2013

Analyte	INTENSITY			
	STD1*	STD2(0.5mg/L)	STD3(1.0mg/L)	r2
Silver	466.587476	110006.6425	218900.0453	0.99999788
Arsenic	23.44690896	1171.818334	2322.924465	0.999993661
Barium	604.3712046	107113.2673	213310.3819	0.999998483
Beryllium	12960.86432	2581070.452	5119239.439	0.9999944
Cadmium	317.7038067	59831.97489	116381.8444	0.999937075
Cobalt	142.7950129	28003.32858	55227.67047	0.999984171
Chromium	506.3275929	83044.6447	163904.7022	0.999985729
Copper	1878.292662	191921.1801	379064.5277	0.999987354
Molybdenum	76.98917101	8205.827768	16089.78836	0.999968221
Nickel	286.0316714	25146.40522	49264.80348	0.999965213
Lead	46.3761869	4922.514275	9490.922731	0.999890292
Antimony	49.13354023	1958.54873	3856.857481	0.999977694
Selenium	16.18498044	1336.54979	2669.881505	0.999993677
Thallium	21.85530764	1363.575163	2642.116298	0.999916937
Vanadium	512.9539659	100403.2596	202242.4908	0.999995955
Zinc	533.1207583	23844.35349	46120.49177	0.999907896

*0.0025 mg/L: Ba, Be, Cd, Cr, Co, Ag, V 0.005 mg/L: Sb, Cu, Pb, Mo, Ni 0.01 mg/L: As, Se, Tl, Zn, Mn

0.5 mg/L: Ca, Fe, K, Na

Standard Concentration:	STD1*	0.5 mg/L	1.0 mg/L
Standard ID:	A3H0196	A3G0205	A3G0206

Calibration Acceptance Criteria: > 0.995 Correlation

ATL Number: 1302581

INITIAL CALIBRATION
EPA 6010B

Instrument ID: ICP10
Date(s) Analyzed: 8/27/2013

Analyte	INTENSITY			
	STD1*	STD2(0.5mg/L)	STD3(1.0mg/L)	r2
Silver	463.4582899	108892.2721	215035.4767	0.999986943
Arsenic	20.77699719	1168.187509	2305.926396	0.999985715
Barium	611.4497287	107643.6524	211015.589	0.999967422
Beryllium	12777.46545	2535211.594	5033911.802	0.999995803
Cadmium	316.3398621	59249.93415	116283.0678	0.99997113
Cobalt	144.8309407	27982.24454	54455.66096	0.999939256
Chromium	482.8514092	82864.5276	161718.9726	0.99995121
Copper	1924.918499	191296.9474	375138.6272	0.999968651
Molybdenum	73.64820554	8116.74251	15828.3243	0.999948065
Nickel	281.0159689	25204.66189	48874.56109	0.999921902
Lead	57.01677316	4927.20604	9454.613449	0.99985899
Antimony	41.4993831	1929.320648	3791.27477	0.999974594
Selenium	23.56765048	1346.628892	2614.17788	0.999927252
Thallium	21.47628695	1329.172587	2581.442714	0.999928655
Vanadium	600.4331397	101495.0894	199083.9458	0.999969341
Zinc	504.7998762	23517.74806	46162.07284	0.99997126

*0.0025 mg/L: Ba, Be, Cd, Cr, Co, Ag, V 0.005 mg/L: Sb, Cu, Pb, Mo, Ni 0.01 mg/L: As, Se, Tl, Zn, Mn

0.5 mg/L: Ca, Fe, K, Na

Standard Concentration:	STD1*	0.5 mg/L	1.0 mg/L
Standard ID:	A3H0196	A3G0205	A3G0206

Calibration Acceptance Criteria: > 0.995 Correlation

ATL Number: 1302581

INITIAL CALIBRATION
EPA 6010B

Instrument ID: ICP10
Date(s) Analyzed: 8/28/2013

Analyte	INTENSITY			
	STD1*	STD2(0.5mg/L)	STD3(1.0mg/L)	r2
Silver	487.7443866	108765.6624	216143.8578	0.999996688
Arsenic	21.44522314	1142.988067	2289.741163	0.999999624
Barium	589.3028872	106730.9864	208832.6034	0.999960997
Beryllium	12886.46406	2547103.066	5053692.806	0.999994874
Cadmium	310.4333334	59635.81732	115712.8628	0.99992525
Cobalt	167.1016543	27729.35105	53764.93015	0.999921466
Chromium	475.3508993	82642.11161	162036.8419	0.999968055
Copper	1931.715078	191222.8269	374212.5096	0.999961609
Molybdenum	82.16334626	8135.548948	15936.59462	0.999965044
Nickel	279.3696269	25274.84314	48862.14081	0.999905713
Lead	55.6170513	4902.979757	9476.558926	0.999904414
Antimony	35.64940492	1903.683285	3762.362597	0.999988489
Selenium	49.08394229	1343.114531	2622.969188	0.999924196
Thallium	24.10036712	1327.487868	2590.153425	0.999950179
Vanadium	472.471932	100490.396	197407.6462	0.999973975
Zinc	525.1056773	23646.4013	45850.4637	0.999921076

*0.0025 mg/L: Ba, Be, Cd, Cr, Co, Ag, V 0.005 mg/L: Sb, Cu, Pb, Mo, Ni 0.01 mg/L: As, Se, Tl, Zn, Mn

0.5 mg/L: Ca, Fe, K, Na

Standard Concentration:	STD1*	0.5 mg/L	1.0 mg/L
Standard ID:	A3H0196	A3G0205	A3G0206

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-08	Calibration:	3H26002
		Sequence:	S3H0300

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0300-ICV1	A3H0268	Antimony	0.500000	0.505406	101	mg/L	+/- 10.00%
		Arsenic	0.500000	0.507773	102	mg/L	+/- 10.00%
		Barium	0.500000	0.509842	102	mg/L	+/- 10.00%
		Beryllium	0.500000	0.507244	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.512127	102	mg/L	+/- 10.00%
		Chromium	0.500000	0.512029	102	mg/L	+/- 10.00%
		Cobalt	0.500000	0.519068	104	mg/L	+/- 10.00%
		Copper	0.500000	0.506256	101	mg/L	+/- 10.00%
		Lead	0.500000	0.513472	103	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.495374	99.1	mg/L	+/- 10.00%
		Nickel	0.500000	0.517060	103	mg/L	+/- 10.00%
		Selenium	0.500000	0.504352	101	mg/L	+/- 10.00%
		Silver	0.500000	0.503808	101	mg/L	+/- 10.00%
		Thallium	0.500000	0.517693	104	mg/L	+/- 10.00%
		Vanadium	0.500000	0.503630	101	mg/L	+/- 10.00%
		Zinc	0.500000	0.519787	104	mg/L	+/- 10.00%
S3H0300-CCV1	A3H0219	Antimony	0.250000	0.261819	105	mg/L	+/- 10.00%
		Arsenic	0.250000	0.258376	103	mg/L	+/- 10.00%
		Barium	0.250000	0.254519	102	mg/L	+/- 10.00%
		Beryllium	0.250000	0.253651	101	mg/L	+/- 10.00%
		Cadmium	0.250000	0.255336	102	mg/L	+/- 10.00%
		Chromium	0.250000	0.255731	102	mg/L	+/- 10.00%
		Cobalt	0.250000	0.266708	107	mg/L	+/- 10.00%
		Copper	0.250000	0.253961	102	mg/L	+/- 10.00%
		Lead	0.250000	0.255764	102	mg/L	+/- 10.00%
		Molybdenum	0.250000	0.247125	98.8	mg/L	+/- 10.00%
		Nickel	0.250000	0.260670	104	mg/L	+/- 10.00%
		Selenium	0.250000	0.253558	101	mg/L	+/- 10.00%
		Silver	0.250000	0.253422	101	mg/L	+/- 10.00%
		Thallium	0.250000	0.260725	104	mg/L	+/- 10.00%
		Vanadium	0.250000	0.249912	100	mg/L	+/- 10.00%
		Zinc	0.250000	0.265383	106	mg/L	+/- 10.00%
S3H0300-CCV2	A3H0268	Antimony	0.500000	0.518000	104	mg/L	+/- 10.00%
		Arsenic	0.500000	0.504555	101	mg/L	+/- 10.00%
		Barium	0.500000	0.506691	101	mg/L	+/- 10.00%
		Beryllium	0.500000	0.505743	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.503162	101	mg/L	+/- 10.00%
		Chromium	0.500000	0.507871	102	mg/L	+/- 10.00%
		Cobalt	0.500000	0.515460	103	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-08	Calibration:	3H26002
		Sequence:	S3H0300

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0300-CCV2	A3H0268	Copper	0.500000	0.515165	103	mg/L	+/- 10.00%
		Lead	0.500000	0.505654	101	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.493050	98.6	mg/L	+/- 10.00%
		Nickel	0.500000	0.512856	103	mg/L	+/- 10.00%
		Selenium	0.500000	0.500467	100	mg/L	+/- 10.00%
		Silver	0.500000	0.509070	102	mg/L	+/- 10.00%
		Thallium	0.500000	0.517905	104	mg/L	+/- 10.00%
		Vanadium	0.500000	0.505311	101	mg/L	+/- 10.00%
		Zinc	0.500000	0.512736	103	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-10	Calibration:	3H26005
		Sequence:	S3H0307

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0307-ICV1	A3H0268	Antimony	0.500000	0.497721	99.5	mg/L	+/- 10.00%
		Arsenic	0.500000	0.498718	99.7	mg/L	+/- 10.00%
		Barium	0.500000	0.513132	103	mg/L	+/- 10.00%
		Beryllium	0.500000	0.506011	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.517002	103	mg/L	+/- 10.00%
		Chromium	0.500000	0.516146	103	mg/L	+/- 10.00%
		Cobalt	0.500000	0.519839	104	mg/L	+/- 10.00%
		Copper	0.500000	0.514721	103	mg/L	+/- 10.00%
		Lead	0.500000	0.506758	101	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.494229	98.8	mg/L	+/- 10.00%
		Nickel	0.500000	0.517821	104	mg/L	+/- 10.00%
		Selenium	0.500000	0.495579	99.1	mg/L	+/- 10.00%
		Silver	0.500000	0.513113	103	mg/L	+/- 10.00%
		Thallium	0.500000	0.515738	103	mg/L	+/- 10.00%
		Vanadium	0.500000	0.502232	100	mg/L	+/- 10.00%
		Zinc	0.500000	0.524375	105	mg/L	+/- 10.00%
S3H0307-CCV1	A3H0219	Antimony	0.250000	0.244929	98.0	mg/L	+/- 10.00%
		Arsenic	0.250000	0.253798	102	mg/L	+/- 10.00%
		Barium	0.250000	0.253652	101	mg/L	+/- 10.00%
		Beryllium	0.250000	0.246762	98.7	mg/L	+/- 10.00%
		Cadmium	0.250000	0.260535	104	mg/L	+/- 10.00%
		Chromium	0.250000	0.256573	103	mg/L	+/- 10.00%
		Cobalt	0.250000	0.260348	104	mg/L	+/- 10.00%
		Copper	0.250000	0.255396	102	mg/L	+/- 10.00%
		Lead	0.250000	0.253486	101	mg/L	+/- 10.00%
		Molybdenum	0.250000	0.242546	97.0	mg/L	+/- 10.00%
		Nickel	0.250000	0.271782	109	mg/L	+/- 10.00%
		Selenium	0.250000	0.248462	99.4	mg/L	+/- 10.00%
		Silver	0.250000	0.253880	102	mg/L	+/- 10.00%
		Thallium	0.250000	0.264255	106	mg/L	+/- 10.00%
		Vanadium	0.250000	0.246945	98.8	mg/L	+/- 10.00%
		Zinc	0.250000	0.267437	107	mg/L	+/- 10.00%
S3H0307-CCV4	A3H0268	Antimony	0.500000	0.499156	99.8	mg/L	+/- 10.00%
		Arsenic	0.500000	0.500734	100	mg/L	+/- 10.00%
		Barium	0.500000	0.510332	102	mg/L	+/- 10.00%
		Beryllium	0.500000	0.503557	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.520868	104	mg/L	+/- 10.00%
		Chromium	0.500000	0.514778	103	mg/L	+/- 10.00%
		Cobalt	0.500000	0.515830	103	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-10	Calibration:	3H26005
		Sequence:	S3H0307

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0307-CCV4	A3H0268	Copper	0.500000	0.516792	103	mg/L	+/- 10.00%
		Lead	0.500000	0.510670	102	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.497454	99.5	mg/L	+/- 10.00%
		Nickel	0.500000	0.514995	103	mg/L	+/- 10.00%
		Selenium	0.500000	0.502729	101	mg/L	+/- 10.00%
		Silver	0.500000	0.511489	102	mg/L	+/- 10.00%
		Thallium	0.500000	0.517328	103	mg/L	+/- 10.00%
		Vanadium	0.500000	0.497023	99.4	mg/L	+/- 10.00%
		Zinc	0.500000	0.535074	107	mg/L	+/- 10.00%
S3H0307-CCV5	A3H0268	Antimony	0.500000	0.487484	97.5	mg/L	+/- 10.00%
		Arsenic	0.500000	0.495261	99.1	mg/L	+/- 10.00%
		Barium	0.500000	0.506218	101	mg/L	+/- 10.00%
		Beryllium	0.500000	0.506312	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.515116	103	mg/L	+/- 10.00%
		Chromium	0.500000	0.508616	102	mg/L	+/- 10.00%
		Cobalt	0.500000	0.513262	103	mg/L	+/- 10.00%
		Copper	0.500000	0.510437	102	mg/L	+/- 10.00%
		Lead	0.500000	0.504800	101	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.491079	98.2	mg/L	+/- 10.00%
		Nickel	0.500000	0.511036	102	mg/L	+/- 10.00%
		Selenium	0.500000	0.493652	98.7	mg/L	+/- 10.00%
		Silver	0.500000	0.501648	100	mg/L	+/- 10.00%
		Thallium	0.500000	0.512816	103	mg/L	+/- 10.00%
		Vanadium	0.500000	0.495222	99.0	mg/L	+/- 10.00%
		Zinc	0.500000	0.527484	105	mg/L	+/- 10.00%
S3H0307-CCV6	A3H0268	Antimony	0.500000	0.491851	98.4	mg/L	+/- 10.00%
		Arsenic	0.500000	0.496496	99.3	mg/L	+/- 10.00%
		Barium	0.500000	0.504640	101	mg/L	+/- 10.00%
		Beryllium	0.500000	0.505177	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.511305	102	mg/L	+/- 10.00%
		Chromium	0.500000	0.507793	102	mg/L	+/- 10.00%
		Cobalt	0.500000	0.510104	102	mg/L	+/- 10.00%
		Copper	0.500000	0.510145	102	mg/L	+/- 10.00%
		Lead	0.500000	0.504900	101	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.493230	98.6	mg/L	+/- 10.00%
		Nickel	0.500000	0.507266	101	mg/L	+/- 10.00%
		Selenium	0.500000	0.497973	99.6	mg/L	+/- 10.00%
		Silver	0.500000	0.503500	101	mg/L	+/- 10.00%
		Thallium	0.500000	0.515290	103	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-10	Calibration:	3H26005
		Sequence:	S3H0307

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0307-CCV6	A3H0268	Vanadium	0.500000	0.496562	99.3	mg/L	+/- 10.00%
		Zinc	0.500000	0.526295	105	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-08	Calibration:	3H26002
		Sequence:	S3H0300

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0300-ICV1	A3H0268	Lead	0.500000	0.513472	103	mg/L	+/- 10.00%
S3H0300-CCV1	A3H0219	Lead	0.250000	0.255764	102	mg/L	+/- 10.00%
S3H0300-CCV2	A3H0268	Lead	0.500000	0.505654	101	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-10	Calibration:	3H26005
		Sequence:	S3H0307

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0307-ICV1	A3H0268	Lead	0.500000	0.506758	101	mg/L	+/- 10.00%
S3H0307-CCV1	A3H0219	Lead	0.250000	0.253486	101	mg/L	+/- 10.00%
S3H0307-CCV4	A3H0268	Lead	0.500000	0.510670	102	mg/L	+/- 10.00%
S3H0307-CCV5	A3H0268	Lead	0.500000	0.504800	101	mg/L	+/- 10.00%
S3H0307-CCV6	A3H0268	Lead	0.500000	0.504900	101	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-08	Calibration:	3H26002
		Sequence:	S3H0300

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0300-ICV1	A3H0268	Antimony	0.500000	0.505406	101	mg/L	+/- 10.00%
		Arsenic	0.500000	0.507773	102	mg/L	+/- 10.00%
		Barium	0.500000	0.509842	102	mg/L	+/- 10.00%
		Beryllium	0.500000	0.507244	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.512127	102	mg/L	+/- 10.00%
		Chromium	0.500000	0.512029	102	mg/L	+/- 10.00%
		Cobalt	0.500000	0.519068	104	mg/L	+/- 10.00%
		Copper	0.500000	0.506256	101	mg/L	+/- 10.00%
		Lead	0.500000	0.513472	103	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.495374	99.1	mg/L	+/- 10.00%
		Nickel	0.500000	0.517060	103	mg/L	+/- 10.00%
		Selenium	0.500000	0.504352	101	mg/L	+/- 10.00%
		Silver	0.500000	0.503808	101	mg/L	+/- 10.00%
		Thallium	0.500000	0.517693	104	mg/L	+/- 10.00%
		Vanadium	0.500000	0.503630	101	mg/L	+/- 10.00%
		Zinc	0.500000	0.519787	104	mg/L	+/- 10.00%
S3H0300-CCV1	A3H0219	Antimony	0.250000	0.261819	105	mg/L	+/- 10.00%
		Arsenic	0.250000	0.258376	103	mg/L	+/- 10.00%
		Barium	0.250000	0.254519	102	mg/L	+/- 10.00%
		Beryllium	0.250000	0.253651	101	mg/L	+/- 10.00%
		Cadmium	0.250000	0.255336	102	mg/L	+/- 10.00%
		Chromium	0.250000	0.255731	102	mg/L	+/- 10.00%
		Cobalt	0.250000	0.266708	107	mg/L	+/- 10.00%
		Copper	0.250000	0.253961	102	mg/L	+/- 10.00%
		Lead	0.250000	0.255764	102	mg/L	+/- 10.00%
		Molybdenum	0.250000	0.247125	98.8	mg/L	+/- 10.00%
		Nickel	0.250000	0.260670	104	mg/L	+/- 10.00%
		Selenium	0.250000	0.253558	101	mg/L	+/- 10.00%
		Silver	0.250000	0.253422	101	mg/L	+/- 10.00%
		Thallium	0.250000	0.260725	104	mg/L	+/- 10.00%
		Vanadium	0.250000	0.249912	100	mg/L	+/- 10.00%
		Zinc	0.250000	0.265383	106	mg/L	+/- 10.00%
S3H0300-CCV2	A3H0268	Antimony	0.500000	0.518000	104	mg/L	+/- 10.00%
		Arsenic	0.500000	0.504555	101	mg/L	+/- 10.00%
		Barium	0.500000	0.506691	101	mg/L	+/- 10.00%
		Beryllium	0.500000	0.505743	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.503162	101	mg/L	+/- 10.00%
		Chromium	0.500000	0.507871	102	mg/L	+/- 10.00%
		Cobalt	0.500000	0.515460	103	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-08	Calibration:	3H26002
		Sequence:	S3H0300

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0300-CCV2	A3H0268	Copper	0.500000	0.515165	103	mg/L	+/- 10.00%
		Lead	0.500000	0.505654	101	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.493050	98.6	mg/L	+/- 10.00%
		Nickel	0.500000	0.512856	103	mg/L	+/- 10.00%
		Selenium	0.500000	0.500467	100	mg/L	+/- 10.00%
		Silver	0.500000	0.509070	102	mg/L	+/- 10.00%
		Thallium	0.500000	0.517905	104	mg/L	+/- 10.00%
		Vanadium	0.500000	0.505311	101	mg/L	+/- 10.00%
		Zinc	0.500000	0.512736	103	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-10	Calibration:	3H26005
		Sequence:	S3H0307

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0307-ICV1	A3H0268	Antimony	0.500000	0.497721	99.5	mg/L	+/- 10.00%
		Arsenic	0.500000	0.498718	99.7	mg/L	+/- 10.00%
		Barium	0.500000	0.513132	103	mg/L	+/- 10.00%
		Beryllium	0.500000	0.506011	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.517002	103	mg/L	+/- 10.00%
		Chromium	0.500000	0.516146	103	mg/L	+/- 10.00%
		Cobalt	0.500000	0.519839	104	mg/L	+/- 10.00%
		Copper	0.500000	0.514721	103	mg/L	+/- 10.00%
		Lead	0.500000	0.506758	101	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.494229	98.8	mg/L	+/- 10.00%
		Nickel	0.500000	0.517821	104	mg/L	+/- 10.00%
		Selenium	0.500000	0.495579	99.1	mg/L	+/- 10.00%
		Silver	0.500000	0.513113	103	mg/L	+/- 10.00%
		Thallium	0.500000	0.515738	103	mg/L	+/- 10.00%
		Vanadium	0.500000	0.502232	100	mg/L	+/- 10.00%
		Zinc	0.500000	0.524375	105	mg/L	+/- 10.00%
S3H0307-CCV1	A3H0219	Antimony	0.250000	0.244929	98.0	mg/L	+/- 10.00%
		Arsenic	0.250000	0.253798	102	mg/L	+/- 10.00%
		Barium	0.250000	0.253652	101	mg/L	+/- 10.00%
		Beryllium	0.250000	0.246762	98.7	mg/L	+/- 10.00%
		Cadmium	0.250000	0.260535	104	mg/L	+/- 10.00%
		Chromium	0.250000	0.256573	103	mg/L	+/- 10.00%
		Cobalt	0.250000	0.260348	104	mg/L	+/- 10.00%
		Copper	0.250000	0.255396	102	mg/L	+/- 10.00%
		Lead	0.250000	0.253486	101	mg/L	+/- 10.00%
		Molybdenum	0.250000	0.242546	97.0	mg/L	+/- 10.00%
		Nickel	0.250000	0.271782	109	mg/L	+/- 10.00%
		Selenium	0.250000	0.248462	99.4	mg/L	+/- 10.00%
		Silver	0.250000	0.253880	102	mg/L	+/- 10.00%
		Thallium	0.250000	0.264255	106	mg/L	+/- 10.00%
		Vanadium	0.250000	0.246945	98.8	mg/L	+/- 10.00%
		Zinc	0.250000	0.267437	107	mg/L	+/- 10.00%
S3H0307-CCV4	A3H0268	Antimony	0.500000	0.499156	99.8	mg/L	+/- 10.00%
		Arsenic	0.500000	0.500734	100	mg/L	+/- 10.00%
		Barium	0.500000	0.510332	102	mg/L	+/- 10.00%
		Beryllium	0.500000	0.503557	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.520868	104	mg/L	+/- 10.00%
		Chromium	0.500000	0.514778	103	mg/L	+/- 10.00%
		Cobalt	0.500000	0.515830	103	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-10	Calibration:	3H26005
		Sequence:	S3H0307

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0307-CCV4	A3H0268	Copper	0.500000	0.516792	103	mg/L	+/- 10.00%
		Lead	0.500000	0.510670	102	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.497454	99.5	mg/L	+/- 10.00%
		Nickel	0.500000	0.514995	103	mg/L	+/- 10.00%
		Selenium	0.500000	0.502729	101	mg/L	+/- 10.00%
		Silver	0.500000	0.511489	102	mg/L	+/- 10.00%
		Thallium	0.500000	0.517328	103	mg/L	+/- 10.00%
		Vanadium	0.500000	0.497023	99.4	mg/L	+/- 10.00%
		Zinc	0.500000	0.535074	107	mg/L	+/- 10.00%
S3H0307-CCV5	A3H0268	Antimony	0.500000	0.487484	97.5	mg/L	+/- 10.00%
		Arsenic	0.500000	0.495261	99.1	mg/L	+/- 10.00%
		Barium	0.500000	0.506218	101	mg/L	+/- 10.00%
		Beryllium	0.500000	0.506312	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.515116	103	mg/L	+/- 10.00%
		Chromium	0.500000	0.508616	102	mg/L	+/- 10.00%
		Cobalt	0.500000	0.513262	103	mg/L	+/- 10.00%
		Copper	0.500000	0.510437	102	mg/L	+/- 10.00%
		Lead	0.500000	0.504800	101	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.491079	98.2	mg/L	+/- 10.00%
		Nickel	0.500000	0.511036	102	mg/L	+/- 10.00%
		Selenium	0.500000	0.493652	98.7	mg/L	+/- 10.00%
		Silver	0.500000	0.501648	100	mg/L	+/- 10.00%
		Thallium	0.500000	0.512816	103	mg/L	+/- 10.00%
		Vanadium	0.500000	0.495222	99.0	mg/L	+/- 10.00%
		Zinc	0.500000	0.527484	105	mg/L	+/- 10.00%
S3H0307-CCV6	A3H0268	Antimony	0.500000	0.491851	98.4	mg/L	+/- 10.00%
		Arsenic	0.500000	0.496496	99.3	mg/L	+/- 10.00%
		Barium	0.500000	0.504640	101	mg/L	+/- 10.00%
		Beryllium	0.500000	0.505177	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.511305	102	mg/L	+/- 10.00%
		Chromium	0.500000	0.507793	102	mg/L	+/- 10.00%
		Cobalt	0.500000	0.510104	102	mg/L	+/- 10.00%
		Copper	0.500000	0.510145	102	mg/L	+/- 10.00%
		Lead	0.500000	0.504900	101	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.493230	98.6	mg/L	+/- 10.00%
		Nickel	0.500000	0.507266	101	mg/L	+/- 10.00%
		Selenium	0.500000	0.497973	99.6	mg/L	+/- 10.00%
		Silver	0.500000	0.503500	101	mg/L	+/- 10.00%
		Thallium	0.500000	0.515290	103	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-10	Calibration:	3H26005
		Sequence:	S3H0307

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0307-CCV6	A3H0268	Vanadium	0.500000	0.496562	99.3	mg/L	+/- 10.00%
		Zinc	0.500000	0.526295	105	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-08	Calibration:	3H26002
		Sequence:	S3H0300

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0300-ICV1	A3H0268	Lead	0.500000	0.513472	103	mg/L	+/- 10.00%
S3H0300-CCV1	A3H0219	Lead	0.250000	0.255764	102	mg/L	+/- 10.00%
S3H0300-CCV2	A3H0268	Lead	0.500000	0.505654	101	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-10	Calibration:	3H26005
		Sequence:	S3H0307

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0307-ICV1	A3H0268	Lead	0.500000	0.506758	101	mg/L	+/- 10.00%
S3H0307-CCV1	A3H0219	Lead	0.250000	0.253486	101	mg/L	+/- 10.00%
S3H0307-CCV4	A3H0268	Lead	0.500000	0.510670	102	mg/L	+/- 10.00%
S3H0307-CCV5	A3H0268	Lead	0.500000	0.504800	101	mg/L	+/- 10.00%
S3H0307-CCV6	A3H0268	Lead	0.500000	0.504900	101	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-10	Calibration:	3H28002
		Sequence:	S3H0313

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0313-ICV1	A3H0268	Antimony	0.500000	0.495578	99.1	mg/L	+/- 10.00%
		Arsenic	0.500000	0.496846	99.4	mg/L	+/- 10.00%
		Barium	0.500000	0.506912	101	mg/L	+/- 10.00%
		Beryllium	0.500000	0.504781	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.506626	101	mg/L	+/- 10.00%
		Chromium	0.500000	0.510385	102	mg/L	+/- 10.00%
		Cobalt	0.500000	0.512860	103	mg/L	+/- 10.00%
		Copper	0.500000	0.509524	102	mg/L	+/- 10.00%
		Lead	0.500000	0.505261	101	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.491310	98.3	mg/L	+/- 10.00%
		Nickel	0.500000	0.510371	102	mg/L	+/- 10.00%
		Selenium	0.500000	0.500372	100	mg/L	+/- 10.00%
		Silver	0.500000	0.512795	103	mg/L	+/- 10.00%
		Thallium	0.500000	0.514600	103	mg/L	+/- 10.00%
		Vanadium	0.500000	0.505301	101	mg/L	+/- 10.00%
		Zinc	0.500000	0.509764	102	mg/L	+/- 10.00%
S3H0313-CCV1	A3H0219	Antimony	0.250000	0.246862	98.7	mg/L	+/- 10.00%
		Arsenic	0.250000	0.251637	101	mg/L	+/- 10.00%
		Barium	0.250000	0.253223	101	mg/L	+/- 10.00%
		Beryllium	0.250000	0.249158	99.7	mg/L	+/- 10.00%
		Cadmium	0.250000	0.253390	101	mg/L	+/- 10.00%
		Chromium	0.250000	0.257431	103	mg/L	+/- 10.00%
		Cobalt	0.250000	0.260148	104	mg/L	+/- 10.00%
		Copper	0.250000	0.255277	102	mg/L	+/- 10.00%
		Lead	0.250000	0.255670	102	mg/L	+/- 10.00%
		Molybdenum	0.250000	0.245046	98.0	mg/L	+/- 10.00%
		Nickel	0.250000	0.274223	110	mg/L	+/- 10.00%
		Selenium	0.250000	0.253916	102	mg/L	+/- 10.00%
		Silver	0.250000	0.255450	102	mg/L	+/- 10.00%
		Thallium	0.250000	0.264670	106	mg/L	+/- 10.00%
		Vanadium	0.250000	0.251242	100	mg/L	+/- 10.00%
		Zinc	0.250000	0.257287	103	mg/L	+/- 10.00%
S3H0313-CCV5	A3H0268	Antimony	0.500000	0.498314	99.7	mg/L	+/- 10.00%
		Arsenic	0.500000	0.492215	98.4	mg/L	+/- 10.00%
		Barium	0.500000	0.504251	101	mg/L	+/- 10.00%
		Beryllium	0.500000	0.509633	102	mg/L	+/- 10.00%
		Cadmium	0.500000	0.506219	101	mg/L	+/- 10.00%
		Chromium	0.500000	0.508969	102	mg/L	+/- 10.00%
		Cobalt	0.500000	0.511739	102	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-10	Calibration:	3H28002
		Sequence:	S3H0313

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0313-CCV5	A3H0268	Copper	0.500000	0.509244	102	mg/L	+/- 10.00%
		Lead	0.500000	0.504083	101	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.498191	99.6	mg/L	+/- 10.00%
		Nickel	0.500000	0.509833	102	mg/L	+/- 10.00%
		Selenium	0.500000	0.509539	102	mg/L	+/- 10.00%
		Silver	0.500000	0.506584	101	mg/L	+/- 10.00%
		Thallium	0.500000	0.520739	104	mg/L	+/- 10.00%
		Vanadium	0.500000	0.492115	98.4	mg/L	+/- 10.00%
		Zinc	0.500000	0.514228	103	mg/L	+/- 10.00%
S3H0313-CCV6	A3H0268	Antimony	0.500000	0.489257	97.9	mg/L	+/- 10.00%
		Arsenic	0.500000	0.484496	96.9	mg/L	+/- 10.00%
		Barium	0.500000	0.500792	100	mg/L	+/- 10.00%
		Beryllium	0.500000	0.507169	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.497714	99.5	mg/L	+/- 10.00%
		Chromium	0.500000	0.504677	101	mg/L	+/- 10.00%
		Cobalt	0.500000	0.500603	100	mg/L	+/- 10.00%
		Copper	0.500000	0.511442	102	mg/L	+/- 10.00%
		Lead	0.500000	0.495000	99.0	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.494791	99.0	mg/L	+/- 10.00%
		Nickel	0.500000	0.501718	100	mg/L	+/- 10.00%
		Selenium	0.500000	0.483181	96.6	mg/L	+/- 10.00%
		Silver	0.500000	0.507153	101	mg/L	+/- 10.00%
		Thallium	0.500000	0.514385	103	mg/L	+/- 10.00%
		Vanadium	0.500000	0.485918	97.2	mg/L	+/- 10.00%
		Zinc	0.500000	0.508581	102	mg/L	+/- 10.00%
S3H0313-CCV7	A3H0268	Antimony	0.500000	0.485971	97.2	mg/L	+/- 10.00%
		Arsenic	0.500000	0.483085	96.6	mg/L	+/- 10.00%
		Barium	0.500000	0.498132	99.6	mg/L	+/- 10.00%
		Beryllium	0.500000	0.503581	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.497728	99.5	mg/L	+/- 10.00%
		Chromium	0.500000	0.504950	101	mg/L	+/- 10.00%
		Cobalt	0.500000	0.501465	100	mg/L	+/- 10.00%
		Copper	0.500000	0.511082	102	mg/L	+/- 10.00%
		Lead	0.500000	0.490855	98.2	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.492823	98.6	mg/L	+/- 10.00%
		Nickel	0.500000	0.503502	101	mg/L	+/- 10.00%
		Selenium	0.500000	0.487676	97.5	mg/L	+/- 10.00%
		Silver	0.500000	0.508316	102	mg/L	+/- 10.00%
		Thallium	0.500000	0.510072	102	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-10	Calibration:	3H28002
		Sequence:	S3H0313

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0313-CCV7	A3H0268	Vanadium	0.500000	0.487303	97.5	mg/L	+/- 10.00%
		Zinc	0.500000	0.506399	101	mg/L	+/- 10.00%
S3H0313-CCV8	A3H0268	Antimony	0.500000	0.488939	97.8	mg/L	+/- 10.00%
		Arsenic	0.500000	0.487300	97.5	mg/L	+/- 10.00%
		Barium	0.500000	0.498552	99.7	mg/L	+/- 10.00%
		Beryllium	0.500000	0.505425	101	mg/L	+/- 10.00%
		Cadmium	0.500000	0.500640	100	mg/L	+/- 10.00%
		Chromium	0.500000	0.507226	101	mg/L	+/- 10.00%
		Cobalt	0.500000	0.503985	101	mg/L	+/- 10.00%
		Copper	0.500000	0.514438	103	mg/L	+/- 10.00%
		Lead	0.500000	0.497896	99.6	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.498499	99.7	mg/L	+/- 10.00%
		Nickel	0.500000	0.504211	101	mg/L	+/- 10.00%
		Selenium	0.500000	0.487792	97.6	mg/L	+/- 10.00%
		Silver	0.500000	0.510323	102	mg/L	+/- 10.00%
		Thallium	0.500000	0.519623	104	mg/L	+/- 10.00%
		Vanadium	0.500000	0.487011	97.4	mg/L	+/- 10.00%
		Zinc	0.500000	0.511168	102	mg/L	+/- 10.00%
S3H0313-CCV9	A3H0268	Antimony	0.500000	0.496758	99.4	mg/L	+/- 10.00%
		Arsenic	0.500000	0.489518	97.9	mg/L	+/- 10.00%
		Barium	0.500000	0.490458	98.1	mg/L	+/- 10.00%
		Beryllium	0.500000	0.508763	102	mg/L	+/- 10.00%
		Cadmium	0.500000	0.496177	99.2	mg/L	+/- 10.00%
		Chromium	0.500000	0.498826	99.8	mg/L	+/- 10.00%
		Cobalt	0.500000	0.496105	99.2	mg/L	+/- 10.00%
		Copper	0.500000	0.502501	101	mg/L	+/- 10.00%
		Lead	0.500000	0.495415	99.1	mg/L	+/- 10.00%
		Molybdenum	0.500000	0.498073	99.6	mg/L	+/- 10.00%
		Nickel	0.500000	0.495517	99.1	mg/L	+/- 10.00%
		Selenium	0.500000	0.498444	99.7	mg/L	+/- 10.00%
		Silver	0.500000	0.496153	99.2	mg/L	+/- 10.00%
		Thallium	0.500000	0.518916	104	mg/L	+/- 10.00%
		Vanadium	0.500000	0.475859	95.2	mg/L	+/- 10.00%
		Zinc	0.500000	0.508569	102	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-10	Calibration:	3H28002
		Sequence:	S3H0313

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0313-ICV1	A3H0268	Lead	0.500000	0.505261	101	mg/L	+/- 10.00%
S3H0313-CCV1	A3H0219	Lead	0.250000	0.255670	102	mg/L	+/- 10.00%
S3H0313-CCV5	A3H0268	Lead	0.500000	0.504083	101	mg/L	+/- 10.00%
S3H0313-CCV6	A3H0268	Lead	0.500000	0.495000	99.0	mg/L	+/- 10.00%
S3H0313-CCV7	A3H0268	Lead	0.500000	0.490855	98.2	mg/L	+/- 10.00%
S3H0313-CCV8	A3H0268	Lead	0.500000	0.497896	99.6	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-10	Calibration:	3H29001
		Sequence:	S3H0331

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3H0331-ICV1	A3H0268	Lead	0.500000	0.509376	102	mg/L	+/- 10.00%
S3H0331-CCV1	A3H0219	Lead	0.250000	0.253353	101	mg/L	+/- 10.00%
S3H0331-CCV8	A3H0268	Lead	0.500000	0.499550	99.9	mg/L	+/- 10.00%
S3H0331-CCV9	A3H0268	Lead	0.500000	0.501507	100	mg/L	+/- 10.00%

SUMMARY OF INSTRUMENT BLANKS

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-08	Calibration:	3H26002
Sequence:	S3H0300		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0300-ICB1	Beryllium	0.000179	mg/L	0.0004	0.02	U
	Copper	0.000386	mg/L	0.002	0.04	U
	Silver	0.000580	mg/L	0.001	0.02	U
	Vanadium	-0.000479	mg/L	0.003	0.02	U
	Antimony	-0.000559	mg/L	0.004	0.04	U
	Arsenic	0.000209	mg/L	0.008	0.02	U
	Barium	0.000080	mg/L	0.002	0.02	U
	Cadmium	-0.000035	mg/L	0.0004	0.02	U
	Chromium	-0.000019	mg/L	0.0007	0.02	U
	Cobalt	0.000063	mg/L	0.001	0.02	U
	Lead	-0.000062	mg/L	0.003	0.02	U
	Molybdenum	-0.000046	mg/L	0.0009	0.02	U
	Nickel	-0.000108	mg/L	0.0009	0.02	U
	Selenium	-0.000040	mg/L	0.005	0.02	U
	Thallium	0.001341	mg/L	0.006	0.02	U
	Zinc	0.000164	mg/L	0.01	0.02	U
S3H0300-CCB1	Beryllium	3.205E-4	mg/L	0.0004	0.02	U
	Copper	0.000417	mg/L	0.002	0.04	U
	Silver	0.000558	mg/L	0.001	0.02	U
	Vanadium	-0.000523	mg/L	0.003	0.02	U
	Antimony	0.000736	mg/L	0.004	0.04	U
	Arsenic	-0.001337	mg/L	0.008	0.02	U
	Barium	0.000069	mg/L	0.002	0.02	U
	Cadmium	-2.830E-5	mg/L	0.0004	0.02	U
	Chromium	-0.000177	mg/L	0.0007	0.02	U
	Cobalt	-0.000041	mg/L	0.001	0.02	U
	Lead	0.000011	mg/L	0.003	0.02	U
	Molybdenum	0.000179	mg/L	0.0009	0.02	U
	Nickel	0.000123	mg/L	0.0009	0.02	U
	Selenium	0.000748	mg/L	0.005	0.02	U
	Thallium	5.972E-4	mg/L	0.006	0.02	U
	Zinc	2.187E-4	mg/L	0.01	0.02	U
B3H0462-BLK1	Beryllium	0.022522	mg/kg	0.02	1.0	J
	Copper	0.064825	mg/kg	0.11	2.0	U
	Silver	0.027385	mg/kg	0.06	1.0	U
	Vanadium	-0.053689	mg/kg	0.17	1.0	U

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-08	Calibration:	3H26002
Sequence:	S3H0300		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
B3H0462-BLK1	Antimony	0.234282	mg/kg	0.22	2.0	J
	Arsenic	-0.046814	mg/kg	0.38	1.0	U
	Barium	0.072253	mg/kg	0.08	1.0	U
	Cadmium	0.000029	mg/kg	0.02	1.0	U
	Chromium	0.100361	mg/kg	0.04	1.0	J
	Cobalt	-0.023560	mg/kg	0.06	1.0	U
	Lead	0.096365	mg/kg	0.14	1.0	U
	Molybdenum	-0.000902	mg/kg	0.04	1.0	U
	Nickel	0.073123	mg/kg	0.04	1.0	J
	Selenium	0.169055	mg/kg	0.24	1.0	U
	Thallium	-0.173795	mg/kg	0.30	1.0	U
	Zinc	0.158571	mg/kg	0.51	1.0	U
S3H0300-CCB2	Beryllium	0.000321	mg/L	0.0004	0.02	U
	Copper	0.000134	mg/L	0.002	0.04	U
	Silver	0.000496	mg/L	0.001	0.02	U
	Vanadium	0.000385	mg/L	0.003	0.02	U
	Antimony	0.000077	mg/L	0.004	0.04	U
	Arsenic	-2.010E-5	mg/L	0.008	0.02	U
	Barium	0.000190	mg/L	0.002	0.02	U
	Cadmium	0.000087	mg/L	0.0004	0.02	U
	Chromium	-0.000086	mg/L	0.0007	0.02	U
	Cobalt	-0.000049	mg/L	0.001	0.02	U
	Lead	0.001376	mg/L	0.003	0.02	U
	Molybdenum	0.000003	mg/L	0.0009	0.02	U
	Nickel	0.000052	mg/L	0.0009	0.02	U
	Selenium	0.001463	mg/L	0.005	0.02	U
	Thallium	0.002113	mg/L	0.006	0.02	U
	Zinc	0.002579	mg/L	0.01	0.02	U

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0307-ICB1	Antimony	0.004080	mg/L	0.004	0.04	J
	Arsenic	-0.000243	mg/L	0.008	0.02	U
	Barium	0.000248	mg/L	0.002	0.02	U
	Beryllium	0.000103	mg/L	0.0004	0.02	U
	Cadmium	0.000324	mg/L	0.0004	0.02	U
	Chromium	0.000610	mg/L	0.0007	0.02	U
	Cobalt	0.000222	mg/L	0.001	0.02	U
	Copper	0.000427	mg/L	0.002	0.04	U
	Lead	0.000212	mg/L	0.003	0.02	U
	Molybdenum	0.000954	mg/L	0.0009	0.02	J
	Nickel	4.388E-4	mg/L	0.0009	0.02	U
	Selenium	-0.002868	mg/L	0.005	0.02	U
	Silver	0.000122	mg/L	0.001	0.02	U
	Thallium	-1.509E-4	mg/L	0.006	0.02	U
	Vanadium	0.000024	mg/L	0.003	0.02	U
	Zinc	0.000691	mg/L	0.01	0.02	U
S3H0307-CCB1	Antimony	0.001638	mg/L	0.004	0.04	U
	Arsenic	0.001273	mg/L	0.008	0.02	U
	Barium	0.000176	mg/L	0.002	0.02	U
	Beryllium	0.000057	mg/L	0.0004	0.02	U
	Cadmium	0.000184	mg/L	0.0004	0.02	U
	Chromium	4.477E-4	mg/L	0.0007	0.02	U
	Cobalt	-0.000082	mg/L	0.001	0.02	U
	Copper	0.000633	mg/L	0.002	0.04	U
	Lead	0.000976	mg/L	0.003	0.02	U
	Molybdenum	9.197E-4	mg/L	0.0009	0.02	J
	Nickel	0.000228	mg/L	0.0009	0.02	U
	Selenium	-0.004735	mg/L	0.005	0.02	U
	Silver	0.000008	mg/L	0.001	0.02	U
	Thallium	2.733E-4	mg/L	0.006	0.02	U
	Vanadium	0.000202	mg/L	0.003	0.02	U
	Zinc	0.000802	mg/L	0.01	0.02	U
S3H0307-CCB4	Antimony	0.002898	mg/L	0.004	0.04	U
	Arsenic	-0.000348	mg/L	0.008	0.02	U
	Barium	0.000321	mg/L	0.002	0.02	U
	Beryllium	1.177E-4	mg/L	0.0004	0.02	U

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0307-CCB4	Cadmium	0.000339	mg/L	0.0004	0.02	U
	Chromium	0.000667	mg/L	0.0007	0.02	U
	Cobalt	0.000318	mg/L	0.001	0.02	U
	Copper	0.001024	mg/L	0.002	0.04	U
	Lead	8.916E-4	mg/L	0.003	0.02	U
	Molybdenum	0.000977	mg/L	0.0009	0.02	J
	Nickel	0.000288	mg/L	0.0009	0.02	U
	Selenium	-0.006660	mg/L	0.005	0.02	J
	Silver	0.000355	mg/L	0.001	0.02	U
	Thallium	-0.000726	mg/L	0.006	0.02	U
	Vanadium	-0.000189	mg/L	0.003	0.02	U
	Zinc	0.001859	mg/L	0.01	0.02	U
S3H0307-CCB5	Antimony	0.001082	mg/L	0.004	0.04	U
	Arsenic	0.000369	mg/L	0.008	0.02	U
	Barium	0.000085	mg/L	0.002	0.02	U
	Beryllium	0.000008	mg/L	0.0004	0.02	U
	Cadmium	4.120E-5	mg/L	0.0004	0.02	U
	Chromium	0.000257	mg/L	0.0007	0.02	U
	Cobalt	-0.000104	mg/L	0.001	0.02	U
	Copper	0.001232	mg/L	0.002	0.04	U
	Lead	0.000057	mg/L	0.003	0.02	U
	Molybdenum	0.000673	mg/L	0.0009	0.02	U
	Nickel	0.000232	mg/L	0.0009	0.02	U
	Selenium	-4.3978E-3	mg/L	0.005	0.02	U
	Silver	0.000090	mg/L	0.001	0.02	U
	Thallium	-0.001154	mg/L	0.006	0.02	U
	Vanadium	-0.000220	mg/L	0.003	0.02	U
	Zinc	0.002132	mg/L	0.01	0.02	U
S3H0307-CCB6	Antimony	0.00234	mg/L	0.004	0.04	U
	Arsenic	0.000905	mg/L	0.008	0.02	U
	Barium	0.000457	mg/L	0.002	0.02	U
	Beryllium	0.000126	mg/L	0.0004	0.02	U
	Cadmium	0.000453	mg/L	0.0004	0.02	J
	Chromium	0.000830	mg/L	0.0007	0.02	J
	Cobalt	0.000194	mg/L	0.001	0.02	U
	Copper	0.001795	mg/L	0.002	0.04	U

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0307-CCB6	Lead	0.001445	mg/L	0.003	0.02	U
	Molybdenum	0.001161	mg/L	0.0009	0.02	J
	Nickel	0.000746	mg/L	0.0009	0.02	U
	Selenium	-0.002595	mg/L	0.005	0.02	U
	Silver	0.000383	mg/L	0.001	0.02	U
	Thallium	-0.000271	mg/L	0.006	0.02	U
	Vanadium	-0.000019	mg/L	0.003	0.02	U
	Zinc	4.1904E-3	mg/L	0.01	0.02	U

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-08	Calibration:	3H26002
Sequence:	S3H0300		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0300-ICB1	Lead	-0.000062	mg/L	0.003	0.02	U
S3H0300-CCB1	Lead	0.000011	mg/L	0.003	0.02	U
B3H0462-BLK1	Lead	0.096365	mg/kg	0.14	1.0	U
S3H0300-CCB2	Lead	0.001376	mg/L	0.003	0.02	U

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0307-ICB1	Lead	0.000212	mg/L	0.003	0.02	U
S3H0307-CCB1	Lead	0.000976	mg/L	0.003	0.02	U
S3H0307-CCB4	Lead	8.916E-4	mg/L	0.003	0.02	U
S3H0307-CCB5	Lead	0.000057	mg/L	0.003	0.02	U
S3H0307-CCB6	Lead	0.001445	mg/L	0.003	0.02	U

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-08	Calibration:	3H26002
Sequence:	S3H0300		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0300-ICB1	Beryllium	0.000179	mg/L	0.0004	0.02	U
	Copper	0.000386	mg/L	0.002	0.04	U
	Silver	0.000580	mg/L	0.001	0.02	U
	Vanadium	-0.000479	mg/L	0.003	0.02	U
	Antimony	-0.000559	mg/L	0.004	0.04	U
	Arsenic	0.000209	mg/L	0.008	0.02	U
	Barium	0.000080	mg/L	0.002	0.02	U
	Cadmium	-0.000035	mg/L	0.0004	0.02	U
	Chromium	-0.000019	mg/L	0.0007	0.02	U
	Cobalt	0.000063	mg/L	0.001	0.02	U
	Lead	-0.000062	mg/L	0.003	0.02	U
	Molybdenum	-0.000046	mg/L	0.0009	0.02	U
	Nickel	-0.000108	mg/L	0.0009	0.02	U
	Selenium	-0.000040	mg/L	0.005	0.02	U
	Thallium	0.001341	mg/L	0.006	0.02	U
	Zinc	0.000164	mg/L	0.01	0.02	U
S3H0300-CCB1	Beryllium	3.205E-4	mg/L	0.0004	0.02	U
	Copper	0.000417	mg/L	0.002	0.04	U
	Silver	0.000558	mg/L	0.001	0.02	U
	Vanadium	-0.000523	mg/L	0.003	0.02	U
	Antimony	0.000736	mg/L	0.004	0.04	U
	Arsenic	-0.001337	mg/L	0.008	0.02	U
	Barium	0.000069	mg/L	0.002	0.02	U
	Cadmium	-2.830E-5	mg/L	0.0004	0.02	U
	Chromium	-0.000177	mg/L	0.0007	0.02	U
	Cobalt	-0.000041	mg/L	0.001	0.02	U
	Lead	0.000011	mg/L	0.003	0.02	U
	Molybdenum	0.000179	mg/L	0.0009	0.02	U
	Nickel	0.000123	mg/L	0.0009	0.02	U
	Selenium	0.000748	mg/L	0.005	0.02	U
	Thallium	5.972E-4	mg/L	0.006	0.02	U
	Zinc	2.187E-4	mg/L	0.01	0.02	U
B3H0462-BLK1	Beryllium	0.022522	mg/kg	0.02	1.0	J
	Copper	0.064825	mg/kg	0.11	2.0	U
	Silver	0.027385	mg/kg	0.06	1.0	U
	Vanadium	-0.053689	mg/kg	0.17	1.0	U

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EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-08	Calibration:	3H26002
Sequence:	S3H0300		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
B3H0462-BLK1	Antimony	0.234282	mg/kg	0.22	2.0	J
	Arsenic	-0.046814	mg/kg	0.38	1.0	U
	Barium	0.072253	mg/kg	0.08	1.0	U
	Cadmium	0.000029	mg/kg	0.02	1.0	U
	Chromium	0.100361	mg/kg	0.04	1.0	J
	Cobalt	-0.023560	mg/kg	0.06	1.0	U
	Lead	0.096365	mg/kg	0.14	1.0	U
	Molybdenum	-0.000902	mg/kg	0.04	1.0	U
	Nickel	0.073123	mg/kg	0.04	1.0	J
	Selenium	0.169055	mg/kg	0.24	1.0	U
	Thallium	-0.173795	mg/kg	0.30	1.0	U
	Zinc	0.158571	mg/kg	0.51	1.0	U
S3H0300-CCB2	Beryllium	0.000321	mg/L	0.0004	0.02	U
	Copper	0.000134	mg/L	0.002	0.04	U
	Silver	0.000496	mg/L	0.001	0.02	U
	Vanadium	0.000385	mg/L	0.003	0.02	U
	Antimony	0.000077	mg/L	0.004	0.04	U
	Arsenic	-2.010E-5	mg/L	0.008	0.02	U
	Barium	0.000190	mg/L	0.002	0.02	U
	Cadmium	0.000087	mg/L	0.0004	0.02	U
	Chromium	-0.000086	mg/L	0.0007	0.02	U
	Cobalt	-0.000049	mg/L	0.001	0.02	U
	Lead	0.001376	mg/L	0.003	0.02	U
	Molybdenum	0.000003	mg/L	0.0009	0.02	U
	Nickel	0.000052	mg/L	0.0009	0.02	U
	Selenium	0.001463	mg/L	0.005	0.02	U
	Thallium	0.002113	mg/L	0.006	0.02	U
	Zinc	0.002579	mg/L	0.01	0.02	U

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EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0307-ICB1	Antimony	0.004080	mg/L	0.004	0.04	J
	Arsenic	-0.000243	mg/L	0.008	0.02	U
	Barium	0.000248	mg/L	0.002	0.02	U
	Beryllium	0.000103	mg/L	0.0004	0.02	U
	Cadmium	0.000324	mg/L	0.0004	0.02	U
	Chromium	0.000610	mg/L	0.0007	0.02	U
	Cobalt	0.000222	mg/L	0.001	0.02	U
	Copper	0.000427	mg/L	0.002	0.04	U
	Lead	0.000212	mg/L	0.003	0.02	U
	Molybdenum	0.000954	mg/L	0.0009	0.02	J
	Nickel	4.388E-4	mg/L	0.0009	0.02	U
	Selenium	-0.002868	mg/L	0.005	0.02	U
	Silver	0.000122	mg/L	0.001	0.02	U
	Thallium	-1.509E-4	mg/L	0.006	0.02	U
	Vanadium	0.000024	mg/L	0.003	0.02	U
	Zinc	0.000691	mg/L	0.01	0.02	U
S3H0307-CCB1	Antimony	0.001638	mg/L	0.004	0.04	U
	Arsenic	0.001273	mg/L	0.008	0.02	U
	Barium	0.000176	mg/L	0.002	0.02	U
	Beryllium	0.000057	mg/L	0.0004	0.02	U
	Cadmium	0.000184	mg/L	0.0004	0.02	U
	Chromium	4.477E-4	mg/L	0.0007	0.02	U
	Cobalt	-0.000082	mg/L	0.001	0.02	U
	Copper	0.000633	mg/L	0.002	0.04	U
	Lead	0.000976	mg/L	0.003	0.02	U
	Molybdenum	9.197E-4	mg/L	0.0009	0.02	J
	Nickel	0.000228	mg/L	0.0009	0.02	U
	Selenium	-0.004735	mg/L	0.005	0.02	U
	Silver	0.000008	mg/L	0.001	0.02	U
	Thallium	2.733E-4	mg/L	0.006	0.02	U
	Vanadium	0.000202	mg/L	0.003	0.02	U
	Zinc	0.000802	mg/L	0.01	0.02	U
S3H0307-CCB4	Antimony	0.002898	mg/L	0.004	0.04	U
	Arsenic	-0.000348	mg/L	0.008	0.02	U
	Barium	0.000321	mg/L	0.002	0.02	U
	Beryllium	1.177E-4	mg/L	0.0004	0.02	U

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EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0307-CCB4	Cadmium	0.000339	mg/L	0.0004	0.02	U
	Chromium	0.000667	mg/L	0.0007	0.02	U
	Cobalt	0.000318	mg/L	0.001	0.02	U
	Copper	0.001024	mg/L	0.002	0.04	U
	Lead	8.916E-4	mg/L	0.003	0.02	U
	Molybdenum	0.000977	mg/L	0.0009	0.02	J
	Nickel	0.000288	mg/L	0.0009	0.02	U
	Selenium	-0.006660	mg/L	0.005	0.02	J
	Silver	0.000355	mg/L	0.001	0.02	U
	Thallium	-0.000726	mg/L	0.006	0.02	U
	Vanadium	-0.000189	mg/L	0.003	0.02	U
	Zinc	0.001859	mg/L	0.01	0.02	U
S3H0307-CCB5	Antimony	0.001082	mg/L	0.004	0.04	U
	Arsenic	0.000369	mg/L	0.008	0.02	U
	Barium	0.000085	mg/L	0.002	0.02	U
	Beryllium	0.000008	mg/L	0.0004	0.02	U
	Cadmium	4.120E-5	mg/L	0.0004	0.02	U
	Chromium	0.000257	mg/L	0.0007	0.02	U
	Cobalt	-0.000104	mg/L	0.001	0.02	U
	Copper	0.001232	mg/L	0.002	0.04	U
	Lead	0.000057	mg/L	0.003	0.02	U
	Molybdenum	0.000673	mg/L	0.0009	0.02	U
	Nickel	0.000232	mg/L	0.0009	0.02	U
	Selenium	-4.3978E-3	mg/L	0.005	0.02	U
	Silver	0.000090	mg/L	0.001	0.02	U
	Thallium	-0.001154	mg/L	0.006	0.02	U
	Vanadium	-0.000220	mg/L	0.003	0.02	U
	Zinc	0.002132	mg/L	0.01	0.02	U
S3H0307-CCB6	Antimony	0.00234	mg/L	0.004	0.04	U
	Arsenic	0.000905	mg/L	0.008	0.02	U
	Barium	0.000457	mg/L	0.002	0.02	U
	Beryllium	0.000126	mg/L	0.0004	0.02	U
	Cadmium	0.000453	mg/L	0.0004	0.02	J
	Chromium	0.000830	mg/L	0.0007	0.02	J
	Cobalt	0.000194	mg/L	0.001	0.02	U
	Copper	0.001795	mg/L	0.002	0.04	U

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EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0307-CCB6	Lead	0.001445	mg/L	0.003	0.02	U
	Molybdenum	0.001161	mg/L	0.0009	0.02	J
	Nickel	0.000746	mg/L	0.0009	0.02	U
	Selenium	-0.002595	mg/L	0.005	0.02	U
	Silver	0.000383	mg/L	0.001	0.02	U
	Thallium	-0.000271	mg/L	0.006	0.02	U
	Vanadium	-0.000019	mg/L	0.003	0.02	U
	Zinc	4.1904E-3	mg/L	0.01	0.02	U

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EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-08	Calibration:	3H26002
Sequence:	S3H0300		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0300-ICB1	Lead	-0.000062	mg/L	0.003	0.02	U
S3H0300-CCB1	Lead	0.000011	mg/L	0.003	0.02	U
B3H0462-BLK1	Lead	0.096365	mg/kg	0.14	1.0	U
S3H0300-CCB2	Lead	0.001376	mg/L	0.003	0.02	U

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0307-ICB1	Lead	0.000212	mg/L	0.003	0.02	U
S3H0307-CCB1	Lead	0.000976	mg/L	0.003	0.02	U
S3H0307-CCB4	Lead	8.916E-4	mg/L	0.003	0.02	U
S3H0307-CCB5	Lead	0.000057	mg/L	0.003	0.02	U
S3H0307-CCB6	Lead	0.001445	mg/L	0.003	0.02	U

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EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H28002
Sequence:	S3H0313		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0313-ICB1	Antimony	0.002672	mg/L	0.004	0.04	U
	Arsenic	0.000994	mg/L	0.008	0.02	U
	Barium	0.000354	mg/L	0.002	0.02	U
	Beryllium	0.000115	mg/L	0.0004	0.02	U
	Cadmium	3.631E-4	mg/L	0.0004	0.02	U
	Chromium	0.000596	mg/L	0.0007	0.02	U
	Cobalt	0.000375	mg/L	0.001	0.02	U
	Copper	0.000563	mg/L	0.002	0.04	U
	Lead	0.001351	mg/L	0.003	0.02	U
	Molybdenum	0.000868	mg/L	0.0009	0.02	U
	Nickel	0.000483	mg/L	0.0009	0.02	U
	Selenium	0.001601	mg/L	0.005	0.02	U
	Silver	0.000169	mg/L	0.001	0.02	U
	Thallium	-0.002101	mg/L	0.006	0.02	U
	Vanadium	-0.000236	mg/L	0.003	0.02	U
	Zinc	0.000869	mg/L	0.01	0.02	U
S3H0313-CCB1	Antimony	0.001956	mg/L	0.004	0.04	U
	Arsenic	-0.000599	mg/L	0.008	0.02	U
	Barium	0.000218	mg/L	0.002	0.02	U
	Beryllium	0.000054	mg/L	0.0004	0.02	U
	Cadmium	0.000244	mg/L	0.0004	0.02	U
	Chromium	1.906E-4	mg/L	0.0007	0.02	U
	Cobalt	-0.000091	mg/L	0.001	0.02	U
	Copper	0.000317	mg/L	0.002	0.04	U
	Lead	0.000362	mg/L	0.003	0.02	U
	Molybdenum	0.000643	mg/L	0.0009	0.02	U
	Nickel	0.000296	mg/L	0.0009	0.02	U
	Selenium	0.006448	mg/L	0.005	0.02	J
	Silver	2.1760E-4	mg/L	0.001	0.02	U
	Thallium	-0.002357	mg/L	0.006	0.02	U
	Vanadium	-0.000221	mg/L	0.003	0.02	U
	Zinc	0.000968	mg/L	0.01	0.02	U
S3H0313-CCB5	Antimony	0.002497	mg/L	0.004	0.04	U
	Arsenic	0.000473	mg/L	0.008	0.02	U
	Barium	2.059E-4	mg/L	0.002	0.02	U
	Beryllium	4.821E-5	mg/L	0.0004	0.02	U

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EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H28002
Sequence:	S3H0313		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0313-CCB5	Cadmium	0.000179	mg/L	0.0004	0.02	U
	Chromium	0.000150	mg/L	0.0007	0.02	U
	Cobalt	-0.000113	mg/L	0.001	0.02	U
	Copper	0.000188	mg/L	0.002	0.04	U
	Lead	0.000345	mg/L	0.003	0.02	U
	Molybdenum	0.000442	mg/L	0.0009	0.02	U
	Nickel	0.000606	mg/L	0.0009	0.02	U
	Selenium	0.003990	mg/L	0.005	0.02	U
	Silver	-0.000092	mg/L	0.001	0.02	U
	Thallium	0.000115	mg/L	0.006	0.02	U
	Vanadium	-0.000473	mg/L	0.003	0.02	U
	Zinc	0.000383	mg/L	0.01	0.02	U
B3H0501-BLK1	Antimony	0.143049	mg/kg	0.22	2.0	U
	Arsenic	-0.128771	mg/kg	0.38	1.0	U
	Barium	0.022196	mg/kg	0.08	1.0	U
	Beryllium	0.007617	mg/kg	0.02	1.0	U
	Cadmium	0.006812	mg/kg	0.02	1.0	U
	Chromium	0.107857	mg/kg	0.04	1.0	J
	Cobalt	-0.001670	mg/kg	0.06	1.0	U
	Copper	0.027650	mg/kg	0.11	2.0	U
	Lead	-0.020551	mg/kg	0.14	1.0	U
	Molybdenum	0.003721	mg/kg	0.04	1.0	U
	Nickel	0.104631	mg/kg	0.04	1.0	J
	Selenium	0.030565	mg/kg	0.24	1.0	U
	Silver	-0.009182	mg/kg	0.06	1.0	U
	Thallium	-0.207990	mg/kg	0.30	1.0	U
	Vanadium	-0.019746	mg/kg	0.17	1.0	U
	Zinc	0.451173	mg/kg	0.51	1.0	U
S3H0313-CCB6	Antimony	0.001176	mg/L	0.004	0.04	U
	Arsenic	0.001613	mg/L	0.008	0.02	U
	Barium	0.000750	mg/L	0.002	0.02	U
	Beryllium	0.000057	mg/L	0.0004	0.02	U
	Cadmium	0.000200	mg/L	0.0004	0.02	U
	Chromium	0.000192	mg/L	0.0007	0.02	U
	Cobalt	-4.320E-5	mg/L	0.001	0.02	U
	Copper	0.000728	mg/L	0.002	0.04	U

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H28002
Sequence:	S3H0313		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0313-CCB6	Lead	-0.000076	mg/L	0.003	0.02	U
	Molybdenum	0.000550	mg/L	0.0009	0.02	U
	Nickel	0.000653	mg/L	0.0009	0.02	U
	Selenium	0.001871	mg/L	0.005	0.02	U
	Silver	-0.000033	mg/L	0.001	0.02	U
	Thallium	-0.001865	mg/L	0.006	0.02	U
	Vanadium	-0.000335	mg/L	0.003	0.02	U
	Zinc	0.000821	mg/L	0.01	0.02	U
S3H0313-CCB7	Antimony	0.001021	mg/L	0.004	0.04	U
	Arsenic	0.001832	mg/L	0.008	0.02	U
	Barium	0.000653	mg/L	0.002	0.02	U
	Beryllium	8.710E-5	mg/L	0.0004	0.02	U
	Cadmium	0.000238	mg/L	0.0004	0.02	U
	Chromium	0.000466	mg/L	0.0007	0.02	U
	Cobalt	0.000108	mg/L	0.001	0.02	U
	Copper	0.000503	mg/L	0.002	0.04	U
	Lead	0.000074	mg/L	0.003	0.02	U
	Molybdenum	0.000564	mg/L	0.0009	0.02	U
	Nickel	0.000344	mg/L	0.0009	0.02	U
	Selenium	-0.002290	mg/L	0.005	0.02	U
	Silver	-0.000250	mg/L	0.001	0.02	U
	Thallium	-0.001682	mg/L	0.006	0.02	U
	Vanadium	-0.000175	mg/L	0.003	0.02	U
	Zinc	0.001142	mg/L	0.01	0.02	U
B3H0502-BLK1	Antimony	0.153098	mg/kg	0.22	2.0	U
	Arsenic	0.023488	mg/kg	0.38	1.0	U
	Barium	0.077925	mg/kg	0.08	1.0	U
	Beryllium	-0.000385	mg/kg	0.02	1.0	U
	Cadmium	0.001234	mg/kg	0.02	1.0	U
	Chromium	0.133758	mg/kg	0.04	1.0	J
	Cobalt	-0.006045	mg/kg	0.06	1.0	U
	Copper	0.112276	mg/kg	0.11	2.0	J
	Lead	0.046553	mg/kg	0.14	1.0	U
	Molybdenum	0.002962	mg/kg	0.04	1.0	U
	Nickel	0.122807	mg/kg	0.04	1.0	J
	Selenium	-0.065985	mg/kg	0.24	1.0	U

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H28002
Sequence:	S3H0313		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
B3H0502-BLK1	Silver	-0.009190	mg/kg	0.06	1.0	U
	Thallium	-0.178739	mg/kg	0.30	1.0	U
	Vanadium	-0.022472	mg/kg	0.17	1.0	U
	Zinc	0.684150	mg/kg	0.51	1.0	J
S3H0313-CCB8	Antimony	0.004438	mg/L	0.004	0.04	J
	Arsenic	0.001838	mg/L	0.008	0.02	U
	Barium	0.000666	mg/L	0.002	0.02	U
	Beryllium	0.000194	mg/L	0.0004	0.02	U
	Cadmium	6.530E-4	mg/L	0.0004	0.02	J
	Chromium	0.000918	mg/L	0.0007	0.02	J
	Cobalt	0.000481	mg/L	0.001	0.02	U
	Copper	0.000841	mg/L	0.002	0.04	U
	Lead	0.000566	mg/L	0.003	0.02	U
	Molybdenum	0.000990	mg/L	0.0009	0.02	J
	Nickel	1.2484E-3	mg/L	0.0009	0.02	J
	Selenium	-0.000194	mg/L	0.005	0.02	U
	Silver	0.000656	mg/L	0.001	0.02	U
	Thallium	-0.000057	mg/L	0.006	0.02	U
	Vanadium	-0.000442	mg/L	0.003	0.02	U
	Zinc	0.001859	mg/L	0.01	0.02	U
S3H0313-CCB9	Antimony	0.002428	mg/L	0.004	0.04	U
	Arsenic	-0.000424	mg/L	0.008	0.02	U
	Barium	0.000423	mg/L	0.002	0.02	U
	Beryllium	9.040E-5	mg/L	0.0004	0.02	U
	Cadmium	0.000291	mg/L	0.0004	0.02	U
	Chromium	0.000352	mg/L	0.0007	0.02	U
	Cobalt	0.000145	mg/L	0.001	0.02	U
	Copper	0.000811	mg/L	0.002	0.04	U
	Lead	0.000721	mg/L	0.003	0.02	U
	Molybdenum	0.000844	mg/L	0.0009	0.02	U
	Nickel	5.3740E-4	mg/L	0.0009	0.02	U
	Selenium	-0.003314	mg/L	0.005	0.02	U
	Silver	0.000187	mg/L	0.001	0.02	U
	Thallium	-0.001291	mg/L	0.006	0.02	U
	Vanadium	-0.000509	mg/L	0.003	0.02	U
	Zinc	0.001166	mg/L	0.01	0.02	U

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H28002
Sequence:	S3H0313		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0313-ICB1	Lead	0.001351	mg/L	0.003	0.02	U
S3H0313-CCB1	Lead	0.000362	mg/L	0.003	0.02	U
S3H0313-CCB5	Lead	0.000345	mg/L	0.003	0.02	U
B3H0501-BLK1	Lead	-0.020551	mg/kg	0.14	1.0	U
S3H0313-CCB6	Lead	-0.000076	mg/L	0.003	0.02	U
S3H0313-CCB7	Lead	0.000074	mg/L	0.003	0.02	U
B3H0502-BLK1	Lead	0.046553	mg/kg	0.14	1.0	U
S3H0313-CCB8	Lead	0.000566	mg/L	0.003	0.02	U

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-10	Calibration:	3H29001
Sequence:	S3H0331		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3H0331-ICB1	Lead	0.000904	mg/L	0.003	0.02	U
S3H0331-CCB1	Lead	0.001159	mg/L	0.003	0.02	U
S3H0331-CCB8	Lead	0.000995	mg/L	0.003	0.02	U
S3H0331-CCB9	Lead	6.305E-4	mg/L	0.003	0.02	U

SUMMARY OF INTERFERENCE CHECK (ICSAB)

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-08	Calibration:	3H26002
Sequence:	S3H0300		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0300-IFA1	Antimony	0.04		-0.026800		NA	mg/L
	Arsenic	0.02		-0.006896		NA	mg/L
	Barium	0.02		0.000105		NA	mg/L
	Beryllium	0.02		0.000680		NA	mg/L
	Cadmium	0.02		-0.005062		NA	mg/L
	Chromium	0.02		-0.000343		NA	mg/L
	Cobalt	0.02		-0.000866		NA	mg/L
	Copper	0.04		-0.002097		NA	mg/L
	Lead	0.02		-0.014590		NA	mg/L
	Molybdenum	0.02		0.005076		NA	mg/L
	Nickel	0.02		-0.004696		NA	mg/L
	Selenium	0.02		-0.040729		NA	mg/L
	Silver	0.02		-0.032095		NA	mg/L
	Thallium	0.02		-0.004228		NA	mg/L
	Vanadium	0.02		-0.004998		NA	mg/L
	Zinc	0.02		-0.003619		NA	mg/L
S3H0300-IFB1	Antimony	0.04	1.00000	1.029038	103	80-120	mg/L
	Arsenic	0.02	1.00000	1.020045	102	80-120	mg/L
	Barium	0.02	1.00000	1.003289	100	80-120	mg/L
	Beryllium	0.02	1.00000	0.986269	98.6	80-120	mg/L
	Cadmium	0.02	1.00000	0.901882	90.2	80-120	mg/L
	Chromium	0.02	1.00000	0.964818	96.5	80-120	mg/L
	Cobalt	0.02	1.00000	0.912205	91.2	80-120	mg/L
	Copper	0.04	1.00000	1.055099	106	80-120	mg/L
	Lead	0.02	1.00000	0.915245	91.5	80-120	mg/L
	Molybdenum	0.02	1.00000	0.986864	98.7	80-120	mg/L
	Nickel	0.02	1.00000	0.884565	88.5	80-120	mg/L
	Selenium	0.02	1.00000	0.941695	94.2	80-120	mg/L
	Silver	0.02	1.00000	1.060737	106	80-120	mg/L
	Thallium	0.02	1.00000	0.916250	91.6	80-120	mg/L
	Vanadium	0.02	1.00000	0.997595	99.8	80-120	mg/L
	Zinc	0.02	1.00000	0.919107	91.9	80-120	mg/L
S3H0300-IFA2	Antimony	0.04		-0.032504		NA	mg/L
	Arsenic	0.02		0.003703		NA	mg/L
	Barium	0.02		-0.000483		NA	mg/L
	Beryllium	0.02		0.000730		NA	mg/L
	Cadmium	0.02		-0.005084		NA	mg/L
	Chromium	0.02		-0.000200		NA	mg/L
	Cobalt	0.02		-0.000452		NA	mg/L
	Copper	0.04		-0.001890		NA	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-08	Calibration:	3H26002
Sequence:	S3H0300		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0300-IFA2	Lead	0.02		-0.014561		NA	mg/L
	Molybdenum	0.02		0.004902		NA	mg/L
	Nickel	0.02		-0.004611		NA	mg/L
	Selenium	0.02		-0.031407		NA	mg/L
	Silver	0.02		-0.032182		NA	mg/L
	Thallium	0.02		-0.005142		NA	mg/L
	Vanadium	0.02		-0.004654		NA	mg/L
	Zinc	0.02		-0.001897		NA	mg/L
S3H0300-IFB2	Antimony	0.04	1.00000	1.005997	101	80-120	mg/L
	Arsenic	0.02	1.00000	1.021575	102	80-120	mg/L
	Barium	0.02	1.00000	1.005909	101	80-120	mg/L
	Beryllium	0.02	1.00000	0.979598	98.0	80-120	mg/L
	Cadmium	0.02	1.00000	0.905674	90.6	80-120	mg/L
	Chromium	0.02	1.00000	0.965442	96.5	80-120	mg/L
	Cobalt	0.02	1.00000	0.918056	91.8	80-120	mg/L
	Copper	0.04	1.00000	1.063464	106	80-120	mg/L
	Lead	0.02	1.00000	0.923341	92.3	80-120	mg/L
	Molybdenum	0.02	1.00000	0.994813	99.5	80-120	mg/L
	Nickel	0.02	1.00000	0.889622	89.0	80-120	mg/L
	Selenium	0.02	1.00000	0.956256	95.6	80-120	mg/L
	Silver	0.02	1.00000	1.065959	107	80-120	mg/L
	Thallium	0.02	1.00000	0.916940	91.7	80-120	mg/L
	Vanadium	0.02	1.00000	1.002189	100	80-120	mg/L
	Zinc	0.02	1.00000	0.928953	92.9	80-120	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0307-IFA1	Antimony	0.04		-0.001095		NA	mg/L
	Arsenic	0.02		-0.000986		NA	mg/L
	Barium	0.02		0.003508		NA	mg/L
	Beryllium	0.02		0.000499		NA	mg/L
	Cadmium	0.02		0.000167		NA	mg/L
	Chromium	0.02		0.003437		NA	mg/L
	Cobalt	0.02		-0.000079		NA	mg/L
	Copper	0.04		-0.001777		NA	mg/L
	Lead	0.02		-0.001846		NA	mg/L
	Molybdenum	0.02		-0.000530		NA	mg/L
	Nickel	0.02		-0.000267		NA	mg/L
	Selenium	0.02		-0.040616		NA	mg/L
	Silver	0.02		-0.000589		NA	mg/L
	Thallium	0.02		-0.004949		NA	mg/L
	Vanadium	0.02		-0.009330		NA	mg/L
	Zinc	0.02		-0.002659		NA	mg/L
S3H0307-IFB1	Antimony	0.04	1.00000	0.985958	98.6	80-120	mg/L
	Arsenic	0.02	1.00000	1.006571	101	80-120	mg/L
	Barium	0.02	1.00000	0.946741	94.7	80-120	mg/L
	Beryllium	0.02	1.00000	0.971485	97.1	80-120	mg/L
	Cadmium	0.02	1.00000	0.876112	87.6	80-120	mg/L
	Chromium	0.02	1.00000	0.940789	94.1	80-120	mg/L
	Cobalt	0.02	1.00000	0.910517	91.1	80-120	mg/L
	Copper	0.04	1.00000	0.973473	97.3	80-120	mg/L
	Lead	0.02	1.00000	0.881475	88.1	80-120	mg/L
	Molybdenum	0.02	1.00000	0.941560	94.2	80-120	mg/L
	Nickel	0.02	1.00000	0.895258	89.5	80-120	mg/L
	Selenium	0.02	1.00000	0.889048	88.9	80-120	mg/L
	Silver	0.02	1.00000	1.042455	104	80-120	mg/L
	Thallium	0.02	1.00000	0.901136	90.1	80-120	mg/L
	Vanadium	0.02	1.00000	0.951167	95.1	80-120	mg/L
	Zinc	0.02	1.00000	0.932002	93.2	80-120	mg/L
S3H0307-IFA2	Antimony	0.04		-0.003247		NA	mg/L
	Arsenic	0.02		0.005517		NA	mg/L
	Barium	0.02		0.003542		NA	mg/L
	Beryllium	0.02		0.000479		NA	mg/L
	Cadmium	0.02		0.000217		NA	mg/L
	Chromium	0.02		0.003492		NA	mg/L
	Cobalt	0.02		0.000177		NA	mg/L
	Copper	0.04		-0.002848		NA	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory: Advanced Technology Laboratories
Work Order: 1302545
Client: Ninyo & Moore - SD
Project: CLAIREMONT H.S., 105338071 & 10!
Instrument ID: ICP-10
Calibration: 3H26005
Sequence: S3H0307

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0307-IFA2	Lead	0.02		0.001611		NA	mg/L
	Molybdenum	0.02		-0.001082		NA	mg/L
	Nickel	0.02		0.000093		NA	mg/L
	Selenium	0.02		-0.053042		NA	mg/L
	Silver	0.02		-0.000384		NA	mg/L
	Thallium	0.02		-0.003406		NA	mg/L
	Vanadium	0.02		-0.007457		NA	mg/L
	Zinc	0.02		-0.000588		NA	mg/L
S3H0307-IFB2	Antimony	0.04	1.00000	0.965441	96.5	80-120	mg/L
	Arsenic	0.02	1.00000	0.990346	99.0	80-120	mg/L
	Barium	0.02	1.00000	0.943188	94.3	80-120	mg/L
	Beryllium	0.02	1.00000	0.976860	97.7	80-120	mg/L
	Cadmium	0.02	1.00000	0.884304	88.4	80-120	mg/L
	Chromium	0.02	1.00000	0.940925	94.1	80-120	mg/L
	Cobalt	0.02	1.00000	0.901600	90.2	80-120	mg/L
	Copper	0.04	1.00000	0.975061	97.5	80-120	mg/L
	Lead	0.02	1.00000	0.890851	89.1	80-120	mg/L
	Molybdenum	0.02	1.00000	0.944036	94.4	80-120	mg/L
	Nickel	0.02	1.00000	0.893198	89.3	80-120	mg/L
	Selenium	0.02	1.00000	0.886615	88.7	80-120	mg/L
	Silver	0.02	1.00000	1.042831	104	80-120	mg/L
	Thallium	0.02	1.00000	0.890031	89.0	80-120	mg/L
	Vanadium	0.02	1.00000	0.943299	94.3	80-120	mg/L
	Zinc	0.02	1.00000	0.931545	93.2	80-120	mg/L
S3H0307-IFA3	Antimony	0.04		0.005415		NA	mg/L
	Arsenic	0.02		0.000494		NA	mg/L
	Barium	0.02		0.003658		NA	mg/L
	Beryllium	0.02		0.000475		NA	mg/L
	Cadmium	0.02		0.000179		NA	mg/L
	Chromium	0.02		0.003464		NA	mg/L
	Cobalt	0.02		0.000301		NA	mg/L
	Copper	0.04		0.001075		NA	mg/L
	Lead	0.02		-0.000772		NA	mg/L
	Molybdenum	0.02		-0.000832		NA	mg/L
	Nickel	0.02		-0.000222		NA	mg/L
	Selenium	0.02		-0.044683		NA	mg/L
	Silver	0.02		-0.000763		NA	mg/L
	Thallium	0.02		-0.004154		NA	mg/L
	Vanadium	0.02		-0.007974		NA	mg/L
	Zinc	0.02		0.002899		NA	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0307-IFB3	Antimony	0.04	1.00000	0.967537	96.8	80-120	mg/L
	Arsenic	0.02	1.00000	0.981332	98.1	80-120	mg/L
	Barium	0.02	1.00000	0.943977	94.4	80-120	mg/L
	Beryllium	0.02	1.00000	0.973821	97.4	80-120	mg/L
	Cadmium	0.02	1.00000	0.884639	88.5	80-120	mg/L
	Chromium	0.02	1.00000	0.938988	93.9	80-120	mg/L
	Cobalt	0.02	1.00000	0.901057	90.1	80-120	mg/L
	Copper	0.04	1.00000	0.977326	97.7	80-120	mg/L
	Lead	0.02	1.00000	0.891005	89.1	80-120	mg/L
	Molybdenum	0.02	1.00000	0.944175	94.4	80-120	mg/L
	Nickel	0.02	1.00000	0.894601	89.5	80-120	mg/L
	Selenium	0.02	1.00000	0.916207	91.6	80-120	mg/L
	Silver	0.02	1.00000	1.034634	103	80-120	mg/L
	Thallium	0.02	1.00000	0.868662	86.9	80-120	mg/L
	Vanadium	0.02	1.00000	0.934951	93.5	80-120	mg/L
	Zinc	0.02	1.00000	0.937586	93.8	80-120	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-08	Calibration:	3H26002
Sequence:	S3H0300		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0300-IFA1	Lead	0.02		-0.014590		NA	mg/L
S3H0300-IFB1	Lead	0.02	1.00000	0.915245	91.5	80-120	mg/L
S3H0300-IFA2	Lead	0.02		-0.014561		NA	mg/L
S3H0300-IFB2	Lead	0.02	1.00000	0.923341	92.3	80-120	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0307-IFA1	Lead	0.02		-0.001846		NA	mg/L
S3H0307-IFB1	Lead	0.02	1.00000	0.881475	88.1	80-120	mg/L
S3H0307-IFA2	Lead	0.02		0.001611		NA	mg/L
S3H0307-IFB2	Lead	0.02	1.00000	0.890851	89.1	80-120	mg/L
S3H0307-IFA3	Lead	0.02		-0.000772		NA	mg/L
S3H0307-IFB3	Lead	0.02	1.00000	0.891005	89.1	80-120	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-08	Calibration:	3H26002
Sequence:	S3H0300		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0300-IFA1	Antimony	0.04		-0.026800		NA	mg/L
	Arsenic	0.02		-0.006896		NA	mg/L
	Barium	0.02		0.000105		NA	mg/L
	Beryllium	0.02		0.000680		NA	mg/L
	Cadmium	0.02		-0.005062		NA	mg/L
	Chromium	0.02		-0.000343		NA	mg/L
	Cobalt	0.02		-0.000866		NA	mg/L
	Copper	0.04		-0.002097		NA	mg/L
	Lead	0.02		-0.014590		NA	mg/L
	Molybdenum	0.02		0.005076		NA	mg/L
	Nickel	0.02		-0.004696		NA	mg/L
	Selenium	0.02		-0.040729		NA	mg/L
	Silver	0.02		-0.032095		NA	mg/L
	Thallium	0.02		-0.004228		NA	mg/L
	Vanadium	0.02		-0.004998		NA	mg/L
	Zinc	0.02		-0.003619		NA	mg/L
S3H0300-IFB1	Antimony	0.04	1.00000	1.029038	103	80-120	mg/L
	Arsenic	0.02	1.00000	1.020045	102	80-120	mg/L
	Barium	0.02	1.00000	1.003289	100	80-120	mg/L
	Beryllium	0.02	1.00000	0.986269	98.6	80-120	mg/L
	Cadmium	0.02	1.00000	0.901882	90.2	80-120	mg/L
	Chromium	0.02	1.00000	0.964818	96.5	80-120	mg/L
	Cobalt	0.02	1.00000	0.912205	91.2	80-120	mg/L
	Copper	0.04	1.00000	1.055099	106	80-120	mg/L
	Lead	0.02	1.00000	0.915245	91.5	80-120	mg/L
	Molybdenum	0.02	1.00000	0.986864	98.7	80-120	mg/L
	Nickel	0.02	1.00000	0.884565	88.5	80-120	mg/L
	Selenium	0.02	1.00000	0.941695	94.2	80-120	mg/L
	Silver	0.02	1.00000	1.060737	106	80-120	mg/L
	Thallium	0.02	1.00000	0.916250	91.6	80-120	mg/L
	Vanadium	0.02	1.00000	0.997595	99.8	80-120	mg/L
	Zinc	0.02	1.00000	0.919107	91.9	80-120	mg/L
S3H0300-IFA2	Antimony	0.04		-0.032504		NA	mg/L
	Arsenic	0.02		0.003703		NA	mg/L
	Barium	0.02		-0.000483		NA	mg/L
	Beryllium	0.02		0.000730		NA	mg/L
	Cadmium	0.02		-0.005084		NA	mg/L
	Chromium	0.02		-0.000200		NA	mg/L
	Cobalt	0.02		-0.000452		NA	mg/L
	Copper	0.04		-0.001890		NA	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-08	Calibration:	3H26002
Sequence:	S3H0300		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0300-IFA2	Lead	0.02		-0.014561		NA	mg/L
	Molybdenum	0.02		0.004902		NA	mg/L
	Nickel	0.02		-0.004611		NA	mg/L
	Selenium	0.02		-0.031407		NA	mg/L
	Silver	0.02		-0.032182		NA	mg/L
	Thallium	0.02		-0.005142		NA	mg/L
	Vanadium	0.02		-0.004654		NA	mg/L
	Zinc	0.02		-0.001897		NA	mg/L
S3H0300-IFB2	Antimony	0.04	1.00000	1.005997	101	80-120	mg/L
	Arsenic	0.02	1.00000	1.021575	102	80-120	mg/L
	Barium	0.02	1.00000	1.005909	101	80-120	mg/L
	Beryllium	0.02	1.00000	0.979598	98.0	80-120	mg/L
	Cadmium	0.02	1.00000	0.905674	90.6	80-120	mg/L
	Chromium	0.02	1.00000	0.965442	96.5	80-120	mg/L
	Cobalt	0.02	1.00000	0.918056	91.8	80-120	mg/L
	Copper	0.04	1.00000	1.063464	106	80-120	mg/L
	Lead	0.02	1.00000	0.923341	92.3	80-120	mg/L
	Molybdenum	0.02	1.00000	0.994813	99.5	80-120	mg/L
	Nickel	0.02	1.00000	0.889622	89.0	80-120	mg/L
	Selenium	0.02	1.00000	0.956256	95.6	80-120	mg/L
	Silver	0.02	1.00000	1.065959	107	80-120	mg/L
	Thallium	0.02	1.00000	0.916940	91.7	80-120	mg/L
	Vanadium	0.02	1.00000	1.002189	100	80-120	mg/L
	Zinc	0.02	1.00000	0.928953	92.9	80-120	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0307-IFA1	Antimony	0.04		-0.001095		NA	mg/L
	Arsenic	0.02		-0.000986		NA	mg/L
	Barium	0.02		0.003508		NA	mg/L
	Beryllium	0.02		0.000499		NA	mg/L
	Cadmium	0.02		0.000167		NA	mg/L
	Chromium	0.02		0.003437		NA	mg/L
	Cobalt	0.02		-0.000079		NA	mg/L
	Copper	0.04		-0.001777		NA	mg/L
	Lead	0.02		-0.001846		NA	mg/L
	Molybdenum	0.02		-0.000530		NA	mg/L
	Nickel	0.02		-0.000267		NA	mg/L
	Selenium	0.02		-0.040616		NA	mg/L
	Silver	0.02		-0.000589		NA	mg/L
	Thallium	0.02		-0.004949		NA	mg/L
	Vanadium	0.02		-0.009330		NA	mg/L
	Zinc	0.02		-0.002659		NA	mg/L
S3H0307-IFB1	Antimony	0.04	1.00000	0.985958	98.6	80-120	mg/L
	Arsenic	0.02	1.00000	1.006571	101	80-120	mg/L
	Barium	0.02	1.00000	0.946741	94.7	80-120	mg/L
	Beryllium	0.02	1.00000	0.971485	97.1	80-120	mg/L
	Cadmium	0.02	1.00000	0.876112	87.6	80-120	mg/L
	Chromium	0.02	1.00000	0.940789	94.1	80-120	mg/L
	Cobalt	0.02	1.00000	0.910517	91.1	80-120	mg/L
	Copper	0.04	1.00000	0.973473	97.3	80-120	mg/L
	Lead	0.02	1.00000	0.881475	88.1	80-120	mg/L
	Molybdenum	0.02	1.00000	0.941560	94.2	80-120	mg/L
	Nickel	0.02	1.00000	0.895258	89.5	80-120	mg/L
	Selenium	0.02	1.00000	0.889048	88.9	80-120	mg/L
	Silver	0.02	1.00000	1.042455	104	80-120	mg/L
	Thallium	0.02	1.00000	0.901136	90.1	80-120	mg/L
	Vanadium	0.02	1.00000	0.951167	95.1	80-120	mg/L
	Zinc	0.02	1.00000	0.932002	93.2	80-120	mg/L
S3H0307-IFA2	Antimony	0.04		-0.003247		NA	mg/L
	Arsenic	0.02		0.005517		NA	mg/L
	Barium	0.02		0.003542		NA	mg/L
	Beryllium	0.02		0.000479		NA	mg/L
	Cadmium	0.02		0.000217		NA	mg/L
	Chromium	0.02		0.003492		NA	mg/L
	Cobalt	0.02		0.000177		NA	mg/L
	Copper	0.04		-0.002848		NA	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0307-IFA2	Lead	0.02		0.001611		NA	mg/L
	Molybdenum	0.02		-0.001082		NA	mg/L
	Nickel	0.02		0.000093		NA	mg/L
	Selenium	0.02		-0.053042		NA	mg/L
	Silver	0.02		-0.000384		NA	mg/L
	Thallium	0.02		-0.003406		NA	mg/L
	Vanadium	0.02		-0.007457		NA	mg/L
	Zinc	0.02		-0.000588		NA	mg/L
S3H0307-IFB2	Antimony	0.04	1.00000	0.965441	96.5	80-120	mg/L
	Arsenic	0.02	1.00000	0.990346	99.0	80-120	mg/L
	Barium	0.02	1.00000	0.943188	94.3	80-120	mg/L
	Beryllium	0.02	1.00000	0.976860	97.7	80-120	mg/L
	Cadmium	0.02	1.00000	0.884304	88.4	80-120	mg/L
	Chromium	0.02	1.00000	0.940925	94.1	80-120	mg/L
	Cobalt	0.02	1.00000	0.901600	90.2	80-120	mg/L
	Copper	0.04	1.00000	0.975061	97.5	80-120	mg/L
	Lead	0.02	1.00000	0.890851	89.1	80-120	mg/L
	Molybdenum	0.02	1.00000	0.944036	94.4	80-120	mg/L
	Nickel	0.02	1.00000	0.893198	89.3	80-120	mg/L
	Selenium	0.02	1.00000	0.886615	88.7	80-120	mg/L
	Silver	0.02	1.00000	1.042831	104	80-120	mg/L
	Thallium	0.02	1.00000	0.890031	89.0	80-120	mg/L
	Vanadium	0.02	1.00000	0.943299	94.3	80-120	mg/L
	Zinc	0.02	1.00000	0.931545	93.2	80-120	mg/L
S3H0307-IFA3	Antimony	0.04		0.005415		NA	mg/L
	Arsenic	0.02		0.000494		NA	mg/L
	Barium	0.02		0.003658		NA	mg/L
	Beryllium	0.02		0.000475		NA	mg/L
	Cadmium	0.02		0.000179		NA	mg/L
	Chromium	0.02		0.003464		NA	mg/L
	Cobalt	0.02		0.000301		NA	mg/L
	Copper	0.04		0.001075		NA	mg/L
	Lead	0.02		-0.000772		NA	mg/L
	Molybdenum	0.02		-0.000832		NA	mg/L
	Nickel	0.02		-0.000222		NA	mg/L
	Selenium	0.02		-0.044683		NA	mg/L
	Silver	0.02		-0.000763		NA	mg/L
	Thallium	0.02		-0.004154		NA	mg/L
	Vanadium	0.02		-0.007974		NA	mg/L
	Zinc	0.02		0.002899		NA	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0307-IFB3	Antimony	0.04	1.00000	0.967537	96.8	80-120	mg/L
	Arsenic	0.02	1.00000	0.981332	98.1	80-120	mg/L
	Barium	0.02	1.00000	0.943977	94.4	80-120	mg/L
	Beryllium	0.02	1.00000	0.973821	97.4	80-120	mg/L
	Cadmium	0.02	1.00000	0.884639	88.5	80-120	mg/L
	Chromium	0.02	1.00000	0.938988	93.9	80-120	mg/L
	Cobalt	0.02	1.00000	0.901057	90.1	80-120	mg/L
	Copper	0.04	1.00000	0.977326	97.7	80-120	mg/L
	Lead	0.02	1.00000	0.891005	89.1	80-120	mg/L
	Molybdenum	0.02	1.00000	0.944175	94.4	80-120	mg/L
	Nickel	0.02	1.00000	0.894601	89.5	80-120	mg/L
	Selenium	0.02	1.00000	0.916207	91.6	80-120	mg/L
	Silver	0.02	1.00000	1.034634	103	80-120	mg/L
	Thallium	0.02	1.00000	0.868662	86.9	80-120	mg/L
	Vanadium	0.02	1.00000	0.934951	93.5	80-120	mg/L
	Zinc	0.02	1.00000	0.937586	93.8	80-120	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-08	Calibration:	3H26002
Sequence:	S3H0300		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0300-IFA1	Lead	0.02		-0.014590		NA	mg/L
S3H0300-IFB1	Lead	0.02	1.00000	0.915245	91.5	80-120	mg/L
S3H0300-IFA2	Lead	0.02		-0.014561		NA	mg/L
S3H0300-IFB2	Lead	0.02	1.00000	0.923341	92.3	80-120	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-10	Calibration:	3H26005
Sequence:	S3H0307		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0307-IFA1	Lead	0.02		-0.001846		NA	mg/L
S3H0307-IFB1	Lead	0.02	1.00000	0.881475	88.1	80-120	mg/L
S3H0307-IFA2	Lead	0.02		0.001611		NA	mg/L
S3H0307-IFB2	Lead	0.02	1.00000	0.890851	89.1	80-120	mg/L
S3H0307-IFA3	Lead	0.02		-0.000772		NA	mg/L
S3H0307-IFB3	Lead	0.02	1.00000	0.891005	89.1	80-120	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-10	Calibration:	3H28002
Sequence:	S3H0313		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0313-IFA1	Antimony	0.04		-0.000182		NA	mg/L
	Arsenic	0.02		0.000132		NA	mg/L
	Barium	0.02		0.004156		NA	mg/L
	Beryllium	0.02		0.000521		NA	mg/L
	Cadmium	0.02		0.000008		NA	mg/L
	Chromium	0.02		0.003334		NA	mg/L
	Cobalt	0.02		0.000024		NA	mg/L
	Copper	0.04		-0.000251		NA	mg/L
	Lead	0.02		-0.001847		NA	mg/L
	Molybdenum	0.02		-0.001100		NA	mg/L
	Nickel	0.02		0.000222		NA	mg/L
	Selenium	0.02		-0.067288		NA	mg/L
	Silver	0.02		-0.000409		NA	mg/L
	Thallium	0.02		-0.002907		NA	mg/L
	Vanadium	0.02		-0.008271		NA	mg/L
	Zinc	0.02		-0.002663		NA	mg/L
S3H0313-IFB1	Antimony	0.04	1.00000	0.976240	97.6	80-120	mg/L
	Arsenic	0.02	1.00000	1.000085	100	80-120	mg/L
	Barium	0.02	1.00000	0.945208	94.5	80-120	mg/L
	Beryllium	0.02	1.00000	0.978402	97.8	80-120	mg/L
	Cadmium	0.02	1.00000	0.876396	87.6	80-120	mg/L
	Chromium	0.02	1.00000	0.940687	94.1	80-120	mg/L
	Cobalt	0.02	1.00000	0.907489	90.7	80-120	mg/L
	Copper	0.04	1.00000	0.970798	97.1	80-120	mg/L
	Lead	0.02	1.00000	0.896569	89.7	80-120	mg/L
	Molybdenum	0.02	1.00000	0.938159	93.8	80-120	mg/L
	Nickel	0.02	1.00000	0.895648	89.6	80-120	mg/L
	Selenium	0.02	1.00000	0.902155	90.2	80-120	mg/L
	Silver	0.02	1.00000	1.044537	104	80-120	mg/L
	Thallium	0.02	1.00000	0.894079	89.4	80-120	mg/L
	Vanadium	0.02	1.00000	0.953209	95.3	80-120	mg/L
	Zinc	0.02	1.00000	0.889892	89.0	80-120	mg/L
S3H0313-IFA2	Antimony	0.04		0.004664		NA	mg/L
	Arsenic	0.02		-0.000340		NA	mg/L
	Barium	0.02		0.005697		NA	mg/L
	Beryllium	0.02		0.000490		NA	mg/L
	Cadmium	0.02		0.000134		NA	mg/L
	Chromium	0.02		0.003958		NA	mg/L
	Cobalt	0.02		0.000507		NA	mg/L
	Copper	0.04		-0.000973		NA	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-10	Calibration:	3H28002
Sequence:	S3H0313		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0313-IFA2	Lead	0.02		-0.002729		NA	mg/L
	Molybdenum	0.02		-0.001231		NA	mg/L
	Nickel	0.02		0.000526		NA	mg/L
	Selenium	0.02		-0.037918		NA	mg/L
	Silver	0.02		-0.000421		NA	mg/L
	Thallium	0.02		-0.005616		NA	mg/L
	Vanadium	0.02		-0.007099		NA	mg/L
	Zinc	0.02		0.000711		NA	mg/L
S3H0313-IFB2	Antimony	0.04	1.00000	0.991814	99.2	80-120	mg/L
	Arsenic	0.02	1.00000	0.988766	98.9	80-120	mg/L
	Barium	0.02	1.00000	0.934426	93.4	80-120	mg/L
	Beryllium	0.02	1.00000	0.982968	98.3	80-120	mg/L
	Cadmium	0.02	1.00000	0.866281	86.6	80-120	mg/L
	Chromium	0.02	1.00000	0.936555	93.7	80-120	mg/L
	Cobalt	0.02	1.00000	0.901598	90.2	80-120	mg/L
	Copper	0.04	1.00000	0.974235	97.4	80-120	mg/L
	Lead	0.02	1.00000	0.884981	88.5	80-120	mg/L
	Molybdenum	0.02	1.00000	0.958077	95.8	80-120	mg/L
	Nickel	0.02	1.00000	0.889506	89.0	80-120	mg/L
	Selenium	0.02	1.00000	0.937280	93.7	80-120	mg/L
	Silver	0.02	1.00000	1.047325	105	80-120	mg/L
	Thallium	0.02	1.00000	0.901136	90.1	80-120	mg/L
	Vanadium	0.02	1.00000	0.934799	93.5	80-120	mg/L
	Zinc	0.02	1.00000	0.907713	90.8	80-120	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-10	Calibration:	3H28002
Sequence:	S3H0313		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0313-IFA1	Lead	0.02		-0.001847		NA	mg/L
S3H0313-IFB1	Lead	0.02	1.00000	0.896569	89.7	80-120	mg/L
S3H0313-IFA2	Lead	0.02		-0.002729		NA	mg/L
S3H0313-IFB2	Lead	0.02	1.00000	0.884981	88.5	80-120	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302581
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-10	Calibration:	3H29001
Sequence:	S3H0331		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3H0331-IFA1	Lead	0.02		-0.002398		NA	mg/L
S3H0331-IFB1	Lead	0.02	1.00000	0.885274	88.5	80-120	mg/L
S3H0331-IFA2	Lead	0.02		-0.001821		NA	mg/L
S3H0331-IFB2	Lead	0.02	1.00000	0.867934	86.8	80-120	mg/L

Method EPA 6010B
(STLC DI)

ANALYSIS RUN LOG

WinLab32 - Off-Line ICP Continuous - Data Reprocessing

File Edit Tools Analysis Options Window Help

MethEd | SamInfo | Spectra | Results | Calib | Examine | Reproc

Method: Untitled

Sample Info: Untitled

Data Reprocessing

Analysis Progress

Step: Idle

Reprocess

Data Set To Reprocess: ICP8_130905-01

Browse...

Browse...

Print Log

Hide Empty Columns

	Seq	Sample ID	Date Time	Initial Sample Wt	Initial Sample Vol	Sample Un
1		IBL1	9/5/2013 7:28:37 AM			
2		CAL1	9/5/2013 7:32:14 AM			
3		CAL2	9/5/2013 7:35:39 AM			
4		CAL3	9/5/2013 7:38:48 AM			
5		ICV1	9/5/2013 7:44:51 AM		25	mg/L
6		ICB1	9/5/2013 7:48:04 AM		25	mg/L
7		IFA1	9/5/2013 7:51:51 AM			
8		IFB1	9/5/2013 7:56:09 AM			
9		CCV1	9/5/2013 7:59:50 AM			
10		CCB1	9/5/2013 8:03:00 AM		25	mg/L
11		B3I0026-BLK1	9/5/2013 8:12:49 AM		25	mg/L
12		B3I0026-BS1	9/5/2013 8:16:36 AM		25	mg/L
13		1302669-01@10	9/5/2013 8:19:29 AM		25	mg/L
14		~~1302669-02@10~~	9/5/2013 8:23:10 AM		25	mg/L
15		~~1302669-03@10~~	9/5/2013 8:26:57 AM		25	mg/L
16		1302669-04	9/5/2013 8:30:45 AM		25	mg/L
17		B3I0026-MS1	9/5/2013 8:34:24 AM		25	mg/L
18		B3I0026-MSD1	9/5/2013 8:37:17 AM		25	mg/L
19		1302669-05@10	9/5/2013 8:40:12 AM		25	mg/L
20		~~1302669-06@10~~	9/5/2013 8:43:23 AM		25	mg/L
21		S3I0027-CCV2	9/5/2013 8:47:04 AM		25	mg/L
22		S3I0027-CCB2	9/5/2013 8:50:17 AM		25	mg/L
23		~~1302669-07@10~~	9/5/2013 8:54:04 AM		25	mg/L
24		~~1302669-08@10~~	9/5/2013 8:57:45 AM		25	mg/L
25		1302669-09@10	9/5/2013 9:01:35 AM		25	mg/L
26		~~1302669-10@10~~	9/5/2013 9:05:14 AM		25	mg/L
27		1302669-02	9/5/2013 9:16:34 AM		25	
28		1302669-03	9/5/2013 9:20:14 AM		25	
29		1302669-06@2	9/5/2013 9:24:02 AM		25	
30		1302669-07@2	9/5/2013 9:27:43 AM		25	
31		1302669-08	9/5/2013 9:31:04 AM		25	
32		1302669-10@5	9/5/2013 9:34:44 AM		25	
33		IFA2	9/5/2013 9:41:16 AM			
34		IFB2	9/5/2013 9:45:34 AM			
35		CCV-3	9/5/2013 9:49:15 AM		25	mg/L
36		CCB-3	9/5/2013 9:52:28 AM		25	mg/L
37		S3I0027-CCV4	9/5/2013 1:02:53 PM		25	mg/L
38		S3I0027-CCB4	9/5/2013 1:06:06 PM		25	mg/L
39		B3I0060-BLK1@20	9/5/2013 1:09:53 PM		25	mg/L
40		B3I0060-BS1@20	9/5/2013 1:13:42 PM		25	mg/L

*Parameters marked with an asterisk override settings in the method.

For Help, press F1

WinLab32 - Off-Line ICP Continuous - Data Reprocessing

File Edit Tools Analysis Options Window Help

MethEd | SamInfo | Spectra | Results | Calib | Examine | Reproc

Method: Untitled

Sample Info: Untitled

Data Reprocessing

Analysis Progress | Step: Idle

Reprocess

Data Set To Reprocess: ICP8_130905-01 | Browse

Browse

Print Log

Hide Empty Columns

	Seq.	Sample ID	Date Time	Initial Sample Wt	Initial Sample Vol.	Sample Un
22		S3I0027-CCB2	9/5/2013 8:50:17 AM		25	mg/L
23		1302669-07@10	9/5/2013 8:54:04 AM		25	mg/L
24		1302669-08@10	9/5/2013 8:57:45 AM		25	mg/L
25		1302669-09@10	9/5/2013 9:01:35 AM		25	mg/L
26		1302669-10@10	9/5/2013 9:05:14 AM		25	mg/L
27		1302669-02	9/5/2013 9:16:34 AM		25	
28		1302669-03	9/5/2013 9:20:14 AM		25	
29		1302669-06@2	9/5/2013 9:24:02 AM		25	
30		1302669-07@2	9/5/2013 9:27:43 AM		25	
31		1302669-08	9/5/2013 9:31:04 AM		25	
32		1302669-10@5	9/5/2013 9:34:44 AM		25	
33		IFA2	9/5/2013 9:41:16 AM			
34		IFB2	9/5/2013 9:45:34 AM			
35		CCV-	9/5/2013 9:49:15 AM		25	mg/L
36		CCB-	9/5/2013 9:52:28 AM		25	mg/L
37		S3I0027-CCV4	9/5/2013 1:02:53 PM		25	mg/L
38		S3I0027-CCB4	9/5/2013 1:06:06 PM		25	mg/L
39		B3I0060-BLK1@20	9/5/2013 1:09:53 PM		25	mg/L
40		B3I0060-BS1@20	9/5/2013 1:13:42 PM		25	mg/L
41		1302545-05@20	9/5/2013 1:17:33 PM		25	mg/L
42		1302545-17@20	9/5/2013 1:21:23 PM		25	mg/L
43		1302547-05@20	9/5/2013 1:25:13 PM		25	mg/L
44		1302547-11@20	9/5/2013 1:28:53 PM		25	mg/L
45		B3I0060-DUP1@20	9/5/2013 1:32:43 PM		25	mg/L
46		B3I0060-MS1@20	9/5/2013 1:36:33 PM		25	mg/L
47		B3I0060-MSD1@20	9/5/2013 1:40:14 PM		25	mg/L
48		S3I0027-CCV5	9/5/2013 1:46:43 PM		25	
49		S3I0027-CCB5	9/5/2013 1:49:57 PM		25	
50						
51						
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58						
59						
60						

*Parameters marked with an asterisk override settings in the method.

For Help, press F1

ANALYSIS SEQUENCE

S3I0027

Sequence Comments:

Instrument: ICP-08
Calibration ID: 3I06001

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3I0027-IBL1	QC		1		A3B0015	
S3I0027-CAL1	QC		2	A3I0023	A3B0015	
S3I0027-CAL2	QC		3	A3G0205	A3B0015	
S3I0027-CAL3	QC		4	A3G0206	A3B0015	
S3I0027-ICV1	QC		5	A3H0268	A3B0015	
S3I0027-ICB1	QC		6		A3B0015	
S3I0027-IFA1	QC		7	A3G0427	A3B0015	
S3I0027-IFB1	QC		8	A3G0444	A3B0015	
S3I0027-CCV1	QC		9	A3H0219	A3B0015	
S3I0027-CCB1	QC		10		A3B0015	
B3I0026-BLK1	QC		11		A3B0015	
B3I0026-BS1	QC		12		A3B0015	
1302669-01	200.7	A	13		A3B0015	
1302669-04	200.7	A	14		A3B0015	
B3I0026-MS1	QC		15		A3B0015	
B3I0026-MSD1	QC		16		A3B0015	
1302669-05	200.7	A	17		A3B0015	
S3I0027-CCV2	QC		18	A3H0268	A3B0015	
S3I0027-CCB2	QC		19		A3B0015	
1302669-09	200.7	A	20		A3B0015	
1302669-02	200.7	A	21		A3B0015	
1302669-03	200.7	A	22		A3B0015	
1302669-06	200.7	A	23		A3B0015	
1302669-07	200.7	A	24		A3B0015	
1302669-08	200.7	A	25		A3B0015	
1302669-10	200.7	A	26		A3B0015	
S3I0027-IFA2	QC		27	A3G0427	A3B0015	
S3I0027-IFB2	QC		28	A3G0444	A3B0015	
S3I0027-CCV3	QC		29	A3H0268	A3B0015	
S3I0027-CCB3	QC		30		A3B0015	
S3I0027-CCV4	QC		31	A3H0268	A3B0015	
S3I0027-CCB4	QC		32		A3B0015	

AG 9/6/13
Samples Loaded By Date

AG 9/6/13
Data Processed By Date

ANALYSIS SEQUENCE

S3I0027

Sequence Comments:

Instrument: ICP-08
Calibration ID: 3I06001

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
B3I0060-BLK1	QC		33		A3B0015	
B3I0060-BS1	QC		34		A3B0015	
1302545-05	6010_STDI	A 01	35		A3B0015	Pb
1302545-17	6010_STDI	A 01	36		A3B0015	Pb
1302547-05	6010_STDI	A 01	37		A3B0015	Pb
1302547-11	6010_STDI	A 01	38		A3B0015	Pb
B3I0060-DUP1	QC		39		A3B0015	
B3I0060-MS1	QC		40		A3B0015	
B3I0060-MSD1	QC		41		A3B0015	
S3I0027-CCV5	QC		42	A3H0268	A3B0015	
S3I0027-CCB5	QC		43		A3B0015	

AG 9/6/13
Samples Loaded By Date

AG 9/6/13
Data Processed By Date

SAMPLE PREPARATION LOG

Advanced Technology Laboratories 3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

PREPARATION BENCH SHEET

B3I0060

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 09/05/13 11:48

Prepared by: MS

End Date/Time:

Prep Code: STLC DI Extraction

Bottle Lot No.: _____

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
1302545-05	6010_STDI	Soil		25.00	25						Pb
1302545-17	6010_STDI	Soil		25.00	25						Pb
1302547-05	6010_STDI	Soil		25.00	25						Pb
1302547-11	6010_STDI	Soil		25.00	25						Pb
B3I0060-BLK1	QC		CS 9/30/13	~~10.00~~ 25.00	~~100~~ 25.00						
B3I0060-BS1	QC			5.00	5	A3H0322	A3H0012		200	200	
B3I0060-DUP1	QC		CS 9/2013	~~10.00~~ 25.00	~~100~~ 25.00			1302547-11			
B3I0060-MS1	QC			5.00	5	A3H0355		1302547-11	250		
B3I0060-MSD1	QC			5.00	5	A3H0355		1302547-11	250		

Number	Reagent Name

MS 9-6-13
Prepared By Date

CS 9/6/13
Preparation Reviewed By Date

AG 9/5/13
Digestates Received By Date

Printed: 9/5/2013 1:52:21PM :: bch_ATL_Metals(2)

330

PREPARATION BENCH SHEET

B3I0060

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 09/05/13 11:48

Prepared by: MS

End Date/Time:

Prep Code: STLC DI Extraction

Bottle Lot No.: _____

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
1302545-05	6010_STDI	Soil		25.00	25						Pb
1302545-17	6010_STDI	Soil		25.00	25						Pb
1302547-05	6010_STDI	Soil		25.00	25						Pb
1302547-11	6010_STDI	Soil		25.00	25						Pb
B3I0060-BLK1	QC		GS 9/20/13	~~10.00~~ 25.00	~~100~~ 25.00						
B3I0060-DUP1	QC		GS 9/20/13	~~10.00~~ 25.00	~~100~~ 25.00			1302547-11			

Number	Reagent Name

MS 9.5.13
Prepared By Date

GS 9/6/13
Preparation Reviewed By Date

AG 9/5/13
Digestates Received By Date

PREPARATION BENCH SHEET

B3I0010

Advanced Technology Laboratories

Lab Matrix: Soil
Start Date/Time: 09/03/13 10:28
End Date/Time: 09/05/13 11:30

Prep Code: STLC DI Extraction

Prepared by: MS
Temperature, °C: 23
Rotation Speed, rpm: 30
Bottle Lot No.: _____

Lab Number	Analysis	Client Matrix	Pre-extraction pH	Initial (g)	Final (mL)	Extract pH	Spike ID 1	Spike ID 2	Source ID	Spike 1 (uL)	Spike 2 (uL)	Extraction Comments
1302545-05	STDI_Metals	Soil		10.00	100	<2						
1302545-17	STDI_Metals	Soil		10.00	100	<2						
1302547-05	STDI_Metals	Soil		10.00	100	<2						
1302547-11	STDI_Metals	Soil		10.00	100	<2						
B3I0010-BLK1	QC			10.00	100	<2						
B3I0010-DUP1	QC			10.00	100	<2			1302547-11			

Prepared By	Date	Preparation Reviewed By	Date	Extracts Received By	Date
MS	9-5-13	GS	9/6/13	AL	9/5/13

PREPARATION BENCH SHEET

B3I0010

Advanced Technology Laboratories

Prepared by: MS

Prep Code: STLC DI Extraction

Lab Number	Estimated % Solid	Particle Size >1cm	Particle Size <1cm	Extraction Fluid Code	Fluid Type
1302545-05	100	☐	☑		
1302545-17		☐	☑		
1302547-05		☐	☑		
1302547-11		☐	☑		
B3I0010-BLK1		☐	☑		
B3I0010-DUP1		☐	☑		

Number	Reagent Name

MS — Prepared By — 9-5-13 Date

Preparation Reviewed By — 9/6/13 Date

AL — Extracts Received By — 9/5/13 Date

Printed: 9/5/2013 11:31:03AM :: bch_ATL_Metals_Leach(2)

INITIAL CALIBRATION DATA SUMMARY

Advanced Technology Laboratories 3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

ATL Number: 1302545 , 1302547 BA 09/25/13

INITIAL CALIBRATION
EPA 6010B

Instrument ID: ICP10
Date(s) Analyzed: 9/5/2013

Analyte	INTENSITY			
	STD1*	STD2(0.5mg/L)	STD3(1.0mg/L)	r2
Lead	68.68276026	7032.575115	13793.84342	0.999969295

*~~0.0025 mg/L: Ba, Be, Cd, Cr, Co, Ag, V~~ 0.005 mg/L: Sb, Cu, Pb, Mo, Ni ~~0.01 mg/L: As, Se, Tl, Zn, Mn~~ ~~0.5 mg/L: Ca, Fe, K, Na~~

134 09/17/13

Standard Concentration:	STD1*	0.5 mg/L	1.0 mg/L
Standard ID:	A3I0023	A3G0205	A3G0206

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-08	Calibration:	3I06001
		Sequence:	S3I0027

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3I0027-ICV1	A3H0268	Lead	0.500000	0.503362	101	mg/L	+/- 10.00%
S3I0027-CCV1	A3H0219	Lead	0.250000	0.254885	102	mg/L	+/- 10.00%
S3I0027-CCV4	A3H0268	Lead	0.500000	0.519150	104	mg/L	+/- 10.00%
S3I0027-CCV5	A3H0268	Lead	0.500000	0.519764	104	mg/L	+/- 10.00%

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10533808
Instrument ID:	ICP-08	Calibration:	3I06001
		Sequence:	S3I0027

Lab Sample ID	Standard ID	Analyte	True	Found	%R	Units	Control Limit
S3I0027-ICV1	A3H0268	Lead	0.500000	0.503362	101	mg/L	+/- 10.00%
S3I0027-CCV1	A3H0219	Lead	0.250000	0.254885	102	mg/L	+/- 10.00%
S3I0027-CCV4	A3H0268	Lead	0.500000	0.519150	104	mg/L	+/- 10.00%
S3I0027-CCV5	A3H0268	Lead	0.500000	0.519764	104	mg/L	+/- 10.00%

SUMMARY OF INSTRUMENT BLANKS

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-08	Calibration:	3I06001
Sequence:	S3I0027		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3I0027-ICB1	Lead	-0.000623	mg/L	0.0022	0.050	U
S3I0027-CCB1	Lead	-0.000343	mg/L	0.0022	0.050	U
S3I0027-CCB4	Lead	-0.000050	mg/L	0.0022	0.050	U
B3I0060-BLK1	Lead	-0.005210	mg/L	0.056	1.0	U
S3I0027-CCB5	Lead	-0.000063	mg/L	0.0022	0.050	U

BLANKS

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 105338088
Instrument ID:	ICP-08	Calibration:	3I06001
Sequence:	S3I0027		

Lab Sample ID	Analyte	Found	Units	MDL	RL	C
S3I0027-ICB1	Lead	-0.000623	mg/L	0.0022	0.050	U
S3I0027-CCB1	Lead	-0.000343	mg/L	0.0022	0.050	U
S3I0027-CCB4	Lead	-0.000050	mg/L	0.0022	0.050	U
B3I0060-BLK1	Lead	-0.005210	mg/L	0.056	1.0	U
S3I0027-CCB5	Lead	-0.000063	mg/L	0.0022	0.050	U

SUMMARY OF INTERFERENCE CHECK (ICSAB)

Advanced Technology Laboratories 3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302545
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-08	Calibration:	3I06001
Sequence:	S3I0027		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3I0027-IFA1	Lead	0.050		-0.015611		NA	mg/L
S3I0027-IFB1	Lead	0.050	1.00000	0.925458	92.5	80-120	mg/L
S3I0027-IFA2	Lead	0.050		-0.015030		NA	mg/L
S3I0027-IFB2	Lead	0.050	1.00000	0.918323	91.8	80-120	mg/L

INTERFERENCE CHECK SAMPLE

EPA 6010B

Laboratory:	Advanced Technology Laboratories	Work Order:	1302547
Client:	Ninyo & Moore - SD	Project:	CLAIREMONT H.S., 105338071 & 10!
Instrument ID:	ICP-08	Calibration:	3I06001
Sequence:	S3I0027		

Lab Sample ID	Analyte	RL	True	Found	%R	%R Criteria	Units
S3I0027-IFA1	Lead	0.050		-0.015611		NA	mg/L
S3I0027-IFB1	Lead	0.050	1.00000	0.925458	92.5	80-120	mg/L
S3I0027-IFA2	Lead	0.050		-0.015030		NA	mg/L
S3I0027-IFB2	Lead	0.050	1.00000	0.918323	91.8	80-120	mg/L

Method EPA 7471A

ANALYSIS RUN LOG

Advanced Technology Laboratories 3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

WinLab32 - Off-Line AA FIMS-MHS - Data Reprocessing

File Edit Tools Analysis Options Window Help AA5 VV 8-26-13

MethEd SamInfo Peaks Results Calib Examine Reproc Method: Untitled Sample Info: Untitled

Data Reprocessing

Analysis Progress Step: Idle

Reprocess Data Set To Reprocess: AA5Hg130826S4 Browse... Print Log

Browse... Hide Empty Colu

	Seq.	Sample ID	Omit Repli	
1		IBL1 AJ40039		8/26/2013 12:13:06 PM ICAL A340037
2		CAL1 40		8/26/2013 12:15:02 PM ICV/CCV A340038
3		CAL2 41		8/26/2013 12:17:00 PM
4		CAL3 42		8/26/2013 12:19:00 PM
5		CAL4 43		8/26/2013 12:21:00 PM
6		CAL5 44		8/26/2013 12:23:01 PM
7		ICV1 45		8/26/2013 12:31:20 PM
8		ICB1		8/26/2013 12:33:22 PM
9		B3H0471-BLK1		8/26/2013 12:35:19 PM
10		B3H0471-BS1		8/26/2013 12:37:16 PM
11		1302514-01		8/26/2013 12:39:15 PM
12		B3H0471-PS1		8/26/2013 12:41:14 PM
13		B3H0471-MS1		8/26/2013 12:43:14 PM
14		B3H0471-MSD1		8/26/2013 12:45:15 PM
15		1302514-02		8/26/2013 12:47:17 PM
16		1302514-03		8/26/2013 12:49:20 PM
17		1302514-04		8/26/2013 12:51:23 PM
18		1302514-05		8/26/2013 12:53:20 PM
19		CCV1		8/26/2013 12:55:16 PM
20		CCB1		8/26/2013 12:57:19 PM
21		1302514-06		8/26/2013 12:59:17 PM
22		1302514-07		8/26/2013 1:01:14 PM
23		1302514-08		8/26/2013 1:03:12 PM
24		1302514-09		8/26/2013 1:05:10 PM
25		1302514-10		8/26/2013 1:07:09 PM
26		1302545-01		8/26/2013 1:09:07 PM
27		1302545-10		8/26/2013 1:11:08 PM
28		1302545-13		8/26/2013 1:13:08 PM
29		~~1302545-17~~ NR VV 8-26-13		8/26/2013 1:15:09 PM
30		1302547-05		8/26/2013 1:17:27 PM
31		CCV1		8/26/2013 1:19:28 PM
32		CCB1		8/26/2013 1:21:32 PM
33		~~1302545-17@20~~ NR VV 8-26-13		8/26/2013 1:23:28 PM
34		1302547-07		8/26/2013 1:25:29 PM
35		1302545-17@40		8/26/2013 1:27:33 PM
36		1302547-11		8/26/2013 1:29:34 PM
37		1302547-12		8/26/2013 1:31:37 PM
38		CCV1		8/26/2013 1:33:39 PM
39		CCB1		8/26/2013 1:35:43 PM
40				

ANALYSIS SEQUENCE

Sequence Comments:

S3H0308

Instrument: AA-05
Calibration ID: 3H26001

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3H0308-IBL1	QC		1	A3H0039		
S3H0308-CAL1	QC		2	A3H0040		
S3H0308-CAL2	QC		3	A3H0041		
S3H0308-CAL3	QC		4	A3H0042		
S3H0308-CAL4	QC		5	A3H0043		
S3H0308-CAL5	QC		6	A3H0044		
S3H0308-ICV1	QC		7	A3H0045		
S3H0308-ICB1	QC		8			
B3H0471-BLK1	QC		9			
B3H0471-BS1	QC		10			
1302514-01	7471	A	11			
B3H0471-PS1	QC		12			
B3H0471-MS1	QC		13			
B3H0471-MSD1	QC		14			
1302514-02	7471	A	15			
1302514-03	7471	A	16			
1302514-04	7471	A	17			
1302514-05	7471	A	18			
S3H0308-CCV1	QC		19	A3H0045		
S3H0308-CCB1	QC		20			
1302514-06	7471	A	21			
1302514-07	7471	A	22			
1302514-08	7471	A	23			
1302514-09	7471	A	24			
1302514-10	7471	A	25			
1302545-01	7471	A	26			
1302545-10	7471	A	27			
1302545-13	7471	A	28			
1302547-05	7471	A	29			
S3H0308-CCV2	QC		30	A3H0045		
S3H0308-CCB2	QC		31			
1302547-07	7471	A	32			

VV 8-26-13
Samples Loaded By Date

VV 8-26-13
Data Processed By Date

Printed: 8/26/2013 3:27:33PM :: C:\Program Files\Promium\Element\Print\seq_ATL_Default(2).rpt

ANALYSIS SEQUENCE

Sequence Comments:

S3H0308

Instrument: AA-05
Calibration ID: 3H26001

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
1302545-17	7471	A	33			
1302547-11	7471	A	34			
1302547-12	7471	A	35			
S3H0308-CCV3	QC		36	A3H0045		
S3H0308-CCB3	QC		37			

VV 8-26-13
Samples Loaded By Date

VV 8-26-13
Data Processed By Date

Printed: 8/26/2013 3:27:33PM :: C:\Program Files\Promium\Element\Print\seq_ATL_Default(2).rpt

WinLab32 - Off-Line AA FIMS-MHS - Data Reprocessing

File Edit Tools Analysis Options Window Help AA5 VV 8-28-13

MethEd SamInfo Peaks Results Calib Examine Reproc Method: Untitled Sample Info: Untitled

Data Reprocessing

Analysis Progress Step: Idle

Reprocess Data Set To Reprocess: AA5Hg130828S1 Browse... ✔ Print Log

Browse... Hide Empty Colu

	Seq.	Sample ID	Omit Repli	
1		IBL1 AJ H0039		8/28/2013 4:57:54 PM CAL AJ H0037
2		CAL1 40		8/28/2013 4:59:50 PM CCV/CCV AJ H0038
3		CAL2 41		8/28/2013 5:01:48 PM
4		CAL3 42		8/28/2013 5:03:47 PM
5		CAL4 43		8/28/2013 5:05:48 PM
6		CAL5 44		8/28/2013 5:07:49 PM
7		ICV1 45		8/28/2013 5:13:04 PM
8		ICB1		8/28/2013 5:15:07 PM
9		B3H0553-BLK1		8/28/2013 5:17:04 PM
10		B3H0553-BS1		8/28/2013 5:19:00 PM
11		1302581-02		8/28/2013 5:20:59 PM
12		B3H0553-PS1		8/28/2013 5:22:59 PM
13		B3H0553-MS1		8/28/2013 5:24:59 PM
14		B3H0553-MSD1		8/28/2013 5:27:00 PM
15		1302620-01		8/28/2013 5:29:02 PM
16		1302620-02		8/28/2013 5:31:05 PM
17		1302625-01		8/28/2013 5:33:07 PM
18		1302625-02		8/28/2013 5:35:03 PM
19		CCV1		8/28/2013 5:36:59 PM
20		CCB1		8/28/2013 5:39:02 PM
21		1302581-04		8/28/2013 5:40:59 PM
22		1302581-07		8/28/2013 5:42:55 PM
23		1302581-11		8/28/2013 5:44:51 PM
24		1302581-13		8/28/2013 5:46:49 PM
25		1302581-15		8/28/2013 5:48:47 PM
26		1302581-19		8/28/2013 5:50:45 PM
27		1302581-21		8/28/2013 5:52:44 PM
28		1302581-22		8/28/2013 5:54:43 PM
29		1302615-01		8/28/2013 5:56:42 PM
30		1302615-02		8/28/2013 5:58:43 PM
31		CCV1		8/28/2013 6:00:45 PM
32		CCB1		8/28/2013 6:02:47 PM
33		1302615-03		8/28/2013 6:04:44 PM
34		1302617-01		8/28/2013 6:06:46 PM
35		1302617-02		8/28/2013 6:08:48 PM
36		1302623-01		8/28/2013 6:10:49 PM
37		1302624-01		8/28/2013 6:12:52 PM
38		CCV1		8/28/2013 6:14:55 PM
39		CCB1		8/28/2013 6:16:59 PM
40				

ANALYSIS SEQUENCE

Sequence Comments:

S3H0354

Instrument: AA-05
Calibration ID: 3H29002

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
S3H0354-IBL1	QC		1	A3H0039		
S3H0354-CAL1	QC		2	A3H0040		
S3H0354-CAL2	QC		3	A3H0041		
S3H0354-CAL3	QC		4	A3H0042		
S3H0354-CAL4	QC		5	A3H0043		
S3H0354-CAL5	QC		6	A3H0044		
S3H0354-ICV1	QC		7	A3H0045		
S3H0354-ICB1	QC		8			
B3H0553-BLK1	QC		9			
B3H0553-BS1	QC		10			
1302581-02	7471	A	11			
B3H0553-PS1	QC		12			
B3H0553-MS1	QC		13			
B3H0553-MSD1	QC		14			
1302620-01	7471	A	15			
1302620-02	7471	A	16			
1302625-01	7471	A	17			
1302625-02	7471	A	18			
S3H0354-CCV1	QC		19	A3H0045		
S3H0354-CCB1	QC		20			
1302581-04	7471	A	21			
1302581-07	7471	A	22			
1302581-11	7471	A	23			
1302581-13	7471	A	24			
1302581-15	7471	A	25			
1302581-19	7471	A	26			
1302581-21	7471	A	27			
1302581-22	7471	A	28			
1302615-01	7471	A	29			
1302615-02	7471	A	30			
S3H0354-CCV2	QC		31	A3H0045		
S3H0354-CCB2	QC		32			

VV 8-28-13
Samples Loaded By Date

VV 8-28-13
Data Processed By Date

ANALYSIS SEQUENCE

Sequence Comments:

S3H0354

Instrument: AA-05
Calibration ID: 3H29002

Lab Number	Analysis	Container	Order	STD ID	ISTD ID	Comments
1302615-03	7471	A	33			
1302617-01	7471	B	34			
1302617-02	7471	B	35			
1302623-01	7471	A	36			
1302624-01	7471	A	37			
S3H0354-CCV3	QC		38	A3H0045		
S3H0354-CCB3	QC		39			

VV 8.28.13
Samples Loaded By Date

VV 8.28.13
Data Processed By Date

SAMPLE PREPARATION LOG

Advanced Technology Laboratories 3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

PREPARATION BENCH SHEET

B3H0471

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/26/13 10:18

End Date/Time: 08/26/13 10:48

Prep Code: EPA 7471

Prepared by: VV

Bottle Lot No.: 158370-265

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
1302514-01	7471	Soil		0.61	50						
1302514-02	7471	Soil		0.60	50						
1302514-03	7471	Soil		0.60	50						
1302514-04	7471	Soil		0.60	50						
1302514-05	7471	Soil		0.60	50						
1302514-06	7471	Soil		0.60	50						
1302514-07	7471	Soil		0.60	50						
1302514-08	7471	Soil		0.59	50						
1302514-09	7471	Soil		0.61	50						
1302514-10	7471	Soil		0.60	50						
1302545-01	7471	Soil		0.60	50						
1302545-10	7471	Soil		0.61	50						
1302545-13	7471	Soil		0.60	50						
1302545-17	7471	Soil		0.60	50						
1302547-05	7471	Soil		0.60	50						
1302547-07	7471	Soil		0.60	50						
1302547-11	7471	Soil		0.59	50						
1302547-12	7471	Soil		0.59	50						
B3H0471-BLK1	QC			0.60	50						
B3H0471-BS1	QC			0.60	50	A3H0036			500		

VV 8-26-13
Prepared By Date

CS 8/27/13
Preparation Reviewed By Date

Digestates Received By Date

PREPARATION BENCH SHEET

B3H0471

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/26/13 10:18

End Date/Time: 08/26/13 10:48

Prepared by: VV

Prep Code: EPA 7471

Bottle Lot No.: 158370-263

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
B3H0471-MS1	QC			0.61	50	A3H0035		1302514-01	500		
B3H0471-MSD1	QC			0.61	50	A3H0035		1302514-01	500		
B3H0471-PS1	QC			0.60	50	A3H0035		1302514-01	250		

DB-01-37
TEMP 95C

Number	Reagent Name
A2G0302	20% HYDROXYLAMINE HYDROCH
A3F0359	nitric acid
A3F0385	5% Potassium Permanganate
A3G0127	hydrochloric acid

VV 8-26-13
Prepared By Date

8/27/13
Preparation Reviewed By Date

Digestates Received By Date

PREPARATION BENCH SHEET

B3H0471

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/26/13 10:18

End Date/Time:

Prepared by: VV

Prep Code: EPA 7471

Bottle Lot No: 15P370-269

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
1302514-01	7471	Soil		0.60	50						
1302514-02	7471	Soil		0.60	50						
1302514-03	7471	Soil		0.60	50						
1302514-04	7471	Soil		0.60	50						
1302514-05	7471	Soil		0.60	50						
1302514-06	7471	Soil		0.60	50						
1302514-07	7471	Soil		0.60	50						
1302514-08	7471	Soil		0.60	50						
1302514-09	7471	Soil		0.60	50						
1302514-10	7471	Soil		0.60	50						
1302545-01	7471	Soil		0.60	50						
1302545-10	7471	Soil		0.60	50						
1302545-13	7471	Soil		0.60	50						
1302545-17	7471	Soil		0.60	50						
1302547-05	7471	Soil		0.60	50						
1302547-07	7471	Soil		0.60	50						
1302547-11	7471	Soil		0.60	50						
1302547-12	7471	Soil		0.60	50						
B3H0471-BLK1	QC			0.60	50						
B3H0471-BS1	QC			0.60	50	A3H0096			500		

VV 8-26-13
Prepared By Date

CO 8/27/13
Preparation Reviewed By Date

Digestates Received By Date

PREPARATION BENCH SHEET

B3H0471

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/26/13 10:18

End Date/Time:

Prepared by: VV

Prep Code: EPA 7471

Bottle Lot No.: 157370-263

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
B3H0471-MS1	QC			~~0.60~~ 0.61	50	A3H0035		1302514-01	500		
B3H0471-MSD1	QC			~~0.60~~ 0.61	50	A3H0035		1302514-01	500		
B3H0471-PS1	QC			0.60	50	A3H0035		1302514-01	250		

Number	Reagent Name
A2G0302	20% HYDROXYLAMINE HYDROCI
A3F0359	nitric acid
A3F0385	5% Potassium Permanganate
A3G0127	hydrochloric acid

VV 8.26.13
Prepared By Date

8/27/13
Preparation Reviewed By Date

Digestates Received By Date

DIGESTION BLOCK TEMPERATURE CHECK
DIGESTION BLOCK ID- DB-01

DB-01-1 TEMP (°C): 95 BATCH: B3H0397 DATE: 8-21-13 INITIALS: VV	DB-01-2 TEMP °C): 95 BATCH: B3H0398 DATE: 8-21-13 INITIALS: VV	DB-01-3 TEMP(°C): 93 BATCH: B3H0266 DATE: 8-19-13 INITIALS: MS	DB-01-4 TEMP(°C): 94 BATCH: B3H0357 DATE: 8-20-13 INITIALS: MS	DB-01-5 TEMP(°C): 94 BATCH: B3H0365 DATE: 8-20-13 INITIALS: MS	DB-01-6 TEMP °C): 95 BATCH: B3H0511 DATE: 8-27-13 INITIALS: VV	DB-01-7 TEMP(°C): 95 BATCH: B3H0503 DATE: 8-28-13 INITIALS: VV	DB-01-8 TEMP(°C): 95 BATCH: B3H0504 DATE: 8-28-13 INITIALS: VV	DB-01-9 TEMP(°C): 95 BATCH: B3H0553 DATE: 8-28-13 INITIALS: VV
DB-01-10 TEMP (°C): 94 BATCH: B3H0444 DATE: 8-27-13 INITIALS: MS	DB-01-11 TEMP(°C): BATCH: DATE: INITIALS:	DB-01-12 TEMP(°C): 93 BATCH: B3H0292 DATE: 8-15-13 INITIALS: MS	DB-01-13 TEMP °C): 98 BATCH: B3H0352 DATE: 8-20-13 INITIALS: MS	DB-01-14 TEMP(°C): BATCH: DATE: INITIALS:	DB-01-15 TEMP °C): BATCH: DATE: INITIALS:	DB-01-16 TEMP °C): 98 BATCH: B3H0360 DATE: 8-20-13 INITIALS: MS	DB-01-17 TEMP °C): 95 BATCH: B3H0563 DATE: 8-29-13 INITIALS: VV	DB-01-18 TEMP °C): 95 BATCH: B3H0572 DATE: 8/29/13 INITIALS: VV
DB-01-19 TEMP (°C): BATCH: DATE: INITIALS:	DB-01-20 TEMP °C): 94 BATCH: B3H0264 DATE: 8-14-13 INITIALS: MS	DB-01-21 TEMP °C): 95 BATCH: B3H0590 DATE: 8-26-13 INITIALS: VV	DB-01-22 TEMP °C): 94 BATCH: B3H0349 DATE: 8-15-13 INITIALS: MS	DB-01-23 TEMP °C): 95 BATCH: B3H0366 DATE: 8-20-13 INITIALS: MS	DB-01-24 TEMP °C): 94 BATCH: B3H0291 DATE: 8-16-13 INITIALS: MS	DB-01-25 TEMP °C): 97 BATCH: B3H0272 DATE: 8-15-13 INITIALS: MS	DB-01-26 TEMP(°C): 95 BATCH: ~~B3H0411~~ B3J0011 DATE: 9-9-13 INITIALS: VV B3J0111	DB-01-27 TEMP °C): 95 BATCH: ~~B3H0412~~ B3J0112 DATE: 9-9-13 INITIALS: VV B3J0112
DB-01-28 TEMP (°C): 97 BATCH: B3H0447 DATE: 8-22-13 INITIALS: MS	DB-01-29 TEMP(°C): 97 BATCH: B3H0267 DATE: 8-19-13 INITIALS: MS	DB-01-30 TEMP °C): BATCH: DATE: INITIALS:	DB-01-31 TEMP °C): BATCH: DATE: INITIALS:	DB-01-32 TEMP °C): 94 BATCH: B3H0359 DATE: 8-21-13 INITIALS: MS	DB-01-33 TEMP °C): 95 BATCH: B3H0403 DATE: 8-22-13 INITIALS: MS	DB-01-34 TEMP °C): 94 BATCH: B3H0402 DATE: 8-22-13 INITIALS: MS	DB-01-35 TEMP °C): BATCH: DATE: INITIALS:	DB-01-36 TEMP °C): BATCH: DATE: INITIALS:
DB-01-37 TEMP (°C): 95 BATCH: B3H0471 DATE: 8-26-13 INITIALS: VV	DB-01-38 TEMP °C): BATCH: DATE: INITIALS:	DB-01-39 TEMP(°C): 96 BATCH: B3H0592 DATE: 8-27-13 INITIALS: MS	DB-01-40 TEMP °C): 94 BATCH: B3H0394 DATE: 8-21-13 INITIALS: MS	DB-01-41 TEMP °C): 97 BATCH: B3H0440 DATE: 8-22-13 INITIALS: MS	DB-01-42 TEMP °C): BATCH: DATE: INITIALS:	DB-01-43 TEMP °C): 94 BATCH: B3H0339 DATE: 8-19-13 INITIALS: MS	DB-01-44 TEMP °C): 95 BATCH: B3J0021 DATE: 9-4-13 INITIALS: VV	DB-01-45 TEMP °C): 95 BATCH: B3J0045 DATE: 9-4-13 INITIALS: VV
DB-01-46 TEMP (°C): 94 BATCH: B3H0297 DATE: 8-15-13 INITIALS: MS	DB-01-47 TEMP(°C): BATCH: DATE: INITIALS:	DB-01-48 TEMP °C): 94 BATCH: B3H0345 DATE: 8-19-13 INITIALS: MS	DB-01-49 TEMP °C): BATCH: DATE: INITIALS:	DB-01-50 TEMP °C): 96 BATCH: B3H0267 DATE: 8-19-13 INITIALS: MS	DB-01-51 TEMP °C): 95 BATCH: B3H0395 DATE: 8-21-13 INITIALS: MS	DB-01-52 TEMP °C): 93 BATCH: B3H0405 DATE: 8-22-13 INITIALS: MS	DB-01-53 TEMP °C): BATCH: DATE: INITIALS:	DB-01-54 TEMP °C): 95 BATCH: B3H0456 DATE: 8-23-13 INITIALS: VV

VV 9-9-13

Date Issued: 8-10-13 Date Returned: _____ Control No. _____

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

PREPARATION BENCH SHEET

B3H0553

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/28/13 15:36

End Date/Time: 08/28/13 16:06

Prep Code: EPA 7471

Prepared by: VV

Bottle Lot No.: 153860-203

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
1302581-02	7471	Soil		0.60	50						
1302581-04	7471	Soil		0.60	50						
1302581-07	7471	Soil		0.60	50						
1302581-11	7471	Soil		0.60	50						
1302581-13	7471	Soil		0.60	50						
1302581-15	7471	Soil		0.60	50						
1302581-19	7471	Soil		0.60	50						
1302581-21	7471	Soil		0.60	50						
1302581-22	7471	Soil		0.60	50						
1302615-01	7471	Soil		0.60	50						
1302615-02	7471	Soil		0.61	50						
1302615-03	7471	Soil		0.60	50						
1302617-01	7471	Soil		0.60	50						
1302617-02	7471	Soil		0.60	50						
1302620-01	7471	Concrete		0.60	50						
1302620-02	7471	Concrete		0.60	50						
1302623-01	7471	Soil		0.61	50						
1302624-01	7471	Soil		0.59	50						
1302625-01	7471	CONCRETE		0.60	50						
1302625-02	7471	CONCRETE		0.60	50						

VV 8-28-13

Prepared By Date

Preparation Reviewed By Date

Digestates Received By Date

PREPARATION BENCH SHEET

B3H0553

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/28/13 15:36

End Date/Time: 08/28/13 16:06

Prepared by: VV

Prep Code: EPA 7471

Bottle Lot No.: 1ST 860-263

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
B3H0553-BLK1	QC			0.60	50						
B3H0553-BS1	QC			0.60	50	A3H0036			500		
B3H0553-MS1	QC			0.60	50	A3H0035		1302581-02	500		
B3H0553-MSD1	QC			0.60	50	A3H0035		1302581-02	500		
B3H0553-PS1	QC			0.60	50	A3H0035		1302581-02	250		

DB-01-9
TEMP 95C

Number	Reagent Name
A2G0302	20% HYDROXYLAMINE HYDROCI
A3F0359	nitric acid
A3F0385	5% Potassium Permanganate
A3G0127	hydrochloric acid

VJ 8-28-13

Prepared By Date

Preparation Reviewed By Date

Digestates Received By Date

PREPARATION BENCH SHEET

B3H0553

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/28/13 15:36

End Date/Time:

Prepared by: VV

Prep Code: EPA 7471

Bottle Lot No.: 153680-263 TG

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments VV 9-28-13
1302581-02	7471	Soil		0.60	50						
1302581-04	7471	Soil		0.60	50						
1302581-07	7471	Soil		0.60	50						
1302581-11	7471	Soil		0.60	50						
1302581-13	7471	Soil		0.60	50						
1302581-15	7471	Soil		0.60	50						
1302581-19	7471	Soil		0.60	50						
1302581-21	7471	Soil		0.60	50						
1302581-22	7471	Soil		0.60	50						
1302615-01	7471	Soil		0.60	50						
1302615-02	7471	Soil		~~0.60~~ 0.61	50						
1302615-03	7471	Soil		0.60	50						
1302617-01	7471	Soil		0.60	50						
1302617-02	7471	Soil		0.60	50						
1302620-01	7471	Concrete		0.60	50						
1302620-02	7471	Concrete		0.60	50						
1302623-01	7471	Soil		~~0.60~~ 0.61	50						
1302624-01	7471	Soil		~~0.60~~ 0.61	50						
1302625-01	7471	CONCRETE		0.60	50						
1302625-02	7471	CONCRETE		0.60	50						

VV 8-28-13

Prepared By Date

Preparation Reviewed By Date

Digestates Received By Date

Printed: 8/28/2013 3:40:19PM bch_ATL_Metals(2)

PREPARATION BENCH SHEET

B3H0553

Advanced Technology Laboratories

Lab Matrix: Soil

Date Prepared: 08/28/13 15:36

End Date/Time:

Prepared by: VV

Prep Code: EPA 7471

Bottle Lot No.: 153 760-263

Lab Number	Analysis	ClientMatrix	pH	Initial (g)	Final (mL)	Spike ID 1	Spike ID 2	Source ID	ul Spike 1	ul Spike 2	Extraction Comments
B3H0553-BLK1	QC			0.60	50						
B3H0553-BS1	QC			0.60	50	A3H0036			500		
B3H0553-MS1	QC			0.60	50	A3H0035		1302581-02	500		
B3H0553-MSD1	QC			0.60	50	A3H0035		1302581-02	500		
B3H0553-PS1	QC			0.60	50	A3H0035		1302581-02	250		

Number	Reagent Name
A2G0302	20% HYDROXYLAMINE HYDROCH
A3F0359	nitric acid
A3F0385	5% Potassium Permanganate
A3G0127	hydrochloric acid

VJ — Prepared By

8-28-13 — Date

Preparation Reviewed By — Date

Digestates Received By — Date

DIGESTION BLOCK TEMPERATURE CHECK
DIGESTION BLOCK ID- DB-01

DB-01-1 TEMP (°C): 95 BATCH: B3H0387 DATE: 8-21-13 INITIALS: VV	DB-01-2 TEMP °C): 95 BATCH: B3H0388 DATE: 8-21-13 INITIALS: VV	DB-01-3 TEMP(°C): 93 BATCH: B3H0266 DATE: 8-19-13 INITIALS: MS	DB-01-4 TEMP(°C): 94 BATCH: B3H0357 DATE: 8-20-13 INITIALS: MS	DB-01-5 TEMP(°C): 94 BATCH: B3H0365 DATE: 8-20-13 INITIALS: MS	DB-01-6 TEMP °C): 95 BATCH: B3H0511 DATE: 8-27-13 INITIALS: VV	DB-01-7 TEMP(°C): 95 BATCH: B3H0503 DATE: 8-28-13 INITIALS: VV	DB-01-8 TEMP(°C): 95 BATCH: B3H0504 DATE: 8-28-13 INITIALS: VV	DB-01-9 TEMP(°C): 95 BATCH: B3H0553 DATE: 8-28-13 INITIALS: VV
DB-01-10 TEMP (°C): 94 BATCH: B3H0444 DATE: 8-22-13 INITIALS: MS	DB-01-11 TEMP(°C): 95 BATCH: B3J0164 DATE: 9-11-13 INITIALS: VV	DB-01-12 TEMP(°C): 93 BATCH: B3H0242 DATE: 8-15-13 INITIALS: MS	DB-01-13 TEMP °C): 98 BATCH: B3H0352 DATE: 8-20-13 INITIALS: MS	DB-01-14 TEMP(°C): 95 BATCH: B3J0171 DATE: 9-11-13 INITIALS: VV	DB-01-15 TEMP °C): 95 BATCH: B3J0172 DATE: 9-11-13 INITIALS: VV	DB-01-16 TEMP °C): 98 BATCH: B3H0360 DATE: 8-20-13 INITIALS: MS	DB-01-17 TEMP °C): 95 BATCH: B3H0563 DATE: 8-29-13 INITIALS: VV	DB-01-18 TEMP °C): 95 BATCH: B3H0572 DATE: 8/29/13 INITIALS: VV
DB-01-19 TEMP (°C): 95 BATCH: B3J0161 DATE: 9-11-13 INITIALS: VV	DB-01-20 TEMP °C): 94 BATCH: B3H0247 DATE: 8-14-13 INITIALS: MS	DB-01-21 TEMP °C): 95 BATCH: B3H0590 DATE: 8-28-13 INITIALS: VV	DB-01-22 TEMP °C): 94 BATCH: B3H0349 DATE: 8-13-13 INITIALS: MS	DB-01-23 TEMP °C): 95 BATCH: B3H0366 DATE: 8-20-13 INITIALS: MS	DB-01-24 TEMP °C): 94 BATCH: B3H0291 DATE: 8-16-13 INITIALS: MS	DB-01-25 TEMP °C): 97 BATCH: B3H0272 DATE: 8-15-13 INITIALS: MS	DB-01-26 TEMP(°C): 95 BATCH: [illegible] DATE: 9-9-13 INITIALS: VV B3J0111	DB-01-27 TEMP °C): 95 BATCH: [illegible] DATE: 9-9-13 INITIALS: VV B3J0112
DB-01-28 TEMP (°C): 97 BATCH: B3H0447 DATE: 8-22-13 INITIALS: MS	DB-01-29 TEMP(°C): 97 BATCH: B3H0267 DATE: 8-14-13 INITIALS: MS	DB-01-30 TEMP °C): 95 BATCH: B3J0201 DATE: 9-12-13 INITIALS: VV	DB-01-31 TEMP °C): BATCH: DATE: INITIALS:	DB-01-32 TEMP °C): 94 BATCH: B3H0347 DATE: 8-21-13 INITIALS: MS	DB-01-33 TEMP °C): 95 BATCH: B3H0403 DATE: 8-22-13 INITIALS: MS	DB-01-34 TEMP °C): 94 BATCH: B3H0402 DATE: 8-22-13 INITIALS: MS	DB-01-35 TEMP °C): 95 BATCH: B3J0120 DATE: 9-10-13 INITIALS: VV	DB-01-36 TEMP °C): 95 BATCH: B3J0131 DATE: 9-10-13 INITIALS: VV
DB-01-37 TEMP (°C): 95 BATCH: B3H0471 DATE: 8-26-13 INITIALS: VV	DB-01-38 TEMP °C): 95 BATCH: B3J0202 DATE: 9-13-13 INITIALS: VV	DB-01-39 TEMP(°C): 96 BATCH: B3H0524 DATE: 8-27-13 INITIALS: MS	DB-01-40 TEMP °C): 94 BATCH: B3H0347 DATE: 8-21-13 INITIALS: MS	DB-01-41 TEMP °C): 97 BATCH: B3H0444 DATE: 8-22-13 INITIALS: MS	DB-01-42 TEMP °C): BATCH: DATE: INITIALS:	DB-01-43 TEMP °C): 94 BATCH: B3H0334 DATE: 8-19-13 INITIALS: MS	DB-01-44 TEMP °C): 95 BATCH: B3J0021 DATE: 9-4-13 INITIALS: VV	DB-01-45 TEMP °C): 95 BATCH: B3J0045 DATE: 9-4-13 INITIALS: VV
DB-01-46 TEMP (°C): 94 BATCH: B3H0277 DATE: 8-15-13 INITIALS: MS	DB-01-47 TEMP(°C): 95 BATCH: B3J0203 DATE: 9-13-13 INITIALS: VV	DB-01-48 TEMP °C): 94 BATCH: B3H0345 DATE: 8-19-13 INITIALS: MS	DB-01-49 TEMP °C): BATCH: DATE: INITIALS:	DB-01-50 TEMP °C): 96 BATCH: B3H0267 DATE: 8-19-13 INITIALS: MS	DB-01-51 TEMP °C): 95 BATCH: B3H0395 DATE: 8-21-13 INITIALS: MS	DB-01-52 TEMP °C): 93 BATCH: B3H0405 DATE: 8-22-13 INITIALS: MS	DB-01-53 TEMP °C): BATCH: DATE: INITIALS:	DB-01-54 TEMP °C): 95 BATCH: B3H0456 DATE: 8-23-13 INITIALS: VV

Date Issued: _____ Date Returned: _____ Control No. _____

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

INITIAL CALIBRATION DATA SUMMARY

Advanced Technology Laboratories 2275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

ATL Number: 1302545 , 1302547 BA 09/25/13

(EPA 7471A) - INITIAL CALIBRATION

Instrument ID: AA5

Date(s) Analyzed: 08/26/13

Initial Calibration:

ANALYTE	ABSORBANCE					
	STD1(0.5 ug/L)	STD2(2 ug/L)	STD3(5 ug/L)	STD4(10 ug/L)	STD5(25 ug/L)	r2
Standanrd ID.	A3H0040	A3H0041	A3H0042	A3H0043	A3H0044	
Mercury	0.0033	0.0133	0.0333	0.0666	0.1648	0.999984

Standard Concentration:	1 mg/L
Standard ID:	A3H0037

Calibration Acceptance Criteria: > 0.995 Correlation

ATL Number: 1302581

(EPA 7471A) - INITIAL CALIBRATION

Instrument ID: AA5

Date(s) Analyzed: 08/28/13

Initial Calibration:

ANALYTE	ABSORBANCE					
	STD1(0.5 ug/L)	STD2(2 ug/L)	STD3(5 ug/L)	STD4(10 ug/L)	STD5(25 ug/L)	r2
Standanrd ID.	A3H0040	A3H0041	A3H0042	A3H0043	A3H0044	
Mercury	0.0044	0.0178	0.0428	0.0841	0.2051	0.999851

Standard Concentration:	1 mg/L
Standard ID:	A3H0037

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

Advanced Technology Laboratories 3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

ATL Number: 1302547. / 1302545 BA 09/25/13

(EPA 7471A) INITIAL AND CONTINUING CALIBRATION VERFICATION

Instrument ID: AA5
Date Analyzed: 8/26/2013

	Source:	Standard Code:
Initial Calibration Verification:	High Purity	A3H0038
Continuing Calibration Verification:	High Purity	A3H0038

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found ICV	Initial Calibration %R(1)	True	True	Continuing Calibration Found CCV1	%R	Found CCV2	%R	Found CCV3	%R	Found CCV4	%R	Found CCV5	%R	Found CCV6	%R	Found CCV7	%R	Found CCV8	%R
Mercury	20	19.580	98	10	20	18.330	92	20.440	102	21.100	105										

BA 09/19/13

ICV/CCV Limits: 90 -110%

ATL Number: 1302581

(EPA 7471A) INITIAL AND CONTINUING CALIBRATION VERFICATION

Instrument ID: AA5
Date Analyzed: 8/28/2013

	Source:	Standard Code:
Initial Calibration Verification:	High Purity	A3H0038
Continuing Calibration Verification:	High Purity	A3H0038

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found ICV	Initial Calibration %R(1)	True	True	Continuing Calibration Found CCV1	%R	Found CCV2	%R	Found CCV3	%R	Found CCV4	%R	Found CCV5	%R	Found CCV6	%R	Found CCV7	%R	Found CCV8	%R
Mercury	20	18.730	94	10	20	18.770	94	18.730 4	94	18.820	94										

ICV/CCV Limits: 90 -110%

BA 09/20/13

SUMMARY OF INSTRUMENT BLANKS

Advanced Technology Laboratory 3275 Walnut avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

ATL Number: 1302545, 1302547 BA09/25/13

(EPA 7471A) BLANK

Instrument ID: AA5
Date Digested: 8/26/2013
Digestion Method: EPA 7471A
QC Batch Number: B3H0471

Dilution: 1
Matrix: SOIL
Date Analyzed: 8/26/2013

Analyte	PQL (ug/L)	Initial Calib. Blank (ug/L)	Q	Continuing Calibration Blank (ug/L) 1	Q	2	Q	3	Q	4	Q	5	Q	6	Q	7	Q	8	Q	PQL (ug/L)	Method Blank (ug/L)	Q
Mercury	1.2	0.000		0.010		0.030		0.020												1.2	0.000	

Note: Q = Qualifier

ATL Number: 1302581.

(EPA 7471A) BLANK

Instrument ID: AA5
Date Digested: 8/28/2013
Digestion Method: EPA 7471A
QC Batch Number: B3H0553.

Dilution: 1
Matrix: SOIL
Date Analyzed: 8/28/2013

Analyte	PQL (ug/L)	Initial Calib. Blank (ug/L)	Q	Continuing Calibration Blank (ug/L) 1	Q	2	Q	3	Q	4	Q	5	Q	6	Q	7	Q	8	Q	PQL (ug/L)	Method Blank (ug/L)	Q
Mercury	1.2	0.030		0.050		0.060		0.060												1.2	0.000	

Note: Q = Qualifier

Method EPA 8290

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Rachelle Arada
Advanced Technology Labs
3275 Walnut Street
Signal Hill CA 90807

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

Pace Project #: 10240751
Sample Receipt Date: 09/04/2013
Client Project #: 1302545
Client Sub PO #: SC08167
State Cert #: 01155CA

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 4 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Brittany Hansen, your Pace Project Manager.

This report has been reviewed by:

Brittany J. Hansen

September 25, 2013

Brittany Hansen, Project Manager
(612) 607-6429
(612) 607-6444 (fax)
brittany.hansen@pacelabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Report Prepared Date:

September 25, 2013

Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analysis performed on one sample submitted by a representative of Advanced Technology Laboratories. The sample was analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The reporting limits were set to correspond to the lowest calibration points and a nominal 10-gram sample amount.

Second column confirmation analyses of 2,3,7,8-TCDF values obtained from the primary (DB5-MS) column are performed only when specifically requested for a project and only when the values are above the concentration of the lowest calibration standard. Typical resolution for this isomer using the DB5-MS column ranges from 25-30%.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extract ranged from 42-89%. All of the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to be free of PCDDs and PCDFs at the reporting limits. These results indicate that the sample processing steps did not significantly impact the results of the field sample determinations.

Laboratory spike samples were also prepared with the sample batch using clean sand that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 94-119% with relative percent differences of 0.0-3.9%. These results indicate high degrees of accuracy and precision for these determinations. Matrix spikes were not prepared with the sample batch.

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
Alabama	40770	Mississippi	MN00064
Alaska	MN00064	Montana	92
Arizona	AZ0014	Nebraska	
Arkansas	88-0680	Nevada	MN_00064_200
California	01155CA	New Jersey (NE	MN002
Colorado	MN00064	New Mexico	MN00064
Connecticut	PH-0256	New York (NEL	11647
EPA Region 5	WD-15J	North Carolina	27700
EPA Region 8	8TMS-Q	North Dakota	R-036
Florida (NELAP	E87605	Ohio	4150
Georgia (DNR)	959	Oklahoma	D9922
Guam	959	Oregon (ELAP)	MN200001-005
Hawaii	SLD	Oregon (OREL	MN300001-001
Idaho	MN00064	Pennsylvania	68-00563
Illinois	200012	Saipan	MP0003
Indiana	C-MN-01	South Carolina	74003001
Indiana	C-MN-01	Tennesee	2818
Iowa	368	Tennessee	02818
Kansas	E-10167	Texas	T104704192-08
Kentucky	90062	Utah (NELAP)	PAM
Louisiana	03086	Virginia	00251
Maine	2007029	Washington	C755
Maryland	322	West Virginia	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-Q

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interference present

J = Estimated value

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = See Discussion

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

2,3,7,8-TCDD Equivalency Factors (TEFs) for the Polychlorinated Dibenzo-p-dioxins and Dibenzofurans

89-ITE-Factors

Compound	TEF
2,3,7,8-TCDD	1.000000
1,2,3,7,8-PeCDD	0.500000
1,2,3,4,7,8-HxCDD	0.100000
1,2,3,6,7,8-HxCDD	0.100000
1,2,3,7,8,9-HxCDD	0.100000
1,2,3,4,6,7,8-HpCDD	0.010000
OCDD	0.001000
Total TCDD	0.000000
Total PeCDD	0.000000
Total HxCDD	0.000000
Total HpCDD	0.000000
2,3,7,8-TCDF	0.100000
1,2,3,7,8-PeCDF	0.050000
2,3,4,7,8-PeCDF	0.500000
1,2,3,4,7,8-HxCDF	0.100000
1,2,3,6,7,8-HxCDF	0.100000
2,3,4,6,7,8-HxCDF	0.100000
1,2,3,7,8,9-HxCDF	0.100000
1,2,3,4,6,7,8-HpCDF	0.010000
1,2,3,4,7,8,9-HpCDF	0.010000
OCDF	0.001000
Total TCDF	0.000000
Total PeCDF	0.000000
Total HxCDF	0.000000
Total HpCDF	0.000000

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Appendix A

Sample Management

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Sample ID Cross Reference

Client Sample ID	Pace Sample ID	Date Received	Sample Type
1302545-05 / T-12-9.5	10240751001-R	09/04/2013	Soil

REPORT OF LABORATORY ANALYSIS

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10240751

ADVANCED TECHNOLOGY LABORATORIES

1132

SUBCONTRACT ORDER

Work Order: 1302545

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Rachelle Arada (Rachelle@atlglobal.com)

RECEIVING LABORATORY:

Pace Analytical Services, Inc.
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone :(612) 607-1700
Fax: (612) 607-6444
PO#: SC08167- STANDARD TAT

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires		Sampled
ATL Lab#: 1302545-05 / T-12-9.5			**Soil**	**08/20/13 00:00**
8290 [Dioxins and Dibenzofurans]	**09/19/13 17:00**	09/19/13 00:00		
1-Glass Jar - 4 oz				

Comments: NEED LEVEL III DATA PACKAGE

T= 0.7°C

Released By	Date	Received By	Date
		CSL/PACE	9/13 950
Released By	Date	Received By	Date

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 28Jan2013 Page 1 of 1
	Document No.: **F-MN-L-213-rev.06**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Advanced

Project #: WO#: 10240751

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other:

Tracking Number: 7966 0142 8929

Custody Seal on Cooler/Box Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: **Temp Blank?** ☐ Yes ☑ No

Thermom. Used: ☑ 88A912167504 ☐ 80512447 ☐ 72337080 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 0.2 **Cooler Temp Corrected (°C):** 0.7 **Biological Tissue Frozen?** ☐ Yes ☐ No

Temp should be above freezing to 6°C **Correction Factor:** +0.5 **Date and Initials of Person Examining Contents:** CS 9.4.13

Comments:

Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☐ Yes	☑ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: SL				
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	☐ Yes	☐ No	☑ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12)	☐ Yes	☐ No	☑ N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☐ Yes	☑ No		Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	14.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: BH2 **Date:** 9/4/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

DIOXIN EXTRACTION WORKSHEET

Pace Analytical Services, Inc.

Non Aqueous

EB-13874

Extraction Batch : EB-13874

Method 8290 1613B TO9 M23

Matrix PUF XAD Solid Oil

Tissue Other _____

Spiked By _____

Spike Witness _____

Time of Spiking _____

Extraction On (Date/Time):
9/12/2013 5:05:00 PM

Extraction Off (Date/Time):
9/13/2013 9:05:00 AM

Standards:

Internal Std FS-I-9966-028
Native FS-N-9966-024
Cl-37 Std DWCL4-9966-029
Recovery Std FS-R-9966-027
Tridecane
Mineral Oil
Others

☐ **Silica:**
Date 9/13/2013
Initials PED
Hexane Lot # 130152
Dispenser ID
Neutral Batch # 242N
Basic Batch # 325B
Acid Batch # 489A

☐ **Carbon:**
Date 9/16/2013
Initials MF
Toluene Lot # 131926
Dispenser ID
75% Batch # 314
Dispenser ID
50% Batch # 430
Dispenser ID
Hexane Lot # 130152
Dispenser ID

☐ **Alumina:**
Date 9/14/2000
Initials TDP
Hexane Lot # 130152
Dispenser ID
60% Batch # 1542
Dispenser ID
Alumina Lot

Extract Solvents:
Toluene Lot #
Hexane Lot #
MeCl Lot #

☐ **Acid Base:**
H2SO4 Lot #
Buffer Soln #

QC Matrix Lot/Batch# _____

	Sample #	Internal Stds	Native Stds	Extracted mL or g	#AcidRinse	Buffer Soln	Glassware Set	Location	Comments
1	BLANK-37723			21.70					
2	LCS-37724			20.20					
3	LCSD-37725			20.40					
4	10239780009-R			16.50				Rcving	1613 T-O,prescreen,NO MAEI
5	10239780010-R			16.90				Rcving	1613 T-O,prescreen,NO MAEI
6	10239780012-R			12.20				Rcving	1613 T-O,prescreen,NO MAEI
7	10239780013-R			16.80				Rcving	1613 T-O,prescreen,NO MAEI
8	10239780014-R			15.70				Rcving	1613 T-O,prescreen,NO MAEI
9	10239780015-R			16.10				Rcving	1613 T-O,prescreen,NO MAEI
10	10239780016-R			16.40				Rcving	1613 T-O,prescreen,NO MAEI
11	10239780017-R			16.80				Rcving	1613 T-O,prescreen,NO MAEI
12	10239780018-R			16.10				Rcving	1613 T-O,prescreen,NO MAEI
13	10239780019-R			14.30				Rcving	1613 T-O,prescreen,NO MAEI
14	10239780020-R			15.20				Rcving	1613 T-O,prescreen,NO MAEI
15	10239780021-R			16.20				Rcving	1613 T-O,prescreen,NO MAEI
16	10239780022-R			5.60				Rcving	1613 T-O,prescreen,NO MAEI
17	10240776001-R			43.30				1 0904 08	1613,T-O,chromerge,ext by 9/12
18	10241247001			20.30				Rcving	1613,T-O,EU Req
19	10241247002			20.10				Rcving	1613,T-O,EU Req
20	10241247003			20.60				Rcving	1613,T-O,EU Req
21	35104661009-R2			13.00				10 0820 04	8290,T-O;prescreen
22	35104661011-R2			16.90				10 0820 04	8290,T-O;prescreen
23	10240751001-R			11.60				Rcving	prescreen, 8290 T-O

Extracts Relinquished By: _____ **Received By:** _____ **Date:** _____

FH025Rev.01, 05Jan2009

Report No.....10240751_8290

Extraction Notes

FT/KH

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Solid Sample Moisture Log

Sample ID	Container Weight	Adjusted Wet Weight	Adjusted Dry Weight	% Moisture	% Solids	Amount Extracted	Assayed
BLANK-37723	0.00	0.00	0.00	0.00	100.00	21.70	12/30/99
LCS-37724	0.00	0.00	0.00	0.00	100.00	20.20	12/30/99
LCSD-37725	0.00	0.00	0.00	0.00	100.00	20.40	12/30/99
10239780009-R	0.00	0.00	0.00	17.00	83.00	16.50	8/31/13 JDL
10239780010-R	0.00	0.00	0.00	10.80	89.20	16.90	8/31/13 JDL
10239780012-R	0.00	0.00	0.00	3.80	96.20	12.20	8/31/13 JDL
10239780013-R	0.00	0.00	0.00	11.70	88.30	16.80	8/31/13 JDL
10239780014-R	0.00	0.00	0.00	1.30	98.70	15.70	8/31/13 JDL
10239780015-R	0.00	0.00	0.00	5.60	94.40	16.10	8/31/13 JDL
10239780016-R	0.00	0.00	0.00	0.70	99.30	16.40	8/31/13 JDL
10239780017-R	0.00	0.00	0.00	35.00	65.00	16.80	8/31/13 JDL
10239780018-R	0.00	0.00	0.00	2.80	97.20	16.10	8/31/13 JDL
10239780019-R	0.00	0.00	0.00	4.60	95.40	14.30	8/31/13 JDL
10239780020-R	0.00	0.00	0.00	1.20	98.80	15.20	8/31/13 JDL
10239780021-R	0.00	0.00	0.00	1.30	98.70	16.20	8/31/13 JDL
10239780022-R	0.00	0.00	0.00	1.10	98.90	5.60	8/31/13 JDL
10240776001-R	0.00	0.00	0.00	56.20	100.00	43.30	12/30/99
10241247001	0.00	0.00	0.00	0.00	100.00	20.30	12/30/99
10241247002	0.00	0.00	0.00	0.00	100.00	20.10	12/30/99
10241247003	0.00	0.00	0.00	0.00	100.00	20.60	12/30/99
35104661009-R2	0.00	0.00	0.00	25.30	100.00	13.00	8/21/13 IR00
35104661011-R2	0.00	0.00	0.00	11.00	100.00	16.90	8/21/13 IR00
10240751001-R	0.00	0.00	0.00	6.80	~~100.00~~	11.60	12/30/99

① SWA 9/25/13

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Client names have been blacked out on notebook pages in order to preserve client confidentiality

Analysis Key Code List

- = Not used

✔ = Worked up

= See comment # below

Li = Liner, replace or clean

Ba = Baseplate, change

SyB = Syringe, replace – bent

SyP = Syringe, replace – plugged

SyO = Syringe, replace – other

IS = Injector Septum, replace

BS = Batch Septum, replace

Fi = Filament, replace

Co = Contacts, adjust

Ca = re-Calibrate

Tu = Tune

TC = Tune and Calibrate

CC () = Cut Column (length cut)

CO = Carry-Over possible

RRM = ReRun - Matrix

RRLM = ReRun – Lock Mass

RRBI = ReRun – Bad Injection

RRRT = ReRun – Retention Time shift

RR>S = Rerun – need better Sensitivity

Re = Re-extract

AS = Adjust Slits

LC = Leak Check

RB = Re-Boot system

CiS = Cleaned inner Source

CoS = Cleaned outer Source

AiS = Alternate inner Source

AoS = Alternate outer Source

<Y = Adjust Y focus down

>Y = Adjust Y focus up

Di () = Dilution needed (amount needed)

FE = Front End – liner, baseplate and septum

Sample List Report **MassLynx 4.1 SCN 881** 10MSH-206 7/29/13

Sample List: C:\MassLynx\Default.pro\Sampledb\U130729B.SPL

Last Modified: Monday, July 29, 2013 16:57:48 Central Daylight Time

Printed: Monday, July 29, 2013 16:58:11 Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Method	MS File	Inlet File	Vial	Inj
1	U130729B_01	CAL CS3/CPM-7604-274 - SMT TC	8290	dioxfur	dioxfur	Tray1:1	1.000000
2	U130729B_02	LCS STD-37216 - SMT	HOUSE	dioxfur	dioxfur	Tray1:4	1.000000
3	U130729B_03	BLANK NONANE - SMT	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000
4	U130729B_04	BLANK 8515-142-10X - SMT	HOUSE	dioxfur	dioxfur	Tray1:3	1.000000
5	U130729B_05	SAMP 10231732012 - SMT [redacted] co check	8290	dioxfur	dioxfur	Tray1:5	1.000000
6	U130729B_06	SAMP 10231732014 - SMT [redacted] co check	8290	dioxfur	dioxfur	Tray1:6	1.000000
7	U130729B_07	SAMP 3598370001-R - SMT [redacted]	8290	dioxfur	dioxfur	Tray1:7	1.000000
8	U130729B_08	SAMP 3598370002-R - SMT [redacted]	8290	dioxfur	dioxfur	Tray1:8	1.000000
9	U130729B_09	CAL CS3/CPM-7604-274 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000
10	U130729B_10	CAL CS2-7604-276 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:9	1.000000
11	U130729B_11	CAL CS1-7604-273 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:10	1.000000
12	U130729B_12	CAL CS5-7604-278 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:11	1.000000
13	U130729B_13	CAL CS4-7604-277 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:12	1.000000
14	U130729B_14	BLANK NONANE - SMT	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000
15	U130729B_15	CAL STD-37024 - SMT 2nd	8290/1613B	dioxfur	dioxfur	Tray1:13	1.000000
16	U130729B_16	BLANK NONANE - SMT	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000
17	U130729B_17	BLANK NONANE - SMT	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000
18	U130729B_18	SAMP 60149402001 - SMT [redacted]	1613B-TD	dioxfur	dioxfur	Tray1:14	1.000000
19	U130729B_19	SAMP 201107262 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:15	1.000000
20	U130729B_20	SAMP 1222806001 - SMT [redacted]	1613B-TD/F	dioxfur	dioxfur	Tray1:16	1.000000
21	U130729B_21	SAMP 10236297001 - SMT [redacted]	1613B-TD	dioxfur	dioxfur	Tray1:17	1.000000
22	U130729B_22	SAMP 10236295001 - SMT [redacted]	1613B-TD	dioxfur	dioxfur	Tray1:18	1.000000
23	U130729B_23	BLANK BLANK-37138 - SMT	1613B	dioxfur	dioxfur	Tray1:19	1.000000
24	U130729B_24	CAL CS3/CPM-7604-274 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000

Sum 8/2/13

Sample List Report **MassLynx 4.1 SCN 881** 10MSHR06 9/17/13

Sample List: C:\MassLynx\Default.pro\Sampledb\U130917A.SPL

Last Modified: Wednesday, September 18, 2013 07:15:09 Central Daylight Time

Printed: Wednesday, September 18, 2013 07:15:13 Central Daylight Time Page Position (1, 1)

	File Name	File Text	Method	MS File	Inlet File	Vial	Inj
1	U130917A_01	CAL CS3/CPM-7604-279 - SMT FE AS TC	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000
2	U130917A_02	SAMP 35106542001-MS - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:4	1.000000
3	U130917A_03	SAMP 35106542001-MSD - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:5	1.000000
4	U130917A_04	BLANK BLANK-8515-142-10X - SMT	HOUSE	dioxfur	dioxfur	Tray1:3	1.000000
5	U130917A_05	LCS LCS-37732 - SMT	8290	dioxfur	dioxfur	Tray1:6	1.000000
6	U130917A_06	CAL CS3/CPM-7604-279 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000
7	U130917A_07	LCS LCS-37724 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:4	1.000000
8	U130917A_08	LCS LCSD-37725 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:5	1.000000
9	U130917A_09	BLANK BLANK-8515-142-10X - SMT	HOUSE	dioxfur	dioxfur	Tray1:3	1.000000
10	U130917A_10	BLANK BLANK-37723 - SMT	8290	dioxfur	dioxfur	Tray1:7	1.000000
11	U130917A_11	SAMP 35106542001 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:8	1.000000
12	U130917A_12	SAMP 35104661009-R2 - SMT [redacted]	8290	dioxfur	dioxfur	Tray1:9	1.000000
13	U130917A_13	SAMP 35104661011-R2 - SMT [redacted] dec	8290	dioxfur	dioxfur	Tray1:10	1.000000
14	U130917A_14	SAMP 35106543001 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:11	1.000000
15	U130917A_15	SAMP 35106543002 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:12	1.000000
16	U130917A_16	SAMP 35106543003 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:13	1.000000
17	U130917A_17	SAMP 35106543004 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:14	1.000000
18	U130917A_18	SAMP 35106543005 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:15	1.000000
19	U130917A_19	SAMP 35106543006 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:16	1.000000
20	U130917A_20	SAMP 10240757001 - BAL [redacted] xclp	1613B-TD	dioxfur	dioxfur	Tray1:17	1.000000
21	U130917A_21	BLANK NONANE - SMT yellow samps	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000
22	U130917A_22	CAL CS3/CPM-7604-279 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000

pat ab

SWH 9/18/13

	File Name	File Text	Method	MS File	Inlet File	Vial	Inject
1	F130918B_01	CAL CS3/CPM-7604-279 - SMT TC	8290/1613B	dioxfur	dioxfur	1	1.000000
2	F130918B_02	CAL CS3/CPM-7604-279 - SMT FE 4"	8290/1613B	dioxfur	dioxfur	1	1.000000
3	F130918B_03	CAL CS2-7604-276 - SMT	8290/1613B	dioxfur	dioxfur	20	1.000000
4	F130918B_04	CAL CS1-7604-273 - SMT	8290/1613B	dioxfur	dioxfur	21	1.000000
5	F130918B_05	CAL CS5-7604-278 - SMT	8290/1613B	dioxfur	dioxfur	22	1.000000
6	F130918B_06	CAL CS4-7604-277 - SMT	8290/1613B	dioxfur	dioxfur	23	1.000000
7	F130918B_07	BLANK NONANE - SMT	HOUSE	dioxfur	dioxfur	2	1.000000
8	F130918B_08	CAL LCS-37562 - SMT 2nd	8290/1613B	dioxfur	dioxfur	24	1.000000
9	F130918B_09	LCS LCS-37608 - SMT [redacted] x-cln	1613B	dioxfur	dioxfur	17	1.000000
10	F130918B_10	SAMP 10240642007-MS - SMT [redacted] x-cln	1613B	dioxfur	dioxfur	18	1.000000
11	F130918B_11	SAMP 10240642007-MSD - SMT [redacted] x-cln	1613B	dioxfur	dioxfur	19	1.000000

9/20/13

Sample List Report **MassLynx 4.0 SCN480 SCN533** 10MSHROS 9/21/13

Sample List: C:\MassLynx\Default.pro\Sampledb\F130921A.SPL

Last Modified: Friday, September 20, 2013 6:16:31 PM Central Daylight Time

Printed: Friday, September 20, 2013 6:18:33 PM Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Method	MS File	Inlet File	Vial	Inject
1	F130921A_01	LCS LCS-37801 - BAL	8290/1613T	dioxfur	dioxfur	18	1.000000
2	F130921A_02	LCS LCSD-37802 - BAL	8290/1613T	dioxfur	dioxfur	19	1.000000
3	F130921A_03	BLANK NONANE - BAL	HOUSE	dioxfur	dioxfur	2	1.000000
4	F130921A_04	SAMP 201122364 - BAL [redacted]	8290-TD	dioxfur	dioxfur	20	1.000000
5	F130921A_05	BLANK BLANK-37800 - BAL	8290/1613T	dioxfur	dioxfur	21	1.000000
6	F130921A_06	SAMP 10241495019 - BAL [redacted]	8290	dioxfur	dioxfur	22	1.000000
7	F130921A_07	SAMP 10241526013 - BAL [redacted]	8290	dioxfur	dioxfur	23	1.000000
8	F130921A_08	SAMP 35107374001 - BAL [redacted]	8290	dioxfur	dioxfur	24	1.000000
9	F130921A_09	SAMP 35107374002 - BAL [redacted]	8290	dioxfur	dioxfur	25	1.000000
10	F130921A_10	SAMP 35107374003 - BAL [redacted]	8290	dioxfur	dioxfur	26	1.000000
11	F130921A_11	SAMP 35107374004 - BAL [redacted]	8290	dioxfur	dioxfur	27	1.000000
12	F130921A_12	SAMP 35107374005 - BAL [redacted]	8290	dioxfur	dioxfur	28	1.000000
13	F130921A_13	SAMP 35107374006 - BAL [redacted]	8290	dioxfur	dioxfur	29	1.000000
14	F130921A_14	SAMP 35107374007 - BAL [redacted]	8290	dioxfur	dioxfur	30	1.000000
15	F130921A_15	SAMP 35107374008 - BAL [redacted]	8290	dioxfur	dioxfur	31	1.000000
16	F130921A_16	CAL CS3/CPM-7604-279 - BAL BAL	8290/1613B	dioxfur	dioxfur	1	1.000000

pass 8290 + 1613T

JM 9/25/13

Sample List Report **MassLynx 4.0 SCN480 SCN533** 10 MS HR.05 9/21/13

Sample List: C:\MassLynx\Default.pro\Sampledb\F130921B.SPL

Last Modified: Saturday, September 21, 2013 3:22:23 PM Central Daylight Time

Printed: Saturday, September 21, 2013 3:22:43 PM Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Method	MS File	Inlet File	Vial	Inject
1	F130921B_01	BLANK NONANE - BAL	HOUSE	dioxfur	dioxfur	2	1.000000
2	F130921B_02	SAMP 10241785001 - BAL [redacted]	1613B-TD	dioxfur	dioxfur	4	1.000000
3	F130921B_03	BLANK BLANK-37757 - BAL	8290/1613T	dioxfur	dioxfur	5	1.000000
4	F130921B_04	SAMP 10242402001 - BAL [redacted]	8290	dioxfur	dioxfur	6	1.000000
5	F130921B_05	SAMP 10241526001 - BAL [redacted]	8290	dioxfur	dioxfur	7	1.000000
6	F130921B_06	SAMP 10241526005 - BAL [redacted]	8290	dioxfur	dioxfur	8	1.000000
7	F130921B_07	SAMP 10241526006 - BAL [redacted]	8290	dioxfur	dioxfur	9	1.000000
8	F130921B_08	SAMP 10241670001 - BAL [redacted]	1613B-TD	dioxfur	dioxfur	10	1.000000
9	F130921B_09	SAMP 4083352001 - BAL [redacted]	8290	dioxfur	dioxfur	11	1.000000
10	F130921B_10	SAMP 10240751001-R - BAL ADV	8290	dioxfur	dioxfur	12	1.000000
11	F130921B_11	SAMP 10240751002-R - BAL ADV (1)	8290	dioxfur	dioxfur	13	1.000000
12	F130921B_12	SAMP 10240910001 - BAL [redacted]	8290	dioxfur	dioxfur	14	1.000000
13	F130921B_13	SAMP 10240910002 - BAL [redacted]	8290	dioxfur	dioxfur	15	1.000000
14	F130921B_14	LCS LCS-37758 - BAL	8290/1613T	dioxfur	dioxfur	16	1.000000
15	F130921B_15	LCS LCSD-37759 - BAL	8290/1613T	dioxfur	dioxfur	17	1.000000
16	F130921B_16	CAL CS3/CPM-7604-279 - BAL BAL	8290/1613B	dioxfur	dioxfur	1	1.000000

Passed 8290 & 1613 but not 1613 tetra CAL 9/22/13

(1) 754001 9/21/13

Jiss 9/25/13

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Advanced Technology Labs

Client's Sample ID	1302545-05 / T-12-9.5		
Lab Sample ID	10240751001-R		
Filename	F130921B_10		
Injected By	BAL		
Total Amount Extracted	11.6 g	Matrix	Soil
% Moisture	6.8	Dilution	NA
Dry Weight Extracted	10.8 g	Collected	08/20/2013 08:00
ICAL ID	F130918	Received	09/04/2013 09:50
CCal Filename(s)	F130921A_16 & F130921B_16	Extracted	09/12/2013 17:05
Method Blank ID	BLANK-37723	Analyzed	09/21/2013 21:25

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	3.4	-----	1.0	2,3,7,8-TCDF-13C	2.00	75
Total TCDF	100.0	-----	1.0	2,3,7,8-TCDD-13C	2.00	87
				1,2,3,7,8-PeCDF-13C	2.00	76
2,3,7,8-TCDD	ND	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	74
Total TCDD	6.6	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	89
				1,2,3,4,7,8-HxCDF-13C	2.00	75
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	80
2,3,4,7,8-PeCDF	11.0	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	79
Total PeCDF	85.0	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	63
				1,2,3,4,7,8-HxCDD-13C	2.00	79
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	73
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	74
				1,2,3,4,7,8,9-HpCDF-13C	2.00	68
1,2,3,4,7,8-HxCDF	11.0	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	74
1,2,3,6,7,8-HxCDF	16.0	-----	5.0	OCDD-13C	4.00	42
2,3,4,6,7,8-HxCDF	27.0	-----	5.0			
1,2,3,7,8,9-HxCDF	5.3	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	120.0	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	89
1,2,3,6,7,8-HxCDD	5.8	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	40.0	-----	5.0			
1,2,3,4,6,7,8-HpCDF	77.0	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	15.0	-----	5.0	Equivalence: 14 ng/Kg		
Total HpCDF	130.0	-----	5.0	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	60.0	-----	5.0			
Total HpCDD	110.0	-----	5.0			
OCDF	36.0	-----	10.0			
OCDD	130.0	-----	10.0			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

and are valid to no more than 2 significant figures.

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Appendix C

QC and Calibration Results Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Pace Analytical™

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-37723	Matrix	Solid
Filename	U130917A_10	Dilution	NA
Total Amount Extracted	21.7 g	Extracted	09/12/2013 17:05
ICAL ID	U130729	Analyzed	09/17/2013 16:38
CCal Filename(s)	U130917A_06 & U130917A_22	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	1.0	2,3,7,8-TCDF-13C	2.00	76
Total TCDF	ND	----	1.0	2,3,7,8-TCDD-13C	2.00	84
				1,2,3,7,8-PeCDF-13C	2.00	77
2,3,7,8-TCDD	ND	----	1.0	2,3,4,7,8-PeCDF-13C	2.00	80
Total TCDD	ND	----	1.0	1,2,3,7,8-PeCDD-13C	2.00	87
				1,2,3,4,7,8-HxCDF-13C	2.00	77
1,2,3,7,8-PeCDF	ND	----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	86
2,3,4,7,8-PeCDF	ND	----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	92
Total PeCDF	ND	----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	77
				1,2,3,4,7,8-HxCDD-13C	2.00	84
1,2,3,7,8-PeCDD	ND	----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	79
Total PeCDD	ND	----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	80
				1,2,3,4,7,8,9-HpCDF-13C	2.00	80
1,2,3,4,7,8-HxCDF	ND	----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	78
1,2,3,6,7,8-HxCDF	ND	----	5.0	OCDD-13C	4.00	76
2,3,4,6,7,8-HxCDF	ND	----	5.0			
1,2,3,7,8,9-HxCDF	ND	----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	5.0	2,3,7,8-TCDD-37Cl4	0.20	82
1,2,3,6,7,8-HxCDD	ND	----	5.0			
1,2,3,7,8,9-HxCDD	ND	----	5.0			
Total HxCDD	ND	----	5.0			
1,2,3,4,6,7,8-HpCDF	ND	----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	5.0	Equivalence: 0.00 ng/Kg		
Total HpCDF	ND	----	5.0	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	5.0			
Total HpCDD	ND	----	5.0			
OCDF	ND	----	10.0			
OCDD	ND	----	10.0			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

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Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-37724		
Filename	U130917A_07	Matrix	Solid
Total Amount Extracted	20.2 g	Dilution	NA
ICAL ID	U130729	Extracted	09/12/2013 17:05
CCal Filename(s)	U130917A_06 & U130917A_22	Analyzed	09/17/2013 14:00
Method Blank ID	BLANK-37723	Injected By	SMT

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.21	104	2,3,7,8-TCDF-13C	2.0	74
Total TCDF				2,3,7,8-TCDD-13C	2.0	81
				1,2,3,7,8-PeCDF-13C	2.0	73
2,3,7,8-TCDD	0.20	0.20	102	2,3,4,7,8-PeCDF-13C	2.0	75
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	83
				1,2,3,4,7,8-HxCDF-13C	2.0	75
1,2,3,7,8-PeCDF	1.0	1.0	104	1,2,3,6,7,8-HxCDF-13C	2.0	81
2,3,4,7,8-PeCDF	1.0	1.0	102	2,3,4,6,7,8-HxCDF-13C	2.0	90
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	76
				1,2,3,4,7,8-HxCDD-13C	2.0	83
1,2,3,7,8-PeCDD	1.0	0.96	96	1,2,3,6,7,8-HxCDD-13C	2.0	78
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	81
				1,2,3,4,7,8,9-HpCDF-13C	2.0	76
1,2,3,4,7,8-HxCDF	1.0	1.1	106	1,2,3,4,6,7,8-HpCDD-13C	2.0	75
1,2,3,6,7,8-HxCDF	1.0	1.0	105	OCDD-13C	4.0	73
2,3,4,6,7,8-HxCDF	1.0	1.0	101			
1,2,3,7,8,9-HxCDF	1.0	1.1	106	1,2,3,4-TCDD-13C	2.0	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDD	1.0	1.1	107	2,3,7,8-TCDD-37Cl4	0.20	84
1,2,3,6,7,8-HxCDD	1.0	1.2	119			
1,2,3,7,8,9-HxCDD	1.0	1.1	107			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.1	111			
1,2,3,4,7,8,9-HpCDF	1.0	1.0	105			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	1.1	107			
Total HpCDD						
OCDF	2.0	2.2	111			
OCDD	2.0	2.3	113			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

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Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCSD-37725		
Filename	U130917A_08	Matrix	Solid
Total Amount Extracted	20.4 g	Dilution	NA
ICAL ID	U130729	Extracted	09/12/2013 17:05
CCal Filename(s)	U130917A_06 & U130917A_22	Analyzed	09/17/2013 14:45
Method Blank ID	BLANK-37723	Injected By	SMT

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.20	102	2,3,7,8-TCDF-13C	2.0	72
Total TCDF				2,3,7,8-TCDD-13C	2.0	79
				1,2,3,7,8-PeCDF-13C	2.0	71
2,3,7,8-TCDD	0.20	0.21	104	2,3,4,7,8-PeCDF-13C	2.0	75
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	84
				1,2,3,4,7,8-HxCDF-13C	2.0	73
1,2,3,7,8-PeCDF	1.0	1.0	105	1,2,3,6,7,8-HxCDF-13C	2.0	80
2,3,4,7,8-PeCDF	1.0	1.0	101	2,3,4,6,7,8-HxCDF-13C	2.0	87
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	72
				1,2,3,4,7,8-HxCDD-13C	2.0	79
1,2,3,7,8-PeCDD	1.0	0.94	94	1,2,3,6,7,8-HxCDD-13C	2.0	77
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	77
				1,2,3,4,7,8,9-HpCDF-13C	2.0	73
1,2,3,4,7,8-HxCDF	1.0	1.0	104	1,2,3,4,6,7,8-HpCDD-13C	2.0	72
1,2,3,6,7,8-HxCDF	1.0	1.0	101	OCDD-13C	4.0	71
2,3,4,6,7,8-HxCDF	1.0	0.98	98			
1,2,3,7,8,9-HxCDF	1.0	1.1	109	1,2,3,4-TCDD-13C	2.0	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDD	1.0	1.1	107	2,3,7,8-TCDD-37Cl4	0.20	81
1,2,3,6,7,8-HxCDD	1.0	1.1	115			
1,2,3,7,8,9-HxCDD	1.0	1.1	106			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.1	110			
1,2,3,4,7,8,9-HpCDF	1.0	1.0	102			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	1.0	104			
Total HpCDD						
OCDF	2.0	2.2	110			
OCDD	2.0	2.2	110			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

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Method 8290

Spike Recovery Relative Percent Difference (RPD) Results

Client	Advanced Technology Labs		
Spike 1 ID	LCS-37724	Spike 2 ID	LCSD-37725
Spike 1 Filename	U130917A_07	Spike 2 Filename	U130917A_08

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	104	102	1.9
2,3,7,8-TCDD	102	104	1.9
1,2,3,7,8-PeCDF	104	105	1.0
2,3,4,7,8-PeCDF	102	101	1.0
1,2,3,7,8-PeCDD	96	94	2.1
1,2,3,4,7,8-HxCDF	106	104	1.9
1,2,3,6,7,8-HxCDF	105	101	3.9
2,3,4,6,7,8-HxCDF	101	98	3.0
1,2,3,7,8,9-HxCDF	106	109	2.8
1,2,3,4,7,8-HxCDD	107	107	0.0
1,2,3,6,7,8-HxCDD	119	115	3.4
1,2,3,7,8,9-HxCDD	107	106	0.9
1,2,3,4,6,7,8-HpCDF	111	110	0.9
1,2,3,4,7,8,9-HpCDF	105	102	2.9
1,2,3,4,6,7,8-HpCDD	107	104	2.8
OCDF	111	110	0.9
OCDD	113	110	2.7

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

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Method 8290/1613
Initial Calibration (ICAL) - Response Factor Summary

ICAL ID	F130918	Data Files:		Time	Injected
Calibration Date	09/18/2013	CS-1	F130918B_04	18:22	SMT
Instrument	10MSHR05 (F)	CS-2	F130918B_03	17:38	SMT
Column Phase	DB-5MS 0.25mm	CS-3	F130918B_02	16:50	SMT
Column ID No.	USD174324H	CS-4	F130918B_06	19:54	SMT
		CS-5	F130918B_05	19:08	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
2,3,7,8-TCDF	1.0056	1.0674	1.1267	1.1435	1.1410	1.0968	5.43
2,3,7,8-TCDD	1.1272	1.0525	1.1558	1.1616	1.1665	1.1327	4.18
1,2,3,7,8-PeCDF	1.0831	1.1328	1.1318	1.1577	1.1649	1.1340	2.83
2,3,4,7,8-PeCDF	1.1251	1.1557	1.1618	1.2091	1.2023	1.1708	2.98
1,2,3,7,8-PeCDD	1.0941	1.1224	1.1458	1.1499	1.1508	1.1326	2.16
1,2,3,4,7,8-HxCDF	1.2706	1.2612	1.2627	1.3010	1.3317	1.2855	2.37
1,2,3,6,7,8-HxCDF	1.2834	1.2327	1.2533	1.2605	1.2831	1.2626	1.70
2,3,4,6,7,8-HxCDF	1.2082	1.3573	1.3273	1.3706	1.3544	1.3236	5.02
1,2,3,7,8,9-HxCDF	1.1508	1.1661	1.1842	1.2378	1.2037	1.1885	2.86
1,2,3,4,7,8-HxCDD	1.1578	1.1292	1.1763	1.1857	1.1840	1.1666	2.03
1,2,3,6,7,8-HxCDD	1.0592	1.0951	1.0775	1.0667	1.0624	1.0722	1.36
1,2,3,7,8,9-HxCDD	1.0642	1.0902	1.1631	1.1315	1.1180	1.1134	3.41
1,2,3,4,6,7,8-HpCDF	1.3326	1.4411	1.3298	1.3610	1.4254	1.3780	3.79
1,2,3,4,7,8,9-HpCDF	1.3392	1.3268	1.4124	1.3688	1.4889	1.3872	4.73
1,2,3,4,6,7,8-HpCDD	1.1301	1.1383	1.1786	1.2130	1.2203	1.1761	3.52
OCDF	1.3867	1.3738	1.4585	1.5364	1.5611	1.4633	5.80
OCDD	1.0231	1.0533	1.0806	1.1352	1.1108	1.0806	4.12
Total PeCDF	1.1041	1.1443	1.1468	1.1834	1.1836	1.1524	2.87
Total HxCDF	1.2282	1.2543	1.2569	1.2925	1.2932	1.2650	2.20
Total HxCDD	1.0937	1.1048	1.1390	1.1280	1.1215	1.1174	1.62
Total HpCDF	1.3359	1.3839	1.3711	1.3649	1.4571	1.3826	3.27
2,3,7,8-TCDF-13C	1.5962	1.5358	1.6981	1.5974	1.6444	1.6144	3.76
2,3,7,8-TCDD-13C	0.9072	0.9137	1.0205	0.9423	0.9846	0.9536	5.06
2,3,7,8-TCDD-37Cl4	0.9052	1.0111	1.1580	1.1020	1.1462	1.0645	9.97
1,2,3,7,8-PeCDF-13C	1.3665	1.3891	1.6039	1.4704	1.5398	1.4740	6.78
2,3,4,7,8-PeCDF-13C	1.3514	1.3617	1.6640	1.4181	1.5070	1.4604	8.86
1,2,3,7,8-PeCDD-13C	0.7487	0.7585	0.9429	0.8067	0.8660	0.8245	9.81
1,2,3,4,7,8-HxCDF-13C	1.4266	1.4118	1.3881	1.4751	1.4248	1.4253	2.23
1,2,3,6,7,8-HxCDF-13C	1.5667	1.5976	1.5163	1.6657	1.6059	1.5904	3.45
2,3,4,6,7,8-HxCDF-13C	1.5190	1.4179	1.4313	1.4574	1.4271	1.4505	2.82
1,2,3,7,8,9-HxCDF-13C	1.3579	1.3812	1.4571	1.4213	1.4473	1.4130	3.01
1,2,3,4,7,8-HxCDD-13C	0.9031	0.9502	0.9065	0.9408	0.9440	0.9289	2.40
1,2,3,6,7,8-HxCDD-13C	1.0218	1.0547	1.0601	1.1025	1.0744	1.0627	2.77
1,2,3,4,6,7,8-HpCDF-13C	0.8307	0.8000	0.8218	0.8286	0.8037	0.8170	1.75
1,2,3,4,7,8,9-HpCDF-13C	0.6477	0.6629	0.6302	0.7068	0.6797	0.6654	4.43
1,2,3,4,6,7,8-HpCDD-13C	0.5574	0.5867	0.5737	0.6335	0.6077	0.5918	5.02
OCDD-13C	0.7252	0.7876	0.7685	0.7903	0.8569	0.7857	6.05

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Method 8290/1613
Initial Calibration (ICAL) - Isotope Ratio Summary

ICAL ID	**F130918**	Data Files:		Time	Injected
Calibration Date	09/18/2013	CS-1	F130918B_04	18:22	SMT
Instrument	10MSHR05 (F)	CS-2	F130918B_03	17:38	SMT
Column Phase	DB-5MS 0.25mm	CS-3	F130918B_02	16:50	SMT
Column ID No.	USD174324H	CS-4	F130918B_06	19:54	SMT
		CS-5	F130918B_05	19:08	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
2,3,7,8-TCDF	0.84	0.78	0.81	0.79	0.80	0.65 - 0.89
2,3,7,8-TCDD	0.86	0.73	0.79	0.78	0.79	0.65 - 0.89
1,2,3,7,8-PeCDF	1.57	1.62	1.57	1.61	1.61	1.32 - 1.78
2,3,4,7,8-PeCDF	1.51	1.63	1.62	1.59	1.61	1.32 - 1.78
1,2,3,7,8-PeCDD	0.66	0.64	0.64	0.64	0.65	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.30	1.27	1.31	1.29	1.27	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.29	1.24	1.27	1.30	1.28	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.26	1.27	1.28	1.31	1.26	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.18	1.26	1.30	1.31	1.31	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.27	1.28	1.30	1.38	1.29	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.21	1.31	1.28	1.23	1.29	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.23	1.24	1.26	1.30	1.28	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF	1.09	0.99	1.02	1.02	0.97	0.88 - 1.20
1,2,3,4,7,8,9-HpCDF	0.93	1.07	0.98	1.09	1.07	0.88 - 1.20
1,2,3,4,6,7,8-HpCDD	1.08	0.98	1.02	1.05	1.06	0.88 - 1.20
OCDF	0.91	0.94	0.94	0.93	0.95	0.76 - 1.02
OCDD	0.92	0.89	0.90	0.89	0.91	0.76 - 1.02
1,2,3,4-TCDD-13C	0.81	0.80	0.82	0.79	0.80	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.24	1.26	1.28	1.26	1.27	1.05 - 1.43
2,3,7,8-TCDF-13C	0.81	0.80	0.80	0.80	0.79	0.65 - 0.89
2,3,7,8-TCDD-13C	0.81	0.81	0.81	0.80	0.80	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.62	1.64	1.62	1.62	1.61	1.32 - 1.78
2,3,4,7,8-PeCDF-13C	1.63	1.60	1.65	1.65	1.62	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.59	1.58	1.62	1.57	1.61	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.53	0.53	0.53	0.52	0.54	0.43 - 0.59
1,2,3,6,7,8-HxCDF-13C	0.54	0.56	0.53	0.53	0.55	0.43 - 0.59
2,3,4,6,7,8-HxCDF-13C	0.53	0.55	0.54	0.55	0.53	0.43 - 0.59
1,2,3,7,8,9-HxCDF-13C	0.54	0.53	0.54	0.54	0.54	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.32	1.28	1.28	1.33	1.29	1.05 - 1.43
1,2,3,6,7,8-HxCDD-13C	1.26	1.25	1.25	1.23	1.28	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF-13C	0.44	0.47	0.46	0.45	0.46	0.37 - 0.51
1,2,3,4,7,8,9-HpCDF-13C	0.42	0.47	0.46	0.45	0.44	0.37 - 0.51
1,2,3,4,6,7,8-HpCDD-13C	1.14	1.01	1.08	1.11	1.11	0.88 - 1.20
OCDD-13C	0.91	0.91	0.90	0.93	0.91	0.76 - 1.02

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Method 8290/1613
Initial Calibration (ICAL) - Response Factor Summary

ICAL ID	U130729	Data Files:		Time	Injected
Calibration Date	07/29/2013	CS-1	U130729B_11	23:48	SMT
Instrument	10MSHR06 (U)	CS-2	U130729B_10	23:00	SMT
Column Phase	DB-5MS 0.25mm	CS-3	U130729B_09	22:12	SMT
Column ID No.	USD227224H	CS-4	U130729B_13	01:25	SMT
		CS-5	U130729B_12	00:36	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
2,3,7,8-TCDF	0.9356	0.9238	0.8824	0.8940	0.8840	0.9040	2.69
2,3,7,8-TCDD	1.1618	1.0345	1.0720	1.0288	1.0360	1.0666	5.24
1,2,3,7,8-PeCDF	0.8534	0.8707	0.8673	0.8846	0.8996	0.8751	2.01
2,3,4,7,8-PeCDF	0.9395	0.9176	0.8908	0.9162	0.9166	0.9162	1.88
1,2,3,7,8-PeCDD	1.0781	1.0114	0.9619	1.0014	0.9919	1.0090	4.25
1,2,3,4,7,8-HxCDF	1.1070	1.0856	1.0239	1.0667	1.0596	1.0686	2.90
1,2,3,6,7,8-HxCDF	1.0026	0.9946	1.0113	1.0330	1.0420	1.0167	1.98
2,3,4,6,7,8-HxCDF	1.0042	1.1256	1.0588	1.1135	1.1345	1.0873	5.06
1,2,3,7,8,9-HxCDF	0.9501	0.9693	0.9282	0.9549	0.9921	0.9589	2.47
1,2,3,4,7,8-HxCDD	1.0731	1.0471	0.9893	1.0280	1.0187	1.0313	3.04
1,2,3,6,7,8-HxCDD	0.9783	0.9579	0.9208	0.9102	0.9122	0.9359	3.26
1,2,3,7,8,9-HxCDD	1.0505	1.0345	1.0728	0.9951	1.0170	1.0340	2.89
1,2,3,4,6,7,8-HpCDF	1.3629	1.3723	1.3154	1.3595	1.3500	1.3520	1.62
1,2,3,4,7,8,9-HpCDF	1.4255	1.3742	1.3364	1.3544	1.3668	1.3715	2.44
1,2,3,4,6,7,8-HpCDD	1.1726	1.0583	1.0544	1.0378	1.0599	1.0766	5.05
OCDF	1.1991	1.1875	1.1027	1.2415	1.2886	1.2039	5.74
OCDD	1.0715	1.0501	0.9799	1.0275	1.0555	1.0369	3.43
Total PeCDF	0.8965	0.8942	0.8791	0.9004	0.9081	0.8956	1.19
Total HxCDF	1.0160	1.0438	1.0055	1.0420	1.0570	1.0329	2.06
Total HxCDD	1.0340	1.0132	0.9943	0.9777	0.9827	1.0004	2.32
Total HpCDF	1.3942	1.3733	1.3259	1.3569	1.3584	1.3617	1.84
2,3,7,8-TCDF-13C	1.5722	1.4945	1.5171	1.5002	1.5232	1.5215	2.02
2,3,7,8-TCDD-13C	1.0108	0.9945	1.0257	1.0010	1.0313	1.0126	1.55
2,3,7,8-TCDD-37Cl4	1.1240	1.1311	1.1109	1.1123	1.1464	1.1249	1.30
1,2,3,7,8-PeCDF-13C	1.1720	1.1505	1.2095	1.1519	1.2113	1.1790	2.53
2,3,4,7,8-PeCDF-13C	1.1514	1.1779	1.2366	1.1325	1.2172	1.1831	3.69
1,2,3,7,8-PeCDD-13C	0.7286	0.7509	0.8225	0.7297	0.7919	0.7647	5.39
1,2,3,4,7,8-HxCDF-13C	1.0769	1.0883	1.0277	1.1142	1.0998	1.0814	3.06
1,2,3,6,7,8-HxCDF-13C	1.3124	1.2845	1.2177	1.3118	1.3026	1.2858	3.09
2,3,4,6,7,8-HxCDF-13C	1.2210	1.1491	0.7454	1.1672	1.1285	1.0822	17.69
1,2,3,7,8,9-HxCDF-13C	1.0715	1.1004	1.0367	1.1133	1.1119	1.0867	3.00
1,2,3,4,7,8-HxCDD-13C	0.8595	0.8802	0.7619	0.8596	0.8736	0.8470	5.71
1,2,3,6,7,8-HxCDD-13C	1.0600	1.0804	0.9858	1.0934	1.0826	1.0604	4.10
1,2,3,4,6,7,8-HpCDF-13C	1.0545	1.0485	1.0068	1.0394	1.0437	1.0386	1.80
1,2,3,4,7,8,9-HpCDF-13C	0.8501	0.8420	0.7920	0.8264	0.8510	0.8323	2.96
1,2,3,4,6,7,8-HpCDD-13C	0.8427	0.8580	0.8264	0.8247	0.8321	0.8368	1.65
OCDD-13C	0.7304	0.7454	0.7215	0.7278	0.7778	0.7406	3.05

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Method 8290/1613
Initial Calibration (ICAL) - Isotope Ratio Summary

ICAL ID	**U130729**	Data Files:		Time	Injected
Calibration Date	07/29/2013	CS-1	U130729B_11	23:48	SMT
Instrument	10MSHR06 (U)	CS-2	U130729B_10	23:00	SMT
Column Phase	DB-5MS 0.25mm	CS-3	U130729B_09	22:12	SMT
Column ID No.	USD227224H	CS-4	U130729B_13	01:25	SMT
		CS-5	U130729B_12	00:36	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
2,3,7,8-TCDF	0.89	0.73	0.76	0.75	0.75	0.65 - 0.89
2,3,7,8-TCDD	0.74	0.79	0.74	0.77	0.78	0.65 - 0.89
1,2,3,7,8-PeCDF	1.46	1.53	1.53	1.53	1.54	1.32 - 1.78
2,3,4,7,8-PeCDF	1.43	1.52	1.52	1.55	1.48	1.32 - 1.78
1,2,3,7,8-PeCDD	0.62	0.60	0.60	0.61	0.61	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.15	1.24	1.22	1.21	1.22	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.25	1.23	1.25	1.20	1.23	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.21	1.25	1.21	1.25	1.28	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.16	1.28	1.22	1.27	1.23	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.15	1.19	1.24	1.27	1.23	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.14	1.17	1.24	1.20	1.23	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.18	1.18	1.28	1.23	1.21	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF	1.03	1.02	1.01	1.08	1.04	0.88 - 1.20
1,2,3,4,7,8,9-HpCDF	1.06	1.13	1.05	1.06	1.04	0.88 - 1.20
1,2,3,4,6,7,8-HpCDD	0.99	1.04	1.02	1.04	1.05	0.88 - 1.20
OCDF	0.94	0.90	0.89	0.89	0.90	0.76 - 1.02
OCDD	0.79	0.88	0.89	0.87	0.88	0.76 - 1.02
1,2,3,4-TCDD-13C	0.80	0.80	0.79	0.80	0.80	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.26	1.27	1.23	1.26	1.24	1.05 - 1.43
2,3,7,8-TCDF-13C	0.78	0.76	0.78	0.78	0.77	0.65 - 0.89
2,3,7,8-TCDD-13C	0.78	0.78	0.77	0.78	0.79	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.56	1.53	1.57	1.58	1.59	1.32 - 1.78
2,3,4,7,8-PeCDF-13C	1.58	1.58	1.53	1.55	1.52	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.58	1.59	1.58	1.59	1.59	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.52	0.52	0.52	0.52	0.52	0.43 - 0.59
1,2,3,6,7,8-HxCDF-13C	0.52	0.51	0.53	0.53	0.52	0.43 - 0.59
2,3,4,6,7,8-HxCDF-13C	0.52	0.52	0.50	0.52	0.52	0.43 - 0.59
1,2,3,7,8,9-HxCDF-13C	0.53	0.52	0.52	0.50	0.53	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.27	1.31	1.25	1.27	1.30	1.05 - 1.43
1,2,3,6,7,8-HxCDD-13C	1.27	1.21	1.26	1.25	1.22	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF-13C	0.45	0.46	0.45	0.45	0.45	0.37 - 0.51
1,2,3,4,7,8,9-HpCDF-13C	0.45	0.45	0.46	0.46	0.46	0.37 - 0.51
1,2,3,4,6,7,8-HpCDD-13C	1.08	1.07	1.06	1.07	1.09	0.88 - 1.20
OCDD-13C	0.91	0.90	0.90	0.89	0.89	0.76 - 1.02

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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U130917A_06	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-7604-279	GC Column ID	USD227224H
Analyzed	09/17/2013 13:13	ICAL ID	U130729

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	9.5	0.74	0.9040	0.8612	-4.7
2,3,7,8-TCDD	10	10.5	0.76	1.0666	1.1180	4.8
1,2,3,7,8-PeCDF	50	48.1	1.53	0.8751	0.8420	-3.8
2,3,4,7,8-PeCDF	50	47.4	1.50	0.9162	0.8679	-5.3
1,2,3,7,8-PeCDD	50	48.7	0.63	1.0090	0.9824	-2.6
1,2,3,4,7,8-HxCDF	50	47.2	1.20	1.0686	1.0079	-5.7
1,2,3,6,7,8-HxCDF	50	47.2	1.16	1.0167	0.9599	-5.6
2,3,4,6,7,8-HxCDF	50	46.7	1.21	1.0873	1.0159	-6.6
1,2,3,7,8,9-HxCDF	50	47.6	1.20	0.9589	0.9130	-4.8
1,2,3,4,7,8-HxCDD	50	48.2	1.25	1.0313	0.9943	-3.6
1,2,3,6,7,8-HxCDD	50	48.4	1.22	0.9359	0.9061	-3.2
1,2,3,7,8,9-HxCDD	50	45.5	1.20	1.0340	0.9412	-9.0
1,2,3,4,6,7,8-HpCDF	50	50.0	1.04	1.3520	1.3527	0.1
1,2,3,4,7,8,9-HpCDF	50	48.7	1.02	1.3715	1.3353	-2.6
1,2,3,4,6,7,8-HpCDD	50	50.8	1.07	1.0766	1.0940	1.6
OCDF	100	98.3	0.86	1.2039	1.1831	-1.7
OCDD	100	97.1	0.89	1.0369	1.0068	-2.9
Total PeCDF	100	95.5	NA	0.8956	0.8549	-4.5
Total HxCDF	200	188.7	NA	1.0329	0.9742	-5.7
Total HxCDD	150	142.1	NA	1.0004	0.9472	-5.3
Total HpCDF	100	98.7	NA	1.3617	1.3440	-1.3
2,3,7,8-TCDF-13C	100	97.6	0.79	1.5215	1.4842	-2.4
2,3,7,8-TCDD-13C	100	94.7	0.78	1.0126	0.9594	-5.3
2,3,7,8-TCDD-37Cl4	10	9.7	NA	1.1249	1.0863	-3.4
1,2,3,7,8-PeCDF-13C	100	89.7	1.53	1.1790	1.0570	-10.3
2,3,4,7,8-PeCDF-13C	100	90.7	1.53	1.1831	1.0733	-9.3
1,2,3,7,8-PeCDD-13C	100	91.1	1.60	0.7647	0.6966	-8.9
1,2,3,4,7,8-HxCDF-13C	100	102.4	0.51	1.0814	1.1068	2.4
1,2,3,6,7,8-HxCDF-13C	100	103.5	0.51	1.2858	1.3303	3.5
2,3,4,6,7,8-HxCDF-13C	100	108.4	0.53	1.0822	1.1735	8.4
1,2,3,7,8,9-HxCDF-13C	100	92.8	0.52	1.0867	1.0081	-7.2
1,2,3,4,7,8-HxCDD-13C	100	107.7	1.25	0.8470	0.9121	7.7
1,2,3,6,7,8-HxCDD-13C	100	108.4	1.28	1.0604	1.1497	8.4
1,2,3,4,6,7,8-HpCDF-13C	100	104.0	0.45	1.0386	1.0796	4.0
1,2,3,4,7,8,9-HpCDF-13C	100	95.1	0.45	0.8323	0.7912	-4.9
1,2,3,4,6,7,8-HpCDD-13C	100	93.0	1.08	0.8368	0.7783	-7.0
OCDD-13C	200	200.5	0.91	0.7406	0.7424	0.2
1,2,3,4-TCDD-13C	100	NA	0.79	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.25	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U130917A_22	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-7604-279	GC Column ID	USD227224H
Analyzed	09/18/2013 02:01	ICAL ID	U130729

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	9.5	0.77	0.9040	0.8611	-4.7
2,3,7,8-TCDD	10	10.5	0.78	1.0666	1.1147	4.5
1,2,3,7,8-PeCDF	50	49.4	1.53	0.8751	0.8638	-1.3
2,3,4,7,8-PeCDF	50	47.1	1.49	0.9162	0.8623	-5.9
1,2,3,7,8-PeCDD	50	49.8	0.61	1.0090	1.0040	-0.5
1,2,3,4,7,8-HxCDF	50	46.8	1.20	1.0686	1.0012	-6.3
1,2,3,6,7,8-HxCDF	50	48.1	1.21	1.0167	0.9785	-3.8
2,3,4,6,7,8-HxCDF	50	48.0	1.18	1.0873	1.0437	-4.0
1,2,3,7,8,9-HxCDF	50	47.4	1.20	0.9589	0.9084	-5.3
1,2,3,4,7,8-HxCDD	50	49.1	1.24	1.0313	1.0117	-1.9
1,2,3,6,7,8-HxCDD	50	48.3	1.20	0.9359	0.9042	-3.4
1,2,3,7,8,9-HxCDD	50	45.4	1.22	1.0340	0.9387	-9.2
1,2,3,4,6,7,8-HpCDF	50	49.9	1.05	1.3520	1.3505	-0.1
1,2,3,4,7,8,9-HpCDF	50	48.9	1.02	1.3715	1.3411	-2.2
1,2,3,4,6,7,8-HpCDD	50	51.0	1.05	1.0766	1.0980	2.0
OCDF	100	98.6	0.89	1.2039	1.1866	-1.4
OCDD	100	96.1	0.89	1.0369	0.9964	-3.9
Total PeCDF	100	96.4	NA	0.8956	0.8631	-3.6
Total HxCDF	200	190.3	NA	1.0329	0.9829	-4.8
Total HxCDD	150	142.8	NA	1.0004	0.9515	-4.9
Total HpCDF	100	98.8	NA	1.3617	1.3458	-1.2
2,3,7,8-TCDF-13C	100	100.7	0.78	1.5215	1.5320	0.7
2,3,7,8-TCDD-13C	100	97.2	0.78	1.0126	0.9847	-2.8
2,3,7,8-TCDD-37Cl4	10	9.8	NA	1.1249	1.1016	-2.1
1,2,3,7,8-PeCDF-13C	100	94.7	1.55	1.1790	1.1161	-5.3
2,3,4,7,8-PeCDF-13C	100	96.3	1.56	1.1831	1.1392	-3.7
1,2,3,7,8-PeCDD-13C	100	94.9	1.58	0.7647	0.7261	-5.1
1,2,3,4,7,8-HxCDF-13C	100	103.8	0.52	1.0814	1.1224	3.8
1,2,3,6,7,8-HxCDF-13C	100	102.4	0.52	1.2858	1.3163	2.4
2,3,4,6,7,8-HxCDF-13C	100	109.2	0.51	1.0822	1.1817	9.2
1,2,3,7,8,9-HxCDF-13C	100	96.5	0.52	1.0867	1.0485	-3.5
1,2,3,4,7,8-HxCDD-13C	100	107.4	1.24	0.8470	0.9097	7.4
1,2,3,6,7,8-HxCDD-13C	100	107.5	1.26	1.0604	1.1396	7.5
1,2,3,4,6,7,8-HpCDF-13C	100	106.5	0.46	1.0386	1.1061	6.5
1,2,3,4,7,8,9-HpCDF-13C	100	100.9	0.45	0.8323	0.8398	0.9
1,2,3,4,6,7,8-HpCDD-13C	100	95.1	1.06	0.8368	0.7954	-4.9
OCDD-13C	200	218.6	0.89	0.7406	0.8095	9.3
1,2,3,4-TCDD-13C	100	NA	0.79	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.26	NA	NA	NA

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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	F130921A_16	Instrument ID	10MSHR05 (F)
Standard	CS3/CPM-7604-279	GC Column ID	USD174324H
Analyzed	09/21/2013 13:44	ICAL ID	F130918

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	10.3	0.79	1.0968	1.1279	2.8
2,3,7,8-TCDD	10	10.8	0.81	1.1327	1.2196	7.7
1,2,3,7,8-PeCDF	50	51.5	1.62	1.1340	1.1690	3.1
2,3,4,7,8-PeCDF	50	50.7	1.59	1.1708	1.1875	1.4
1,2,3,7,8-PeCDD	50	53.6	0.62	1.1326	1.2131	7.1
1,2,3,4,7,8-HxCDF	50	51.2	1.31	1.2855	1.3175	2.5
1,2,3,6,7,8-HxCDF	50	49.5	1.31	1.2626	1.2495	-1.0
2,3,4,6,7,8-HxCDF	50	50.3	1.31	1.3236	1.3319	0.6
1,2,3,7,8,9-HxCDF	50	51.0	1.28	1.1885	1.2132	2.1
1,2,3,4,7,8-HxCDD	50	49.7	1.32	1.1666	1.1587	-0.7
1,2,3,6,7,8-HxCDD	50	50.5	1.28	1.0722	1.0833	1.0
1,2,3,7,8,9-HxCDD	50	49.8	1.29	1.1134	1.1086	-0.4
1,2,3,4,6,7,8-HpCDF	50	55.5	1.04	1.3780	1.5308	11.1
1,2,3,4,7,8,9-HpCDF	50	52.6	1.01	1.3872	1.4582	5.1
1,2,3,4,6,7,8-HpCDD	50	51.9	1.06	1.1761	1.2196	3.7
OCDF	100	102.3	0.95	1.4633	1.4970	2.3
OCDD	100	106.7	0.90	1.0806	1.1534	6.7
Total PeCDF	100	102.3	NA	1.1524	1.1782	2.2
Total HxCDF	200	202.1	NA	1.2650	1.2780	1.0
Total HxCDD	150	150.0	NA	1.1174	1.1169	0.0
Total HpCDF	100	108.1	NA	1.3826	1.4945	8.1
2,3,7,8-TCDF-13C	100	116.3	0.81	1.6144	1.8774	16.3
2,3,7,8-TCDD-13C	100	106.1	0.79	0.9536	1.0118	6.1
2,3,7,8-TCDD-37Cl4	10	11.3	NA	1.0645	1.2019	12.9
1,2,3,7,8-PeCDF-13C	100	119.3	1.62	1.4740	1.7591	19.3
2,3,4,7,8-PeCDF-13C	100	125.1	1.62	1.4604	1.8277	25.1
1,2,3,7,8-PeCDD-13C	100	122.1	1.56	0.8245	1.0064	22.1
1,2,3,4,7,8-HxCDF-13C	100	100.3	0.54	1.4253	1.4291	0.3
1,2,3,6,7,8-HxCDF-13C	100	103.1	0.55	1.5904	1.6391	3.1
2,3,4,6,7,8-HxCDF-13C	100	100.2	0.54	1.4505	1.4539	0.2
1,2,3,7,8,9-HxCDF-13C	100	97.9	0.55	1.4130	1.3833	-2.1
1,2,3,4,7,8-HxCDD-13C	100	103.6	1.28	0.9289	0.9626	3.6
1,2,3,6,7,8-HxCDD-13C	100	102.8	1.29	1.0627	1.0929	2.8
1,2,3,4,6,7,8-HpCDF-13C	100	99.9	0.46	0.8170	0.8164	-0.1
1,2,3,4,7,8,9-HpCDF-13C	100	98.9	0.47	0.6654	0.6579	-1.1
1,2,3,4,6,7,8-HpCDD-13C	100	94.7	1.12	0.5918	0.5602	-5.3
OCDD-13C	200	147.9	0.95	0.7857	0.5811	-26.0
1,2,3,4-TCDD-13C	100	NA	0.81	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.30	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290
PCDD/PCDF Calibration Verification

Run Name:	F130921B_16	Instrument ID	10MSHR05 (F)
Standard	CS3/CPM-7604-279	GC Column ID	USD174324H
Analyzed	09/22/2013 01:59	ICAL ID	F130918

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	8.4	0.74	1.0968	0.9238	-15.8
2,3,7,8-TCDD	10	9.9	0.84	1.1327	1.1220	-0.9
1,2,3,7,8-PeCDF	50	43.7	1.58	1.1340	0.9916	-12.6
2,3,4,7,8-PeCDF	50	42.7	1.57	1.1708	0.9998	-14.6
1,2,3,7,8-PeCDD	50	47.2	0.61	1.1326	1.0690	-5.6
1,2,3,4,7,8-HxCDF	50	45.0	1.27	1.2855	1.1567	-10.0
1,2,3,6,7,8-HxCDF	50	45.8	1.26	1.2626	1.1562	-8.4
2,3,4,6,7,8-HxCDF	50	46.2	1.22	1.3236	1.2237	-7.5
1,2,3,7,8,9-HxCDF	50	45.2	1.26	1.1885	1.0748	-9.6
1,2,3,4,7,8-HxCDD	50	45.4	1.26	1.1666	1.0584	-9.3
1,2,3,6,7,8-HxCDD	50	45.8	1.23	1.0722	0.9815	-8.5
1,2,3,7,8,9-HxCDD	50	45.3	1.30	1.1134	1.0085	-9.4
1,2,3,4,6,7,8-HpCDF	50	49.4	1.05	1.3780	1.3604	-1.3
1,2,3,4,7,8,9-HpCDF	50	50.8	1.03	1.3872	1.4085	1.5
1,2,3,4,6,7,8-HpCDD	50	51.1	1.09	1.1761	1.2019	2.2
OCDF	100	84.9	0.91	1.4633	1.2422	-15.1
OCDD	100	95.8	0.93	1.0806	1.0354	-4.2
Total PeCDF	100	86.4	NA	1.1524	0.9957	-13.6
Total HxCDF	200	182.2	NA	1.2650	1.1528	-8.9
Total HxCDD	150	136.4	NA	1.1174	1.0162	-9.1
Total HpCDF	100	100.1	NA	1.3826	1.3845	0.1
2,3,7,8-TCDF-13C	100	97.8	0.80	1.6144	1.5786	-2.2
2,3,7,8-TCDD-13C	100	106.1	0.82	0.9536	1.0115	6.1
2,3,7,8-TCDD-37Cl4	10	10.7	NA	1.0645	1.1369	6.8
1,2,3,7,8-PeCDF-13C	100	96.2	1.60	1.4740	1.4184	-3.8
2,3,4,7,8-PeCDF-13C	100	100.5	1.59	1.4604	1.4673	0.5
1,2,3,7,8-PeCDD-13C	100	114.7	1.58	0.8245	0.9455	14.7
1,2,3,4,7,8-HxCDF-13C	100	86.6	0.53	1.4253	1.2348	-13.4
1,2,3,6,7,8-HxCDF-13C	100	85.1	0.53	1.5904	1.3531	-14.9
2,3,4,6,7,8-HxCDF-13C	100	83.2	0.53	1.4505	1.2063	-16.8
1,2,3,7,8,9-HxCDF-13C	100	83.1	0.53	1.4130	1.1742	-16.9
1,2,3,4,7,8-HxCDD-13C	100	101.8	1.27	0.9289	0.9453	1.8
1,2,3,6,7,8-HxCDD-13C	100	99.9	1.24	1.0627	1.0620	-0.1
1,2,3,4,6,7,8-HpCDF-13C	100	113.4	0.46	0.8170	0.9263	13.4
1,2,3,4,7,8,9-HpCDF-13C	100	106.8	0.48	0.6654	0.7106	6.8
1,2,3,4,6,7,8-HpCDD-13C	100	109.2	1.14	0.5918	0.6463	9.2
OCDD-13C	200	173.8	0.93	0.7857	0.6828	-13.1
1,2,3,4-TCDD-13C	100	NA	0.82	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.24	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

REPORT OF LABORATORY ANALYSIS

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Appendix D

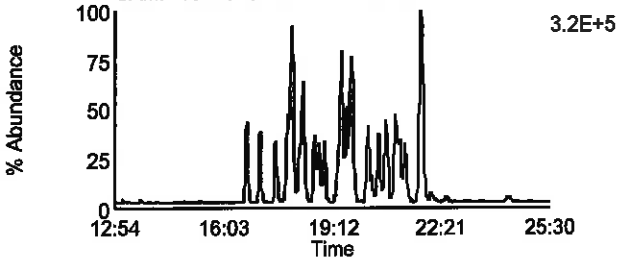
Sample Raw Data

Homologue Group: Tetras

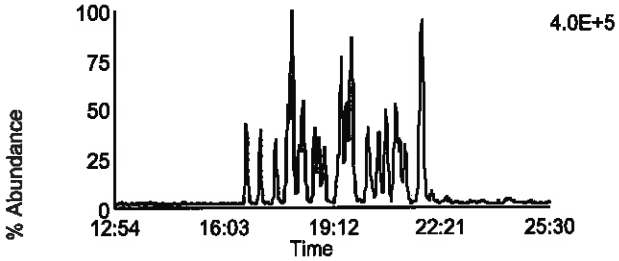
Data File Name: F130921B_10
Date Acquired: 9/21/2013
Sample Description: SAMP 10240751001-R - BAL ADV

Lab Sample ID: 10240751001-R
Client Sample ID: 1302545-05 / T-12-9.5
Instrument: 10MSHR05 (F)

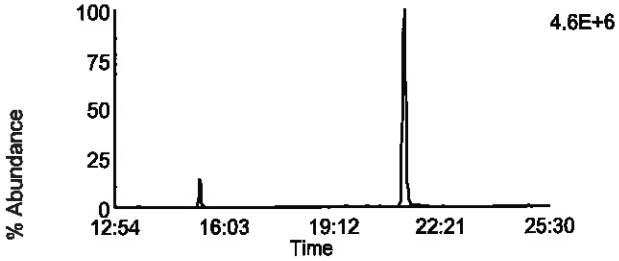
Data File: F130921B_10 G1 C1 - 303.9016
SAMP 10240751001-R - BAL ADV



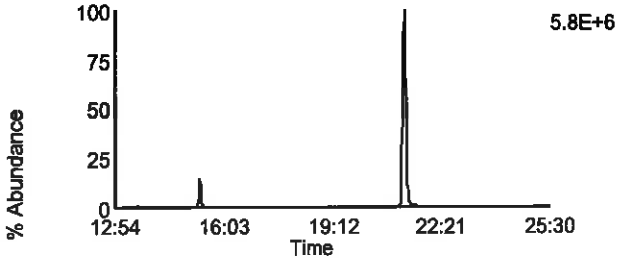
Data File: F130921B_10 G1 C2 - 305.8987
SAMP 10240751001-R - BAL ADV



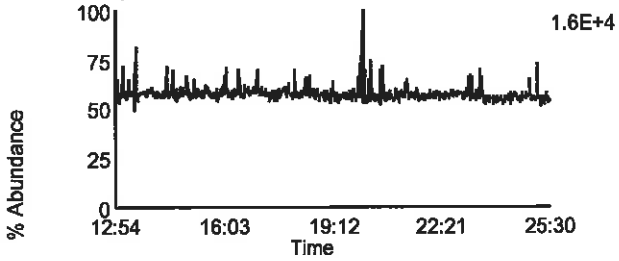
Data File: F130921B_10 G1 C3 - 315.9418
SAMP 10240751001-R - BAL ADV



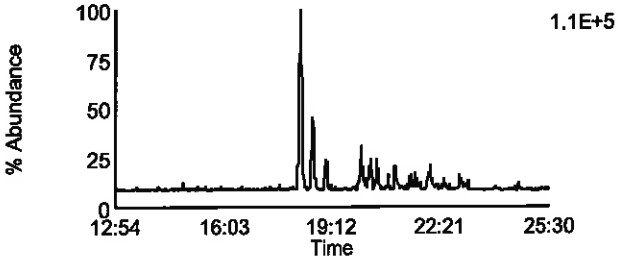
Data File: F130921B_10 G1 C4 - 317.9389
SAMP 10240751001-R - BAL ADV



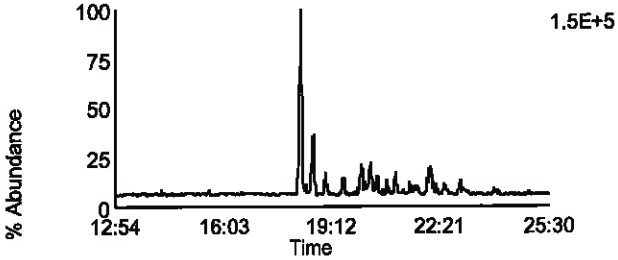
Data File: F130921B_10 G1 C14 - 375.8364
SAMP 10240751001-R - BAL ADV



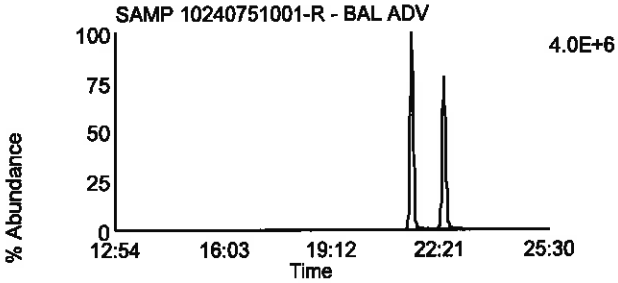
Data File: F130921B_10 G1 C7 - 319.8965
SAMP 10240751001-R - BAL ADV



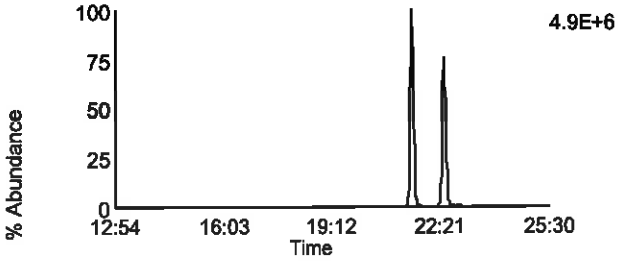
Data File: F130921B_10 G1 C8 - 321.8936
SAMP 10240751001-R - BAL ADV



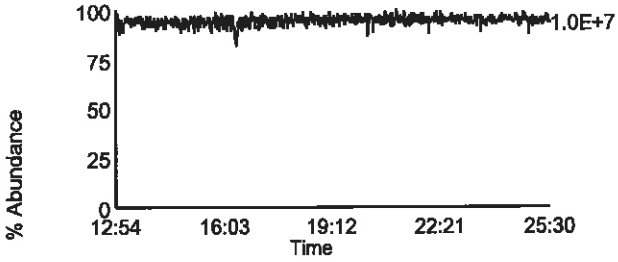
Data File: F130921B_10 G1 C10 - 331.9367
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G1 C11 - 333.9338
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G1 C5 - 318.9792
SAMP 10240751001-R - BAL ADV

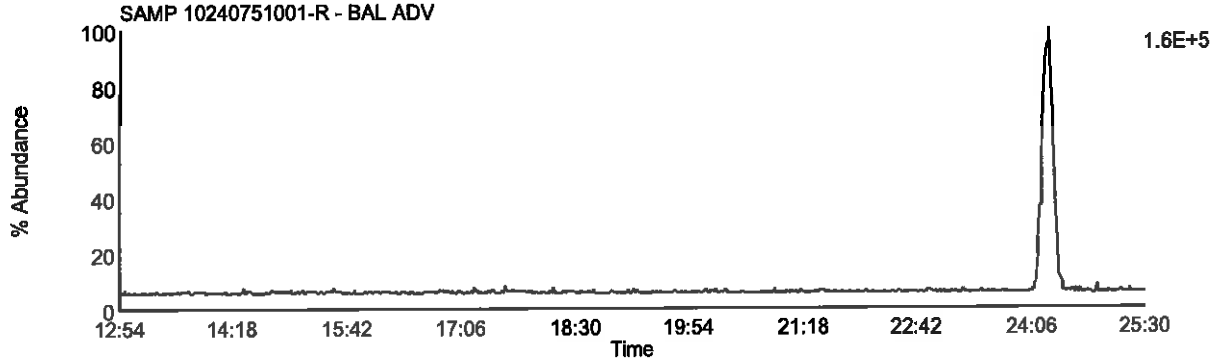


Homologue Group: Penta & Cleanup

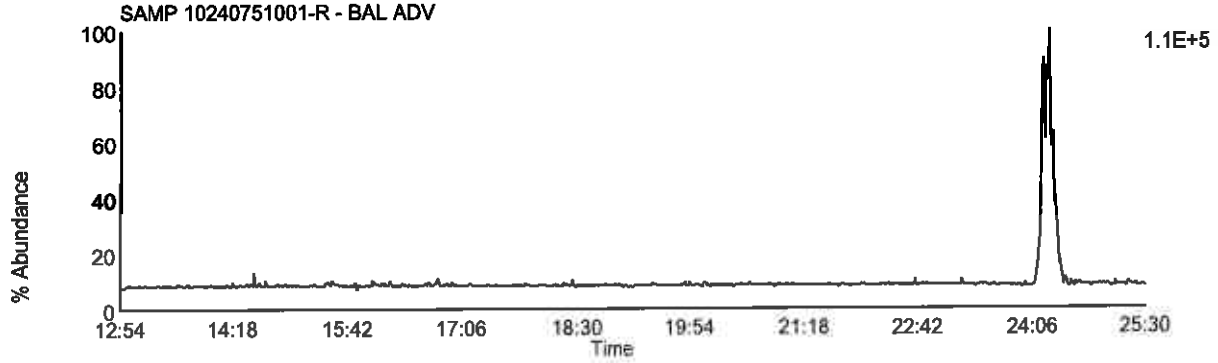
Data File Name: F130921B_10
Date Acquired: 9/21/2013
Sample Description: SAMP 10240751001-R - BAL ADV

Lab Sample ID: 10240751001-R
Client Sample ID: 1302545-05 / T-12-9.5
Instrument: 10MSHR05 (F)

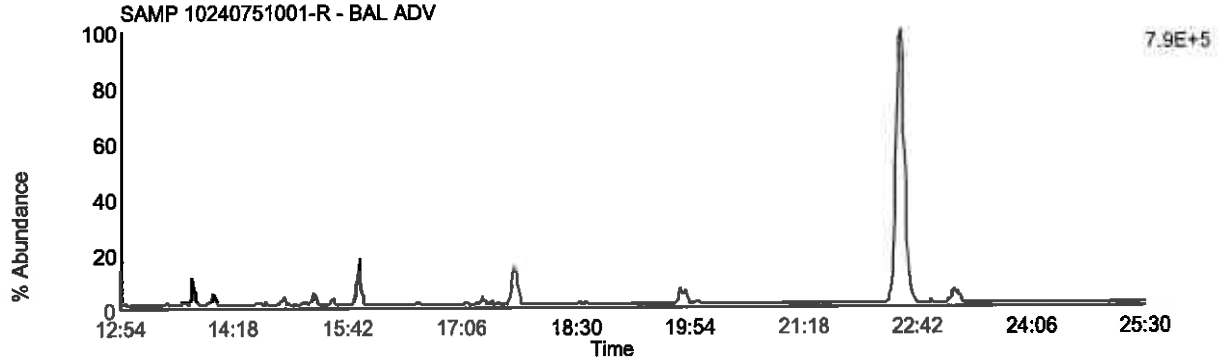
Data File: F130921B_10 G1 C12 - 339.8597
SAMP 10240751001-R - BAL ADV



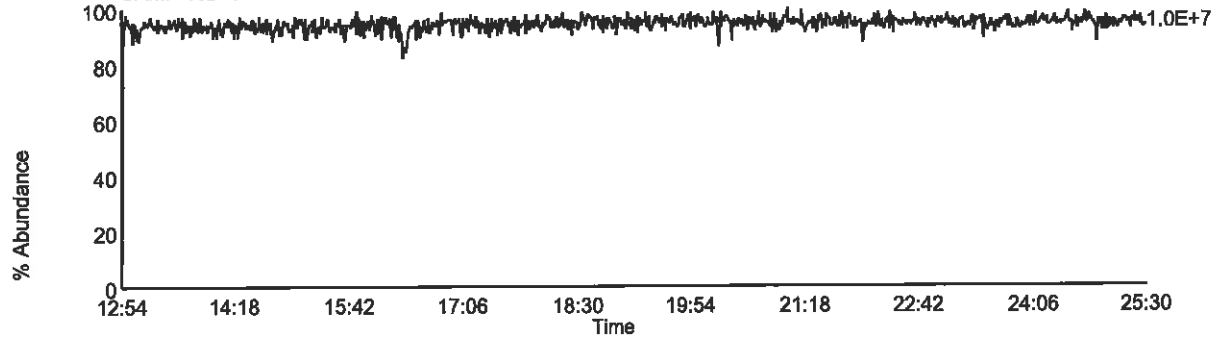
Data File: F130921B_10 G1 C13 - 341.8567
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G1 C9 - 327.8847
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G1 C5 - 318.9792
SAMP 10240751001-R - BAL ADV

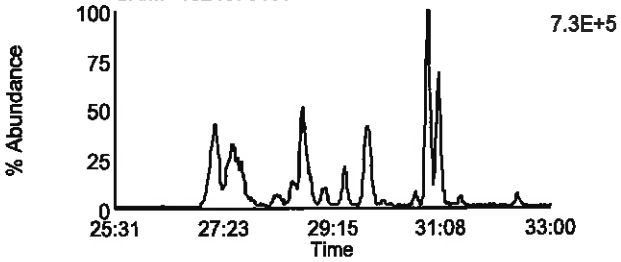


Homologue Group: Pentas

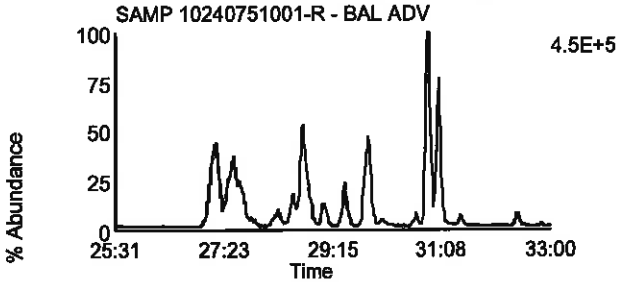
Data File Name: F130921B_10
Date Acquired: 9/21/2013
Sample Description: SAMP 10240751001-R - BAL ADV

Lab Sample ID: 10240751001-R
Client Sample ID: 1302545-05 / T-12-9.5
Instrument: 10MSHR05 (F)

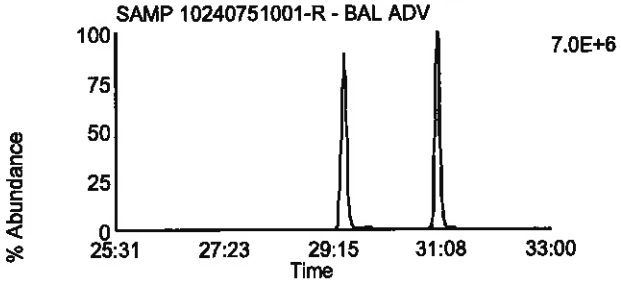
Data File: F130921B_10 G2 C1 - 339.8597
SAMP 10240751001-R - BAL ADV



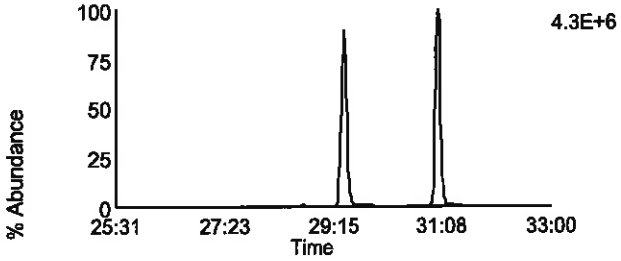
Data File: F130921B_10 G2 C2 - 341.8567
SAMP 10240751001-R - BAL ADV



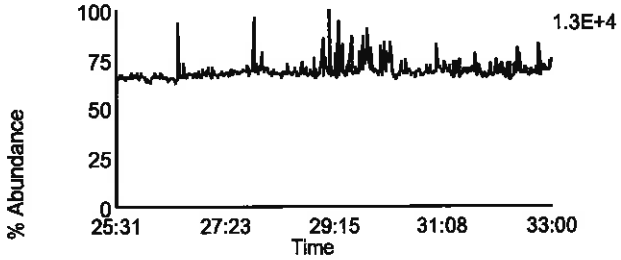
Data File: F130921B_10 G2 C3 - 351.8999
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G2 C5 - 353.8969
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G2 C12 - 409.7974
SAMP 10240751001-R - BAL ADV



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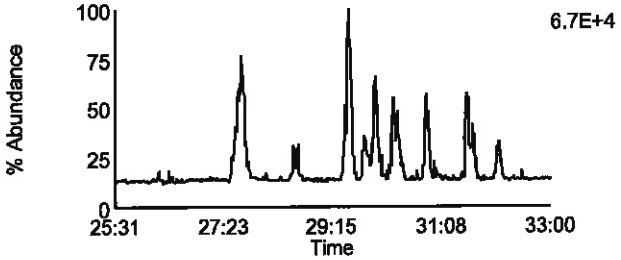
SAMP 10240751001-R - BAL ADV



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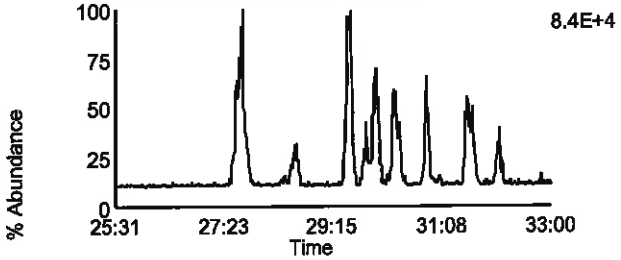
SAMP 10240751001-R - BAL ADV



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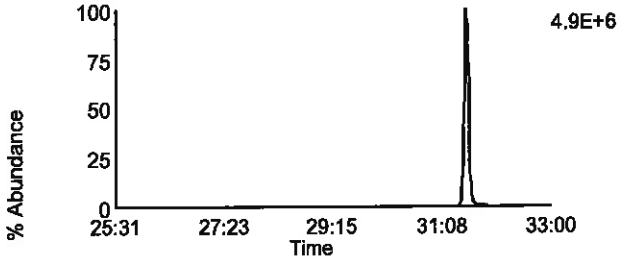
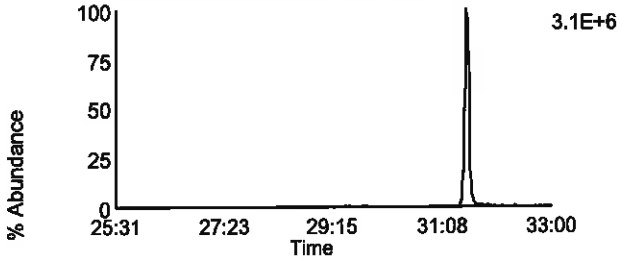
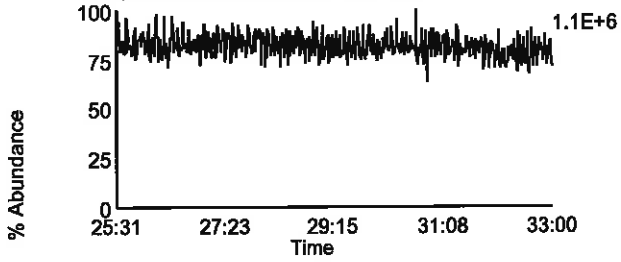
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G2 C11 - 369.8918
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G2 C6 - 354.9792
SAMP 10240751001-R - BAL ADV

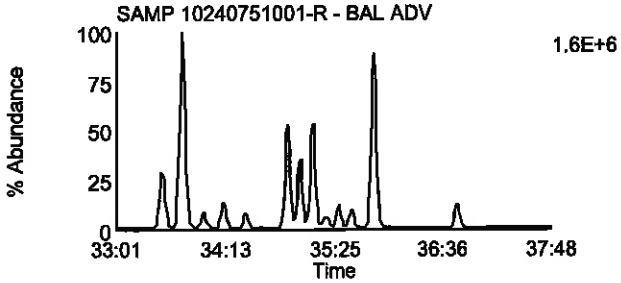


Homologue Group: Hexas

Data File Name: F130921B_10
Date Acquired: 9/21/2013
Sample Description: SAMP 10240751001-R - BAL ADV

Lab Sample ID: 10240751001-R
Client Sample ID: 1302545-05 / T-12-9.5
Instrument: 10MSHR05 (F)

Data File: F130921B_10 G3 C1 - 373.8207
SAMP 10240751001-R - BAL ADV



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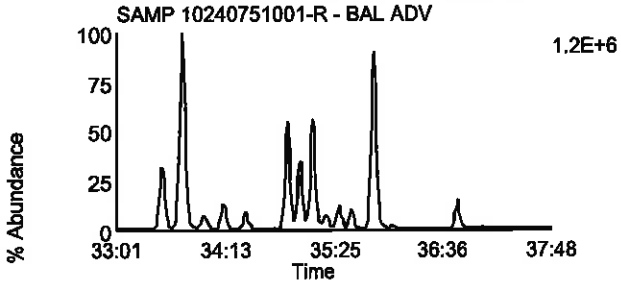
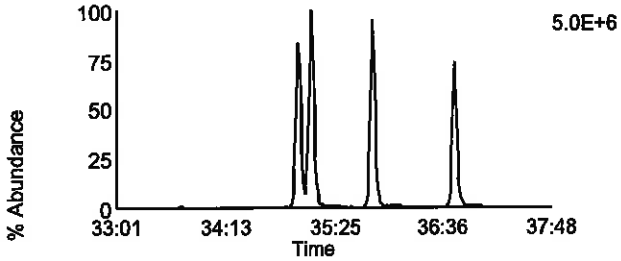
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G3 C5 - 383.8639
SAMP 10240751001-R - BAL ADV



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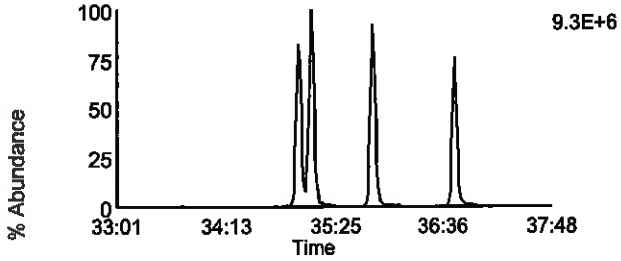
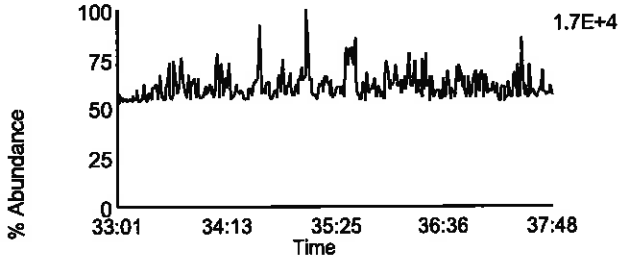
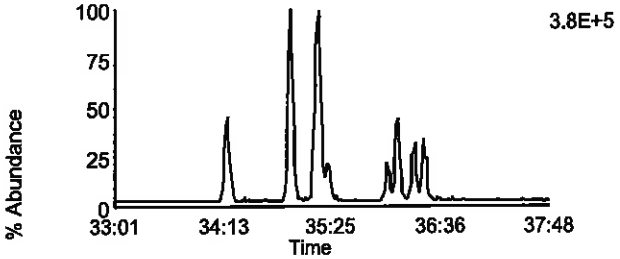
SAMP 10240751001-R - BAL ADV



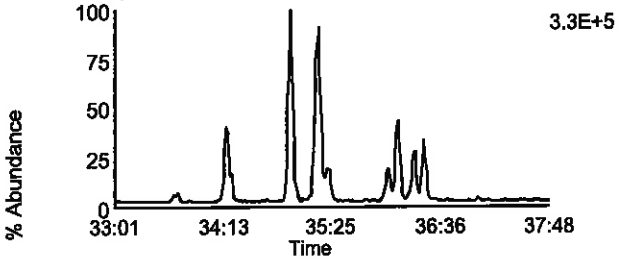
Data File: F130921B_10 G3 C11 - 445.7555
SAMP 10240751001-R - BAL ADV



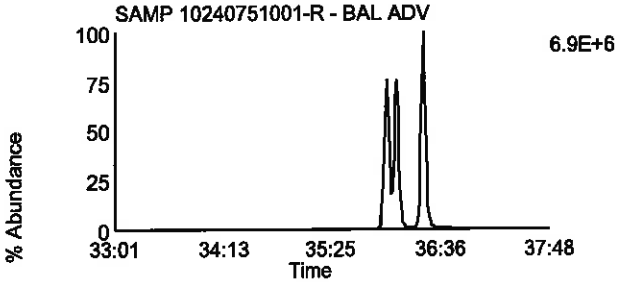
Data File: F130921B_10 G3 C7 - 389.8156
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G3 C8 - 391.8127
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G3 C9 - 401.8559
SAMP 10240751001-R - BAL ADV



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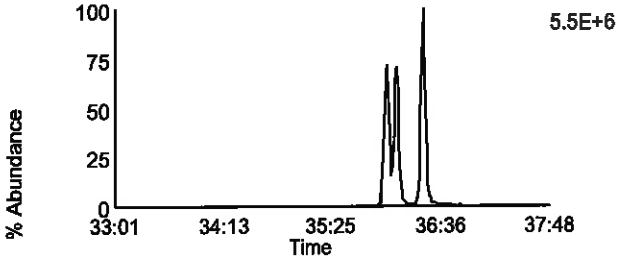
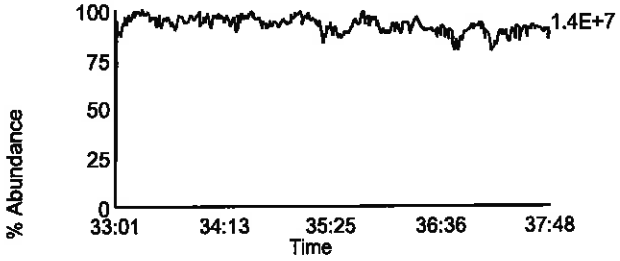
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G3 C3 - 380.976
SAMP 10240751001-R - BAL ADV

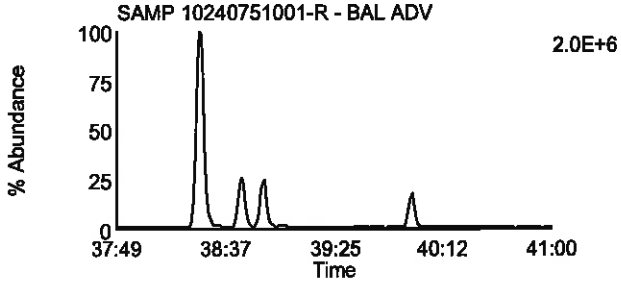


Homologue Group: Heptas

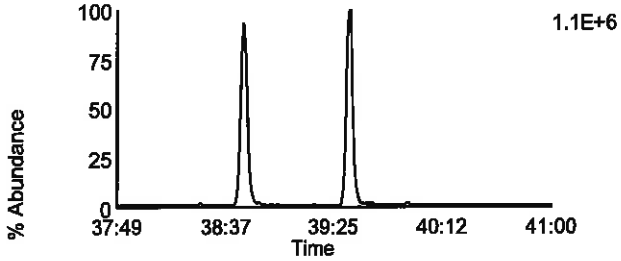
Data File Name: F130921B_10
Date Acquired: 9/21/2013
Sample Description: SAMP 10240751001-R - BAL ADV

Lab Sample ID: 10240751001-R
Client Sample ID: 1302545-05 / T-12-9.5
Instrument: 10MSHR05 (F)

Data File: F130921B_10 G4 C3 - 407.7818
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G4 C8 - 423.7767
SAMP 10240751001-R - BAL ADV



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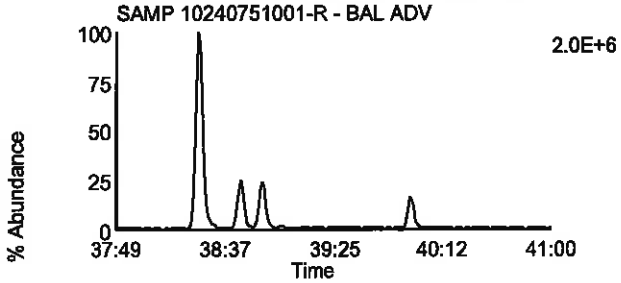
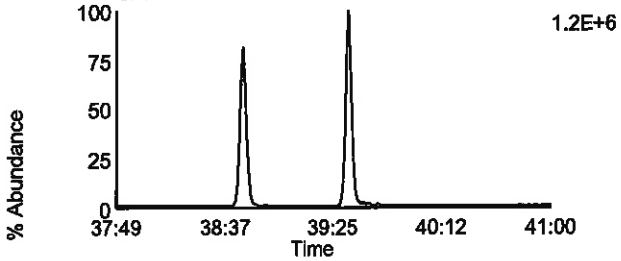
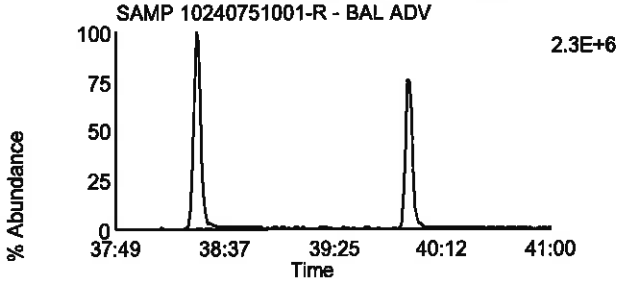
SAMP 10240751001-R - BAL ADV



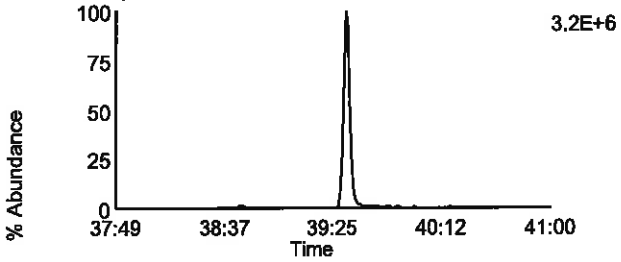
Data File: F130921B_10 G4 C9 - 425.7737
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G4 C6 - 417.825
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G4 C11 - 435.8169
SAMP 10240751001-R - BAL ADV



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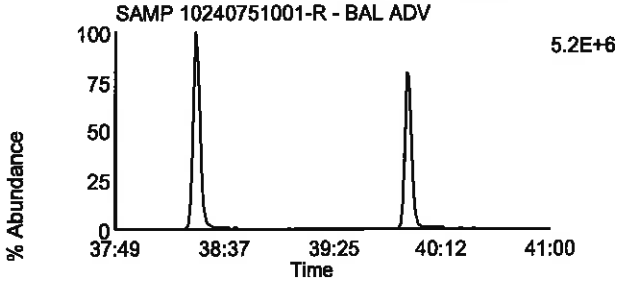
SAMP 10240751001-R - BAL ADV



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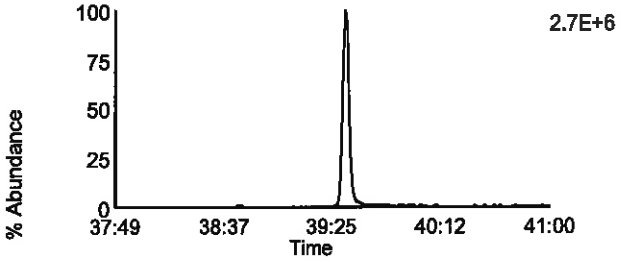
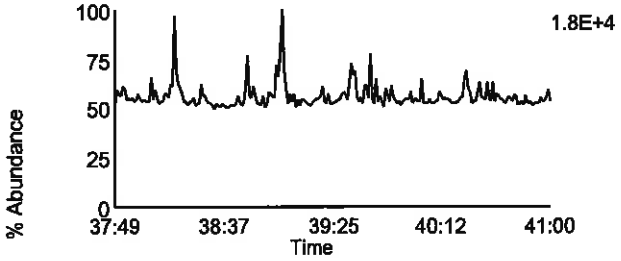
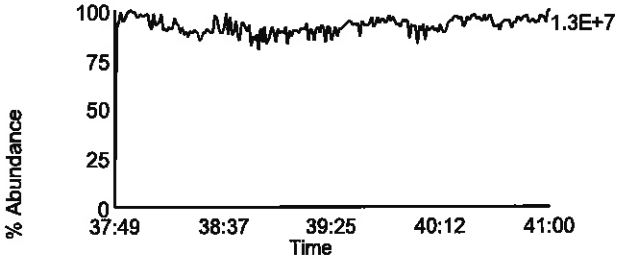
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G4 C13 - 479.7165
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G4 C1 - 380.976
SAMP 10240751001-R - BAL ADV

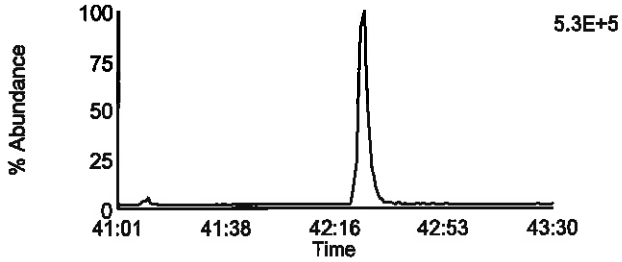


Homologue Group: Octas

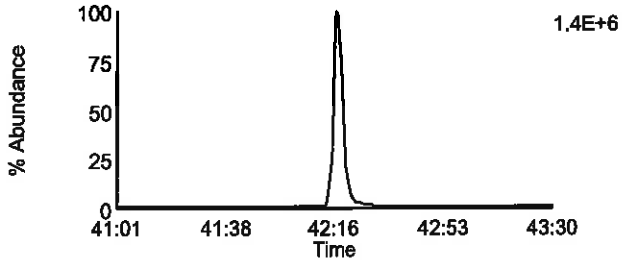
Data File Name: F130921B_10
Date Acquired: 9/21/2013
Sample Description: SAMP 10240751001-R - BAL ADV

Lab Sample ID: 10240751001-R
Client Sample ID: 1302545-05 / T-12-9.5
Instrument: 10MSHR05 (F)

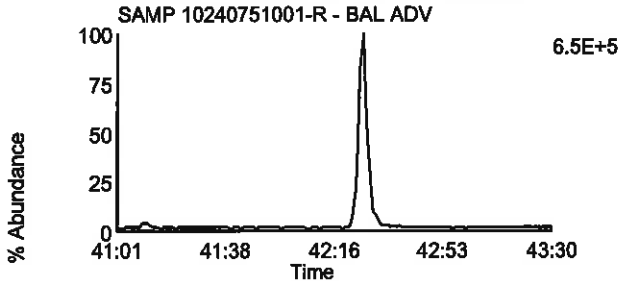
Data File: F130921B_10 G5 C4 - 441.7428
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G5 C8 - 457.7377
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G5 C5 - 443.7398
SAMP 10240751001-R - BAL ADV



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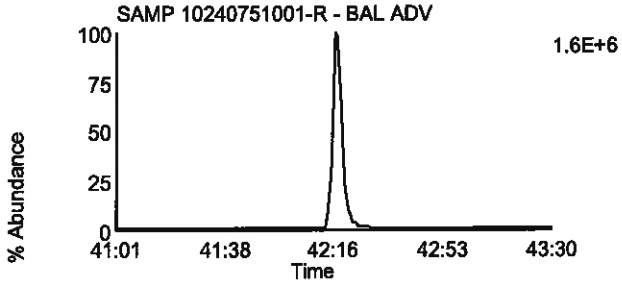
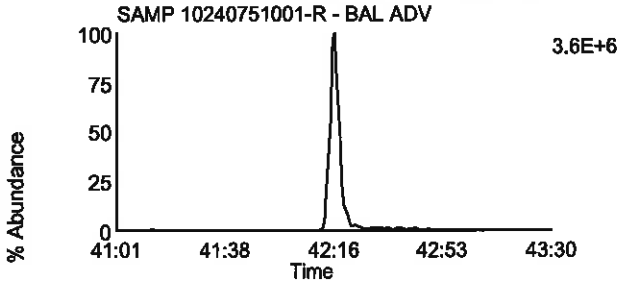
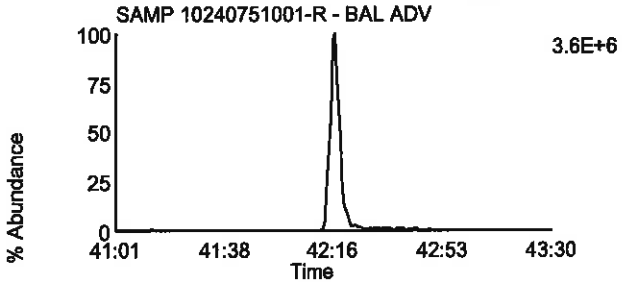
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G5 C11 - 469.7779
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G5 C11 - 469.7779
SAMP 10240751001-R - BAL ADV



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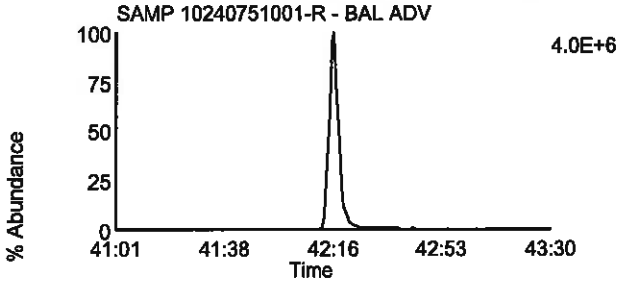
SAMP 10240751001-R - BAL ADV



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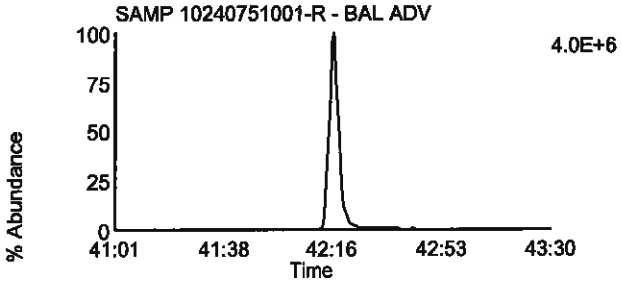
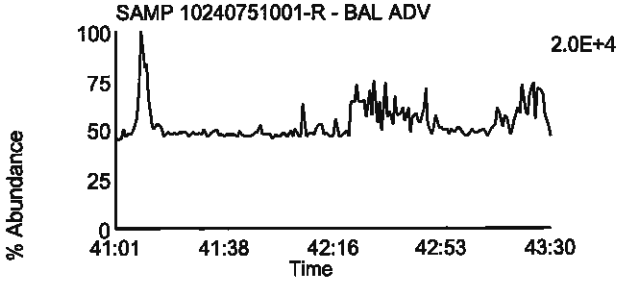
SAMP 10240751001-R - BAL ADV



Data File: F130921B_10 G5 C13 - 513.6775
SAMP 10240751001-R - BAL ADV



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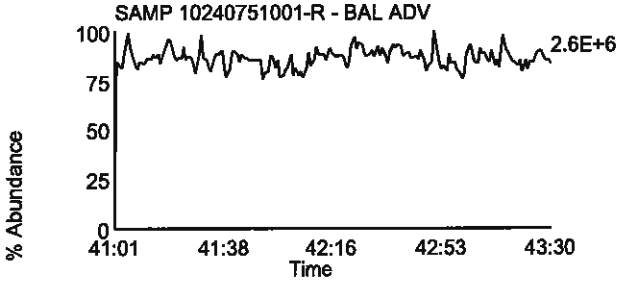
SAMP 10240751001-R - BAL ADV



Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____
Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID	1302545-05 / T-12-9.5	Injected By	BAL
Lab ID	10240751001-R	Instrument ID	10MSHR05 (F)
Filename	F130921B_10	GC Column ID	USD174324H
Analyzed	09/21/2013 21:25	ICAL ID	F130918

Tetra-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C		21:17	3.19e7	3.99e7	4.62e6	5.81e6	8.142e3	5.216e3	0.80	
2,3,7,8-TCDF		21:18	6.03e5	8.35e5	9.52e4	1.17e5	1.406e3	1.171e3	0.72	
Other TCDF	1	16:43	6.10e5	7.37e5					0.83	
	2	17:07	5.05e5	6.43e5					0.79	
	3	17:33	5.11e5	6.78e5					0.75	
	4	17:50	3.53e5	4.61e5					0.76	
	5	18:01	2.37e6	3.14e6					0.75	
	6	18:20	1.53e6	1.97e6					0.78	
	7	18:40	6.82e5	8.09e5					0.84	
	8	18:49	5.04e5	7.50e5					0.67	
	9	18:57	5.24e5	7.16e5					0.73	
	10	19:27	1.74e6	2.15e6					0.81	
	11	19:44	2.70e6	3.56e6					0.76	
	12	20:14	8.61e5	1.16e6					0.74	
	13	20:32	7.11e5	9.89e5					0.72	
	14	20:45	9.73e5	1.30e6					0.75	
	15	21:01	1.56e6	2.00e6					0.78	
	16	21:45	2.31e6	2.93e6					0.79	
	17	22:04	1.10e5	1.59e5					0.69	

Tetra-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C		21:31	2.64e7	3.29e7	3.97e6	4.85e6	3.644e3	1.494e3	0.80	
2,3,7,8-TCDD-13C		22:28	2.19e7	2.70e7	3.09e6	3.68e6	4.465e3	3.366e3	0.81	
2,3,7,8-TCDD-37Cl4		22:30	5.61e6		7.79e5		1.643e3	----		
2,3,7,8-TCDD		22:29	3.79e4	4.70e4	6.45e3	8.67e3	8.948e2	8.080e2	0.81	
Other TCDD	1	23:10	2.95e4	3.73e4					0.79	
	2	22:55	3.80e4	4.73e4					0.80	
	3	22:15	1.85e4	2.72e4					0.68	
	4	21:02	7.14e4	8.71e4					0.82	
	5	20:50	2.32e4	3.12e4					0.74	
	6	18:17	5.36e5	6.64e5					0.81	
	7	18:39	2.25e5	2.54e5					0.89	
	8	20:03	1.32e5	1.71e5					0.77	
	9	20:20	1.00e5	1.42e5					0.71	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:27	4.09e7	2.56e7	6.20e6	3.82e6	1.973e4	1.030e4	1.60	

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

Client Name	Advanced Technology Labs		
Client ID	1302545-05 / T-12-9.5	Injected By	BAL
Lab ID	10240751001-R	Instrument ID	10MSHR05 (F)
Filename	F130921B_10	GC Column ID	USD174324H
Analyzed	09/21/2013 21:25	ICAL ID	F130918

2,3,4,7,8-PeCDF-13C		31:04	3.98e7	2.46e7	6.95e6	4.28e6	4.128e3	4.864e3	1.62
1,2,3,7,8-PeCDF		29:28	8.75e5	5.65e5	1.42e5	9.84e4	8.864e2	7.018e2	1.55
2,3,4,7,8-PeCDF		31:05	2.76e6	1.73e6	4.92e5	3.34e5	1.043e3	8.210e2	1.59
Other PeCDF	1	27:15	3.25e6	2.06e6					1.57
	2	27:31	3.81e6	2.33e6					1.63
	3	27:52	2.03e5	1.31e5					1.55
	4	28:18	3.86e5	2.83e5					1.36
	5	28:34	7.16e5	4.27e5					1.68
	6	28:44	3.22e6	2.09e6					1.55
	7	29:08	4.93e5	3.55e5					1.39
	8	29:52	2.55e6	1.55e6					1.65
	9	30:07	1.43e5	9.19e4					1.56
	10	30:54	4.27e6	2.68e6					1.59
	11	31:28	2.01e5	1.22e5					1.64
	12	32:27	2.20e5	1.48e5					1.49
	13	24:20	1.41e6	8.65e5					1.63

Penta-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C		31:32	2.66e7	1.71e7	4.90e6	3.08e6	4.216e3	3.159e3	1.55	
1,2,3,7,8-PeCDD		31:33	1.28e5	2.03e5	7.62e3	3.71e4	8.566e2	1.058e3	0.63	
Other PeCDD	1	32:08	6.98e4	1.12e5					0.62	
	2	31:40	6.80e4	1.26e5					0.54	
	3	27:42	3.79e5	5.88e5					0.65	
	4	28:40	7.73e4	1.21e5					0.64	
	5	29:32	3.27e5	4.91e5					0.67	
	6	29:49	7.44e4	1.06e5					0.70	
	7	29:60	1.95e5	3.18e5					0.61	
	8	30:18	2.03e5	3.19e5					0.64	
	9	30:52	1.23e5	1.79e5					0.69	

Hexa-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C		35:01	1.72e7	3.22e7	4.11e6	7.61e6	2.127e4	3.473e4	0.53	
1,2,3,6,7,8-HxCDF-13C		35:09	2.03e7	3.85e7	4.95e6	9.28e6	9.572e2	3.182e4	0.53	
2,3,4,6,7,8-HxCDF-13C		35:50	1.83e7	3.45e7	4.71e6	8.57e6	1.958e3	3.460e4	0.53	
1,2,3,7,8,9-HxCDF-13C		36:44	1.42e7	2.71e7	3.66e6	7.01e6	5.871e3	6.822e3	0.53	
1,2,3,4,7,8-HxCDF		35:03	2.22e6	1.73e6	5.50e5	4.26e5	3.176e3	1.739e3	1.28	
1,2,3,6,7,8-HxCDF		35:11	3.51e6	2.79e6	8.22e5	6.79e5	4.147e3	3.611e3	1.26	
2,3,4,6,7,8-HxCDF		35:51	5.64e6	4.57e6	1.38e6	1.10e6	3.607e3	5.388e3	1.24	
1,2,3,7,8,9-HxCDF		36:46	8.11e5	6.05e5	1.84e5	1.84e5	4.260e3	5.506e3	1.34	
Other HxCDF	1	33:31	2.15e6	1.77e6					1.21	
	2	33:45	6.57e6	5.07e6					1.29	
	3	33:59	5.37e5	4.59e5					1.17	

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Client Name	Advanced Technology Labs		
Client ID	1302545-05 / T-12-9.5	Injected By	BAL
Lab ID	10240751001-R	Instrument ID	10MSHR05 (F)
Filename	F130921B_10	GC Column ID	USD174324H
Analyzed	09/21/2013 21:25	ICAL ID	F130918

	4	34:12	9.64e5	7.29e5	1.32	
	5	34:26	5.22e5	4.25e5	1.23	
	6	34:54	3.23e6	2.62e6	1.23	
	7	35:19	5.13e5	3.79e5	1.35	
	8	35:28	6.58e5	5.24e5	1.26	
Ethers	1	35:36	6.67e5	4.98e5	1.34	E

Hexa-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C		36:01	1.90e7	1.48e7	5.17e6	3.93e6	4.580e3	1.541e3	1.29	
1,2,3,6,7,8-HxCDD-13C		36:07	2.03e7	1.54e7	5.19e6	3.84e6	4.580e3	6.242e3	1.32	
1,2,3,7,8,9-HxCDD-13C		36:25	2.59e7	2.04e7	6.85e6	5.44e6	1.154e4	5.783e3	1.27	
1,2,3,4,7,8-HxCDD		36:01	2.58e5	2.10e5	7.12e4	5.22e4	2.199e3	2.087e3	1.23	
1,2,3,6,7,8-HxCDD		36:08	6.61e5	5.47e5	1.57e5	1.35e5	1.827e3	2.014e3	1.21	
1,2,3,7,8,9-HxCDD		36:26	4.55e5	3.64e5	1.17e5	1.04e5	2.397e3	1.943e3	1.25	
Other HxCDD	1	34:16	6.93e5	5.30e5					1.31	
	2	34:57	1.49e6	1.25e6					1.19	
	3	35:16	1.82e6	1.44e6					1.26	
	4	35:23	3.20e5	2.50e5					1.28	
	5	36:20	3.88e5	3.17e5					1.23	

Hepta-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C		38:25	8.70e6	1.92e7	2.29e6	5.18e6	5.444e3	3.691e3	0.45	
1,2,3,4,7,8,9-HpCDF-13C		39:57	6.41e6	1.46e7	1.73e6	4.13e6	2.829e3	2.737e3	0.44	
1,2,3,4,6,7,8-HpCDF		38:26	8.17e6	7.73e6	1.97e6	2.00e6	4.220e3	3.936e3	1.06	
1,2,3,4,7,8,9-HpCDF		39:59	1.19e6	1.15e6	3.58e5	3.22e5	3.364e3	3.936e3	1.03	
Other HpCDF	1	38:44	1.87e6	1.78e6					1.05	
	2	38:55	1.76e6	1.75e6					1.01	
Ethers	1	39:02	1.46e5	1.26e5					1.15	E

Hepta-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C		39:30	1.09e7	9.47e6	3.15e6	2.64e6	1.315e4	1.107e4	1.15	
1,2,3,4,6,7,8-HpCDD		39:32	3.87e6	3.86e6	1.05e6	1.16e6	3.059e3	1.771e3	1.00	
Other HpCDD	1	38:45	3.54e6	3.22e6					1.10	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

Client Name	Advanced Technology Labs		
Client ID	1302545-05 / T-12-9.5	Injected By	BAL
Lab ID	10240751001-R	Instrument ID	10MSHR05 (F)
Filename	F130921B_10	GC Column ID	USD174324H
Analyzed	09/21/2013 21:25	ICAL ID	F130918

OCDF	42:26	2.05e6	2.26e6	5.15e5	6.38e5	2.531e3	3.711e3	0.91	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:17	1.47e7	1.59e7	3.64e6	3.94e6	6.585e2	4.133e2	0.92	
OCDD	42:17	5.53e6	6.24e6	1.39e6	1.57e6	2.588e3	2.620e3	0.89	

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Appendix E

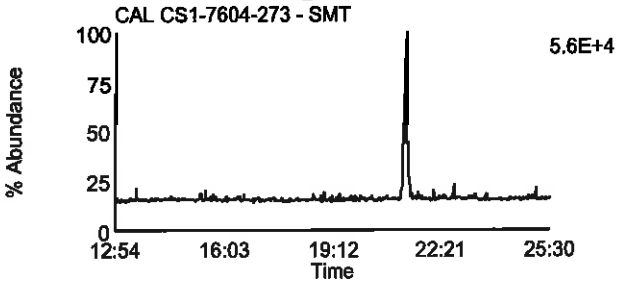
Calibration Raw Data

Homologue Group: Tetras

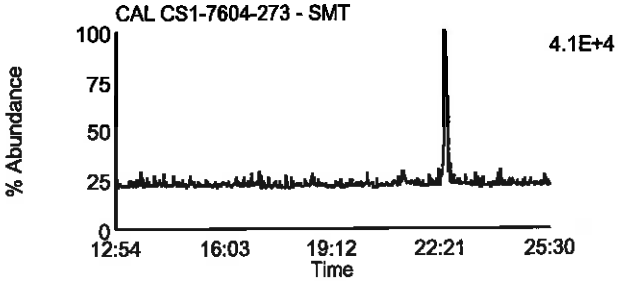
Data File Name: F130918B_04
Date Acquired: 9/18/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR05 (F)

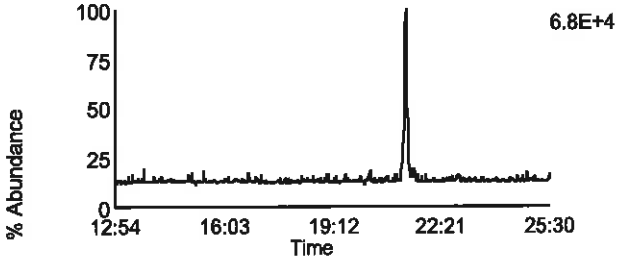
Data File: F130918B_04 G1 C1 - 303.9016
CAL CS1-7604-273 - SMT



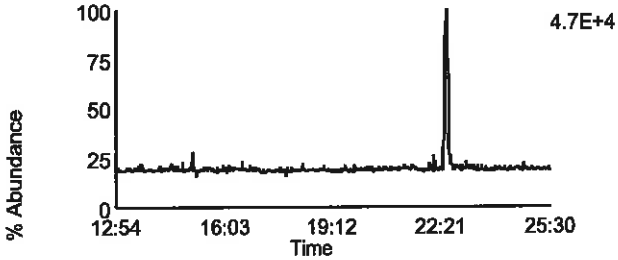
Data File: F130918B_04 G1 C7 - 319.8965
CAL CS1-7604-273 - SMT



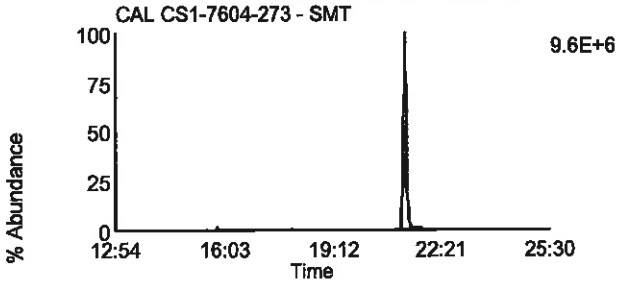
Data File: F130918B_04 G1 C2 - 305.8987
CAL CS1-7604-273 - SMT



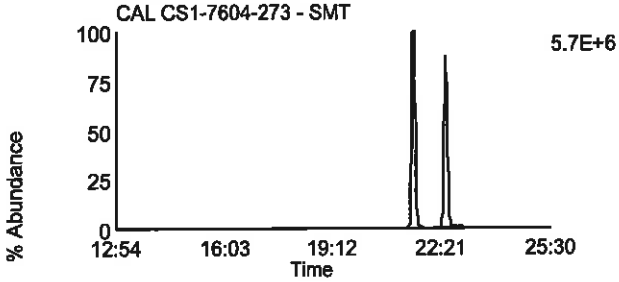
Data File: F130918B_04 G1 C8 - 321.8936
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G1 C3 - 315.9418
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G1 C10 - 331.9367
CAL CS1-7604-273 - SMT



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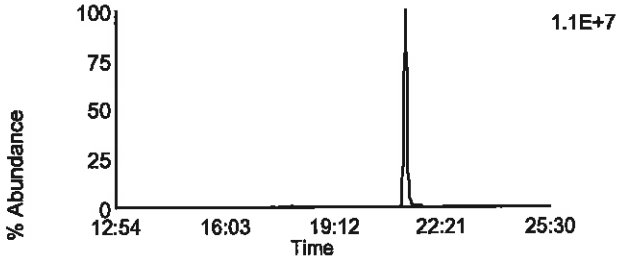
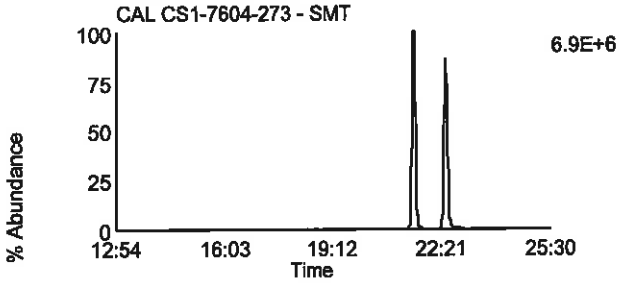
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G1 C11 - 333.9338
CAL CS1-7604-273 - SMT



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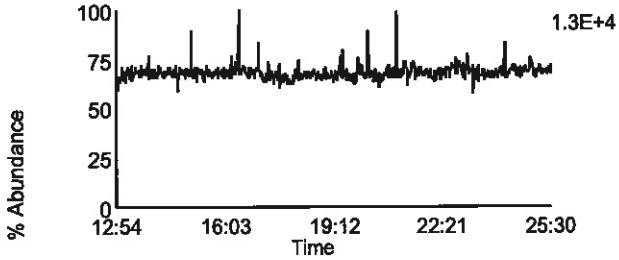
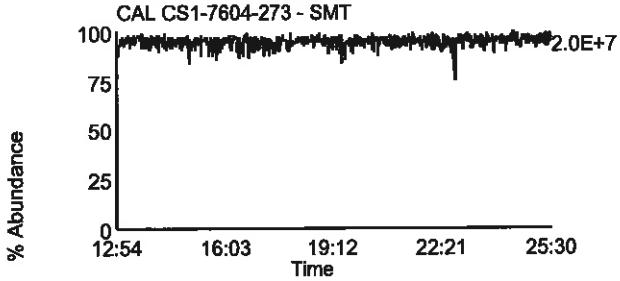
CAL CS1-7604-273 - SMT



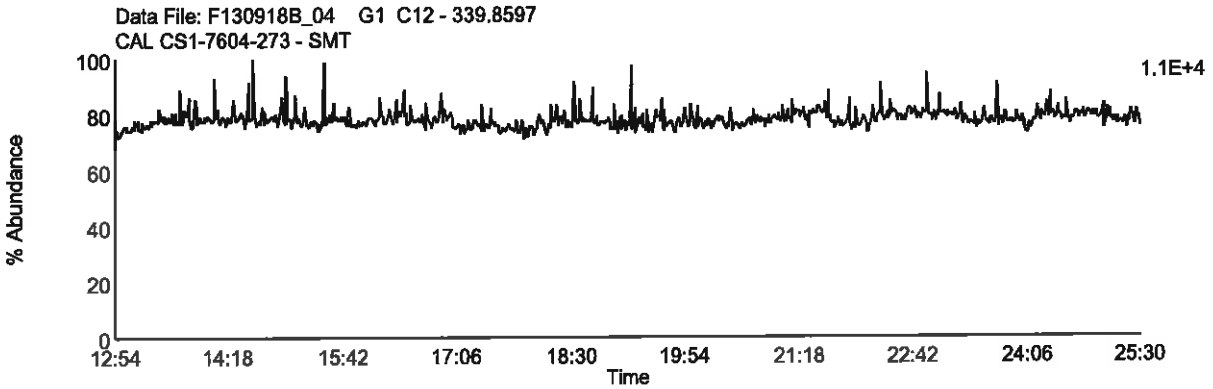
Data File: F130918B_04 G1 C5 - 318.9792
CAL CS1-7604-273 - SMT

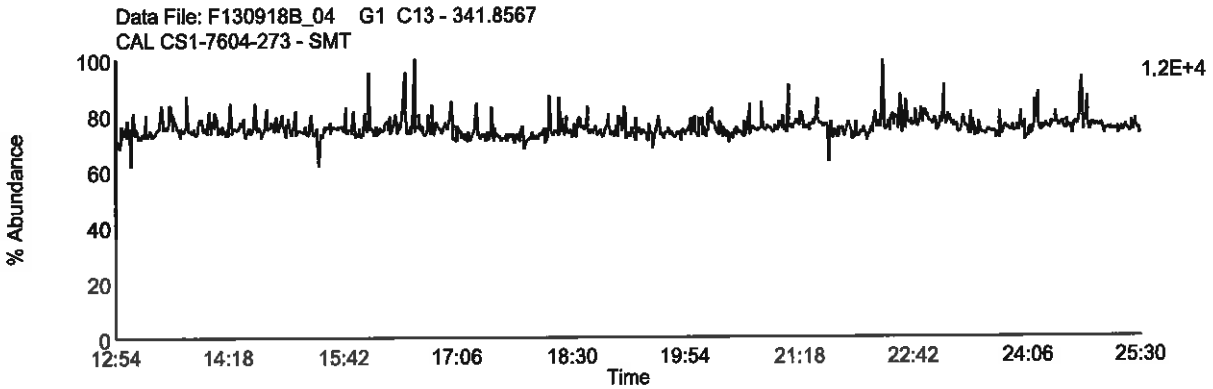


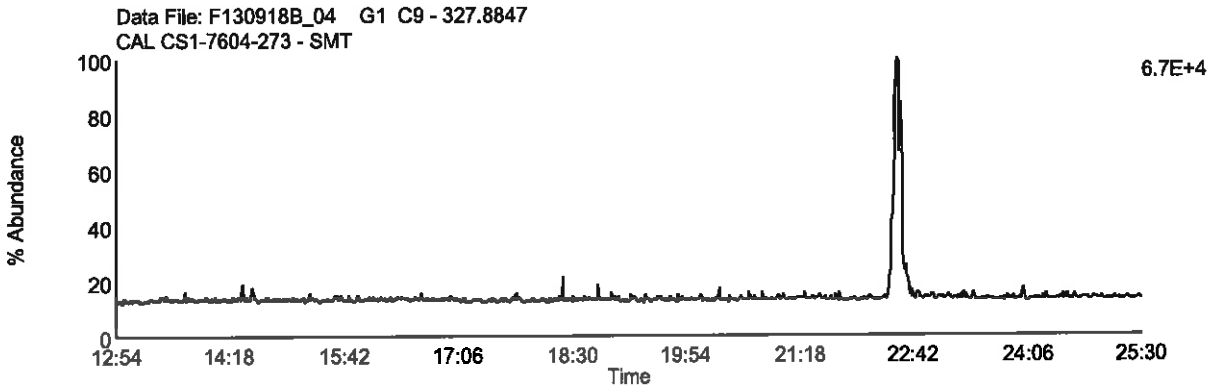
Homologue Group: Penta & Cleanup

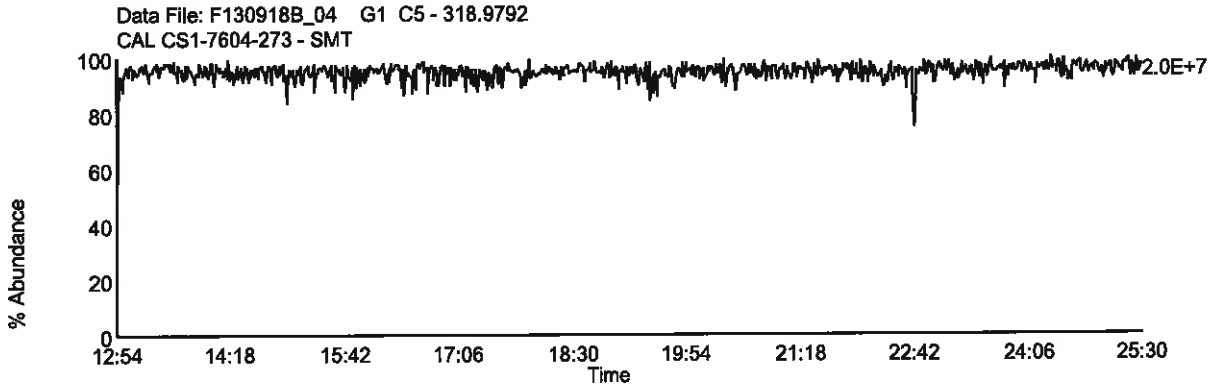
Data File Name: F130918B_04
Date Acquired: 9/18/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR05 (F)







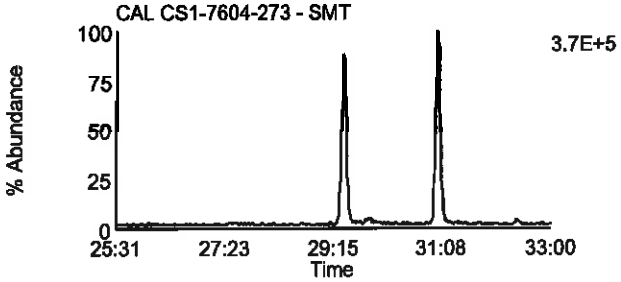


Homologue Group: Pentas

Data File Name: F130918B_04
Date Acquired: 9/18/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130918B_04 G2 C1 - 339.8597
CAL CS1-7604-273 - SMT



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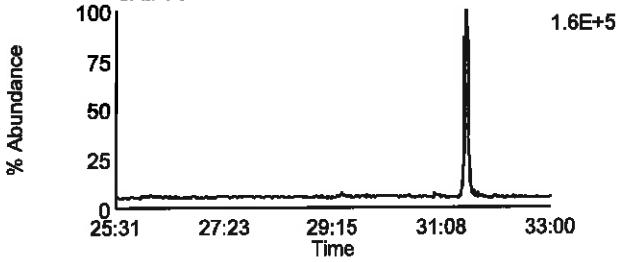
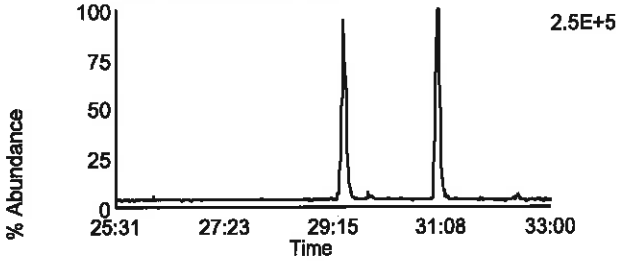
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G2 C2 - 341.8567
CAL CS1-7604-273 - SMT



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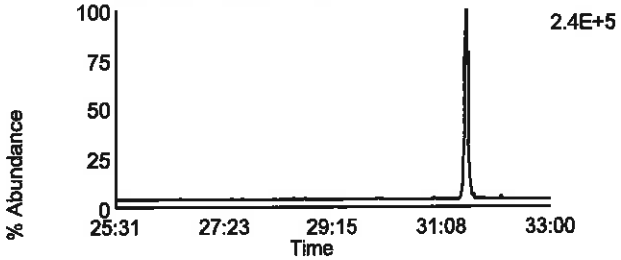
CAL CS1-7604-273 - SMT



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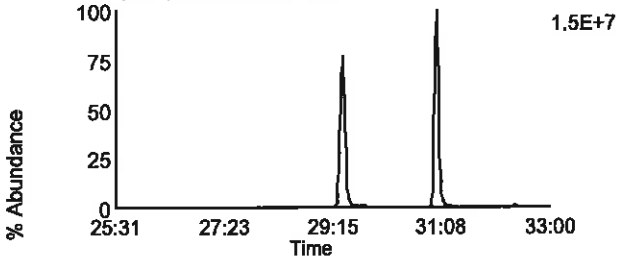
CAL CS1-7604-273 - SMT



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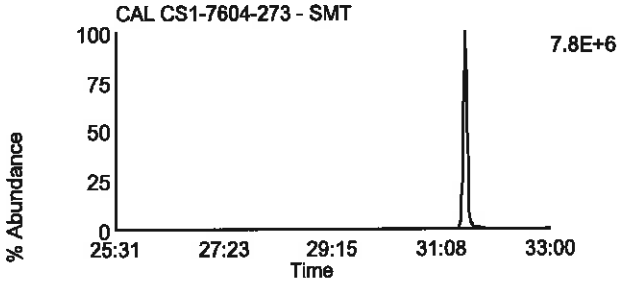
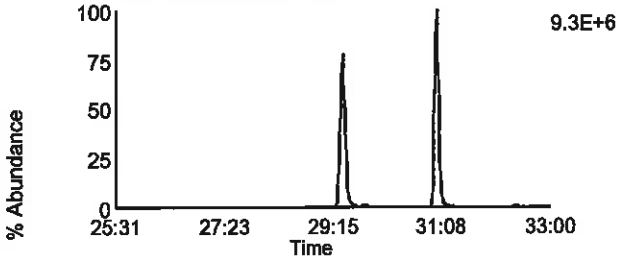
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G2 C5 - 353.8969
CAL CS1-7604-273 - SMT



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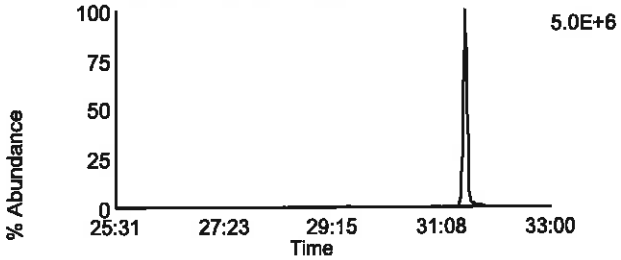

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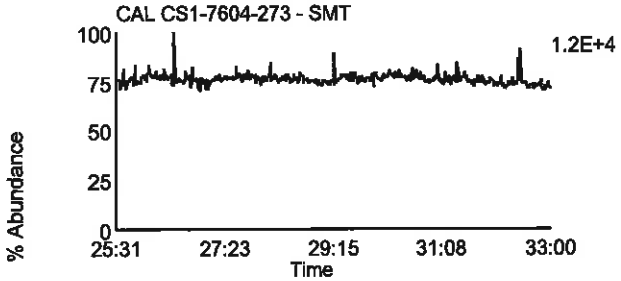
CAL CS1-7604-273 - SMT



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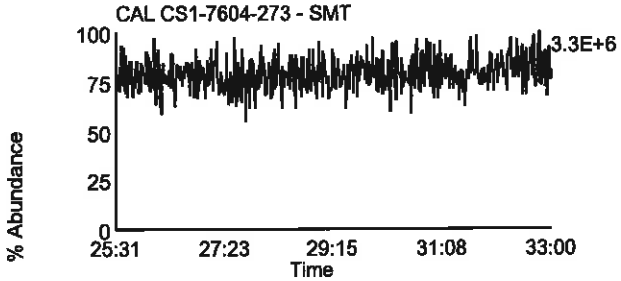
CAL CS1-7604-273 - SMT

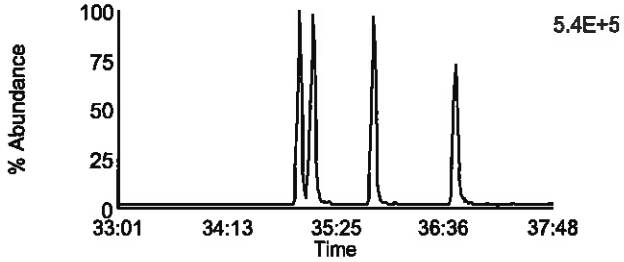


Homologue Group: Hexas

Data File Name: F130918B_04
Date Acquired: 9/18/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130918B_04 G3 C1 - 373.8207
CAL CS1-7604-273 - SMT



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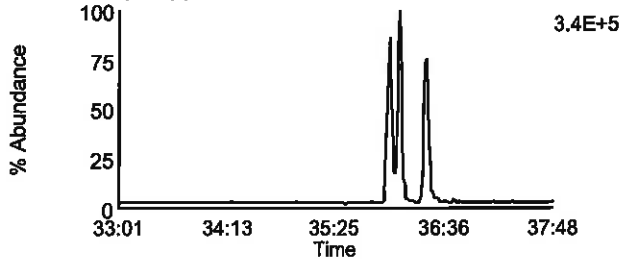
CAL CS1-7604-273 - SMT



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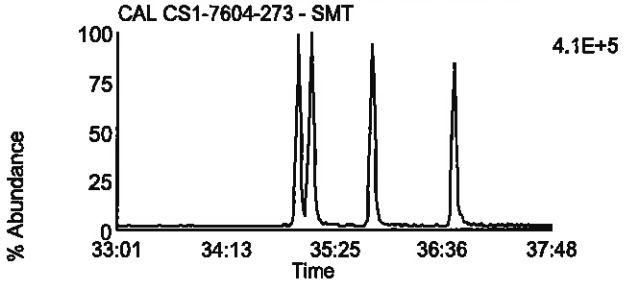
CAL CS1-7604-273 - SMT



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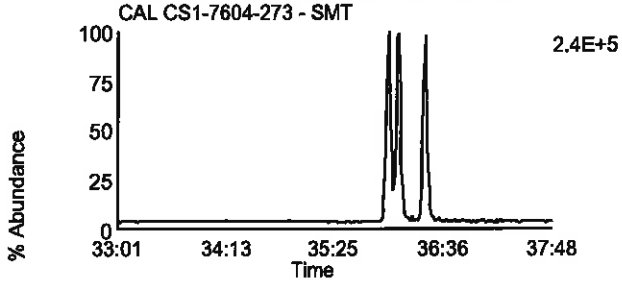
CAL CS1-7604-273 - SMT



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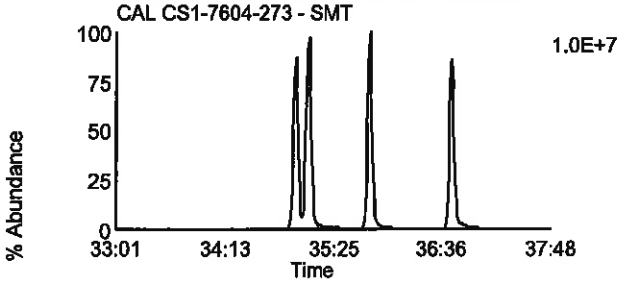
CAL CS1-7604-273 - SMT



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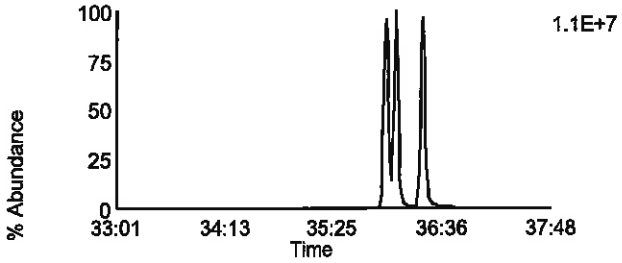
CAL CS1-7604-273 - SMT



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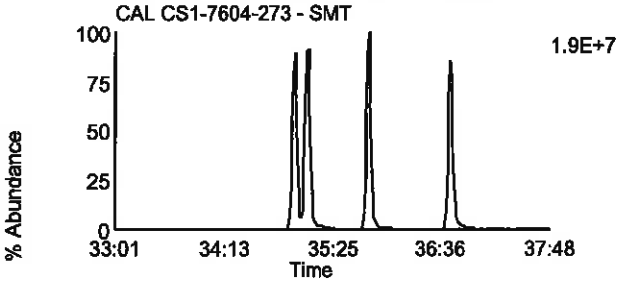
CAL CS1-7604-273 - SMT



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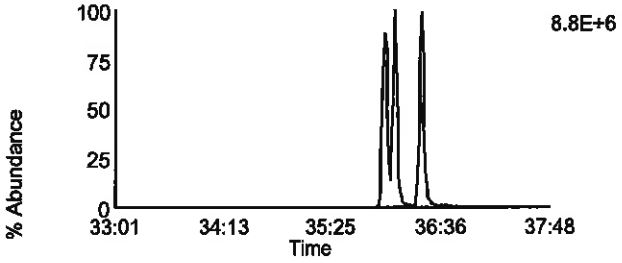

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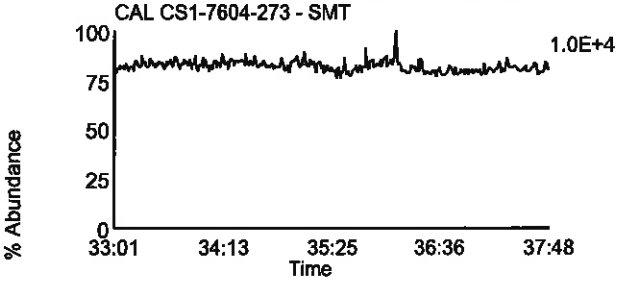
CAL CS1-7604-273 - SMT



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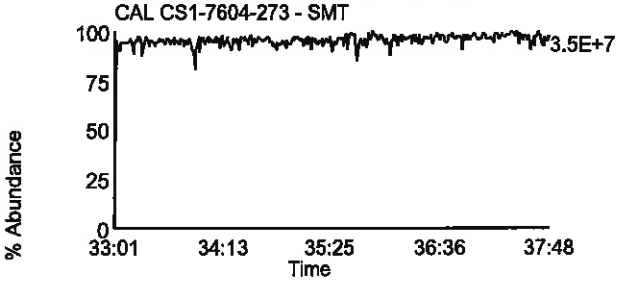
CAL CS1-7604-273 - SMT

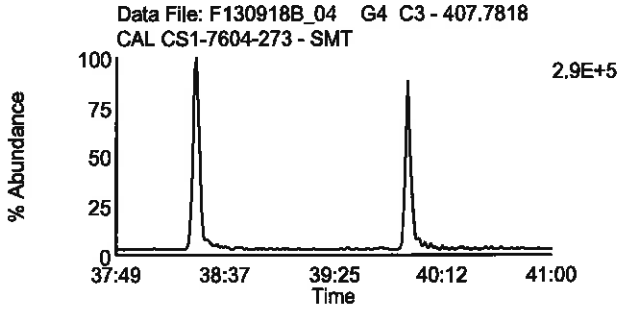


Homologue Group: Heptas

Data File Name: F130918B_04
Date Acquired: 9/18/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130918B_04 G4 C3 - 407.7818
CAL CS1-7604-273 - SMT



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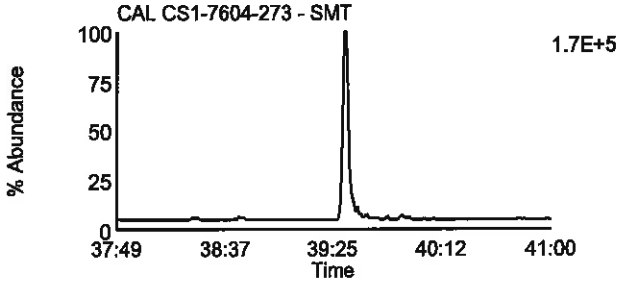

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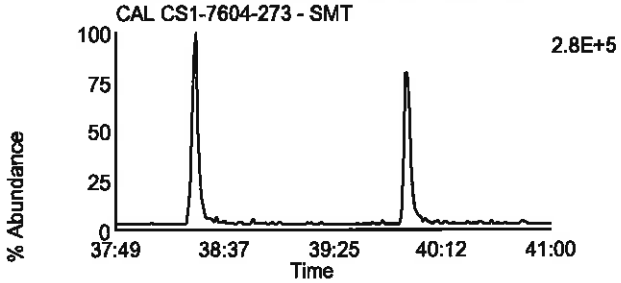
CAL CS1-7604-273 - SMT



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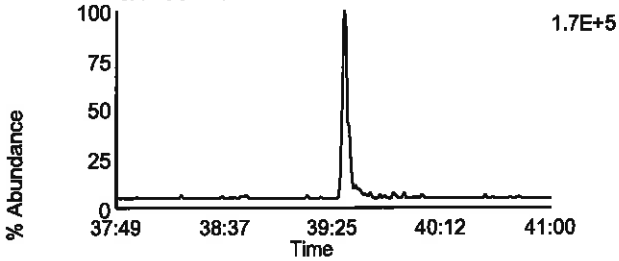
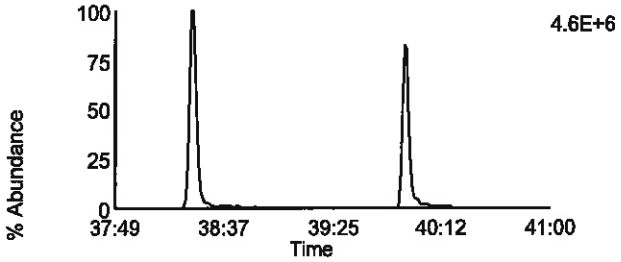
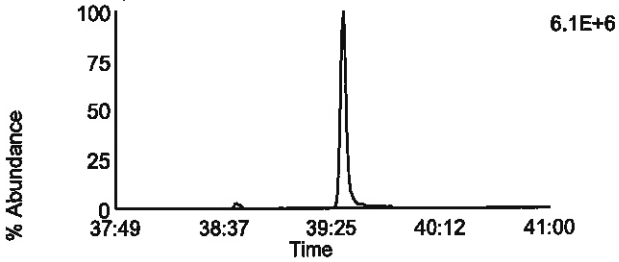
CAL CS1-7604-273 - SMT



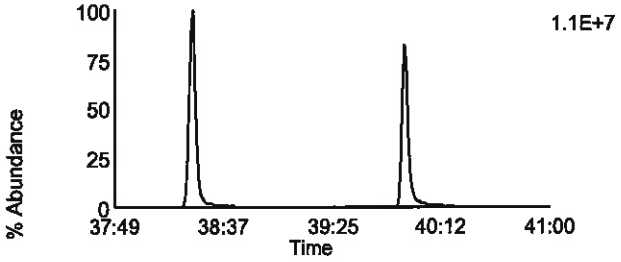
Data File: F130918B_04 G4 C6 - 417.825
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G4 C11 - 435.8169
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G4 C7 - 419.822
CAL CS1-7604-273 - SMT



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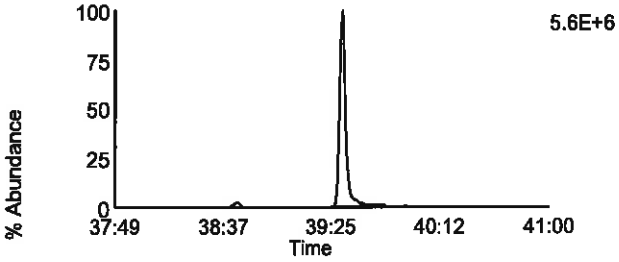
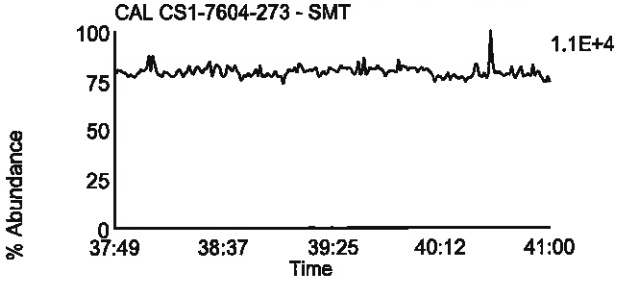
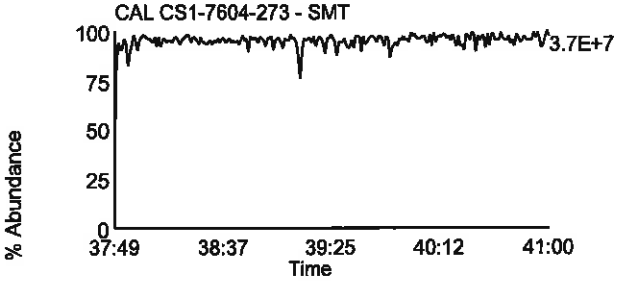
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G4 C13 - 479.7165
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G4 C1 - 380.976
CAL CS1-7604-273 - SMT

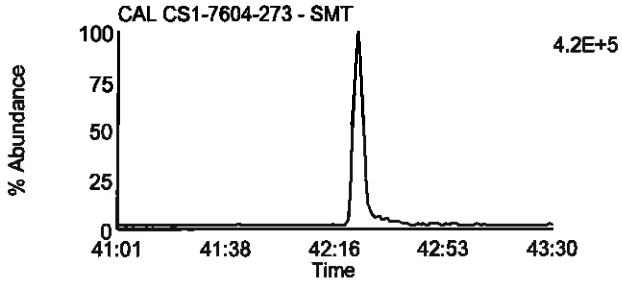


Homologue Group: Octas

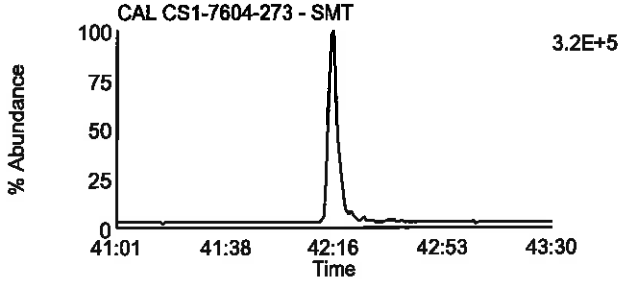
Data File Name: F130918B_04
Date Acquired: 9/18/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR05 (F)

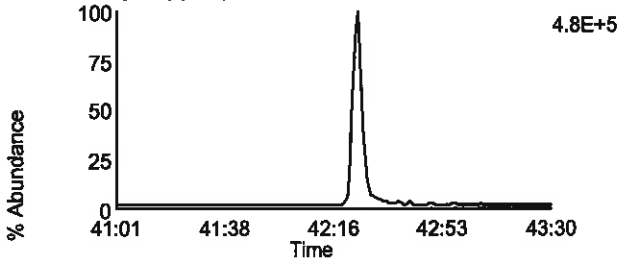
Data File: F130918B_04 G5 C4 - 441.7428
CAL CS1-7604-273 - SMT



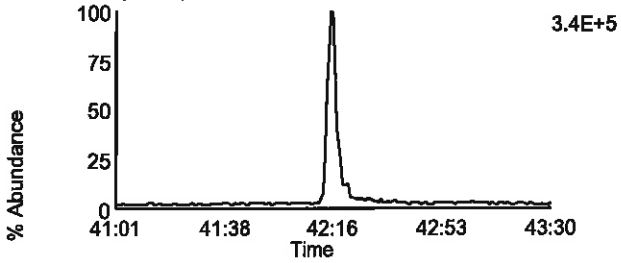
Data File: F130918B_04 G5 C8 - 457.7377
CAL CS1-7604-273 - SMT



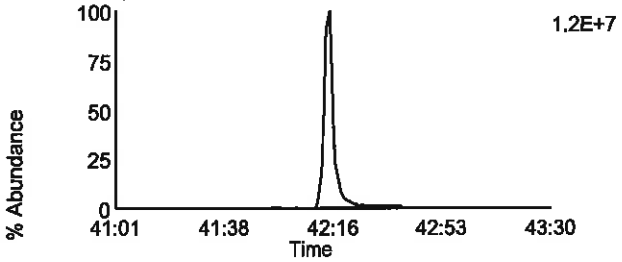
Data File: F130918B_04 G5 C5 - 443.7398
CAL CS1-7604-273 - SMT



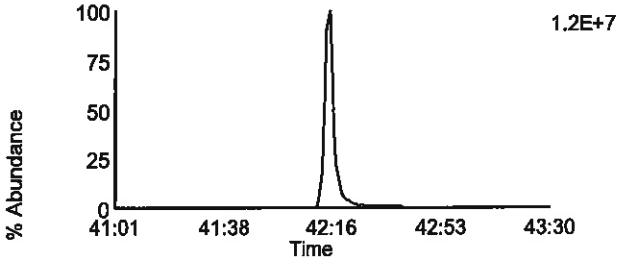
Data File: F130918B_04 G5 C9 - 459.7347
CAL CS1-7604-273 - SMT



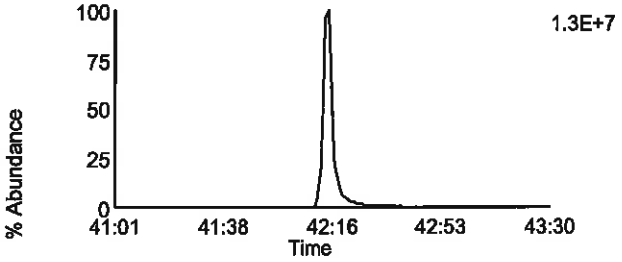
Data File: F130918B_04 G5 C11 - 469.7779
CAL CS1-7604-273 - SMT



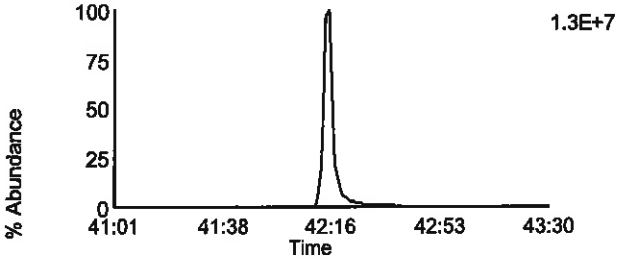
Data File: F130918B_04 G5 C11 - 469.7779
CAL CS1-7604-273 - SMT



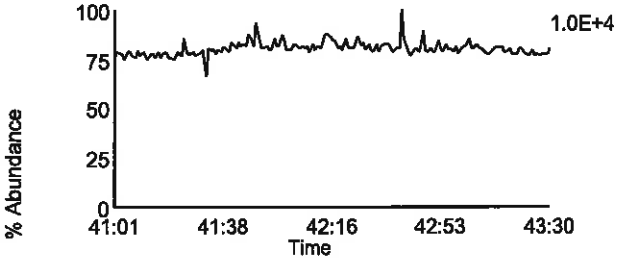
Data File: F130918B_04 G5 C12 - 471.7749
CAL CS1-7604-273 - SMT



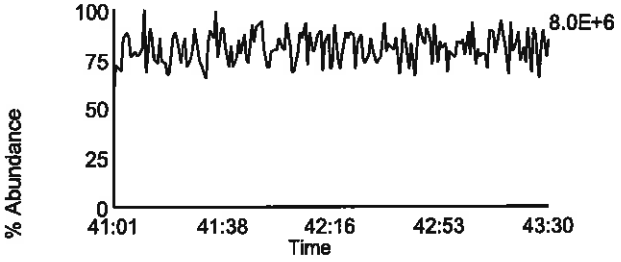
Data File: F130918B_04 G5 C12 - 471.7749
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G5 C13 - 513.6775
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G5 C2 - 430.9728
CAL CS1-7604-273 - SMT

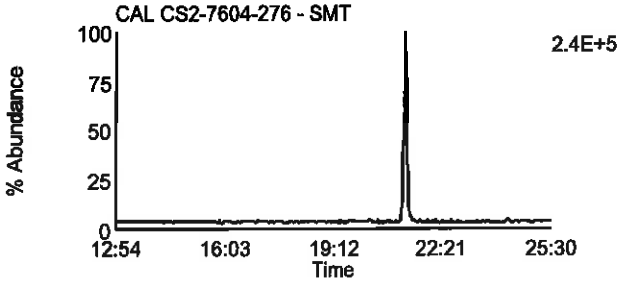


Homologue Group: Tetras

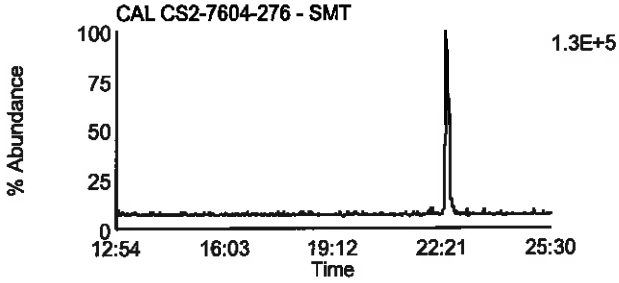
Data File Name: F130918B_03
Date Acquired: 9/18/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR05 (F)

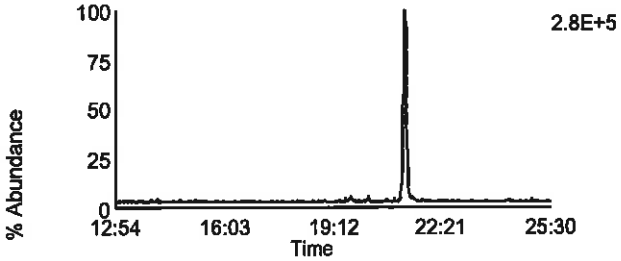
Data File: F130918B_03 G1 C1 - 303.9016
CAL CS2-7604-276 - SMT



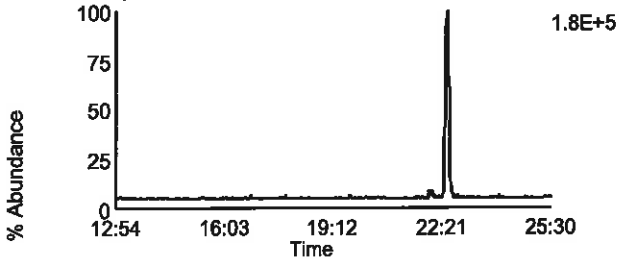
Data File: F130918B_03 G1 C7 - 319.8965
CAL CS2-7604-276 - SMT



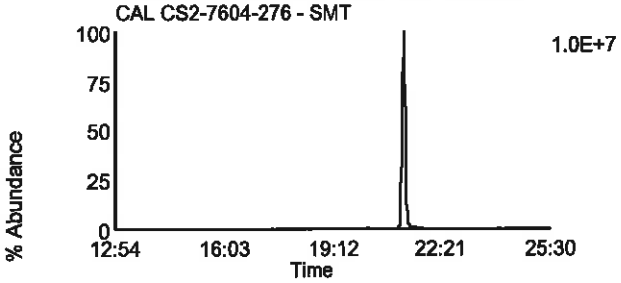
Data File: F130918B_03 G1 C2 - 305.8987
CAL CS2-7604-276 - SMT



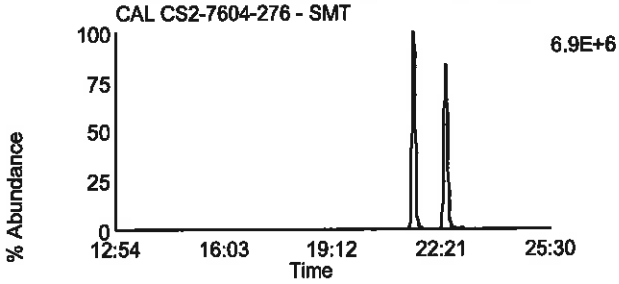
Data File: F130918B_03 G1 C8 - 321.8936
CAL CS2-7604-276 - SMT



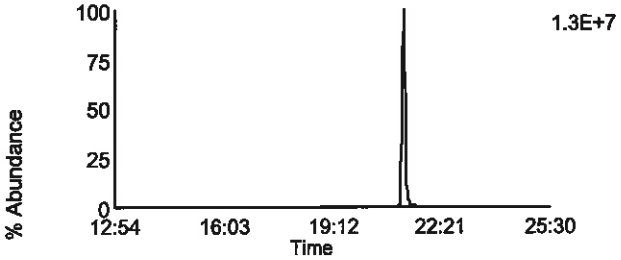
Data File: F130918B_03 G1 C3 - 315.9418
CAL CS2-7604-276 - SMT



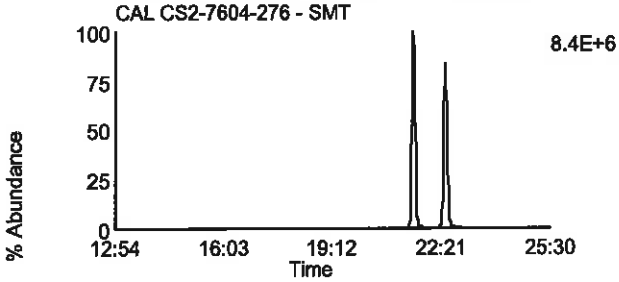
Data File: F130918B_03 G1 C10 - 331.9367
CAL CS2-7604-276 - SMT



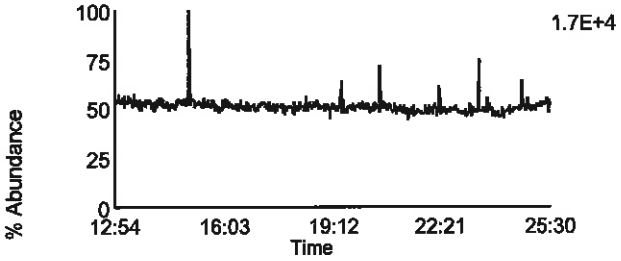
Data File: F130918B_03 G1 C4 - 317.9389
CAL CS2-7604-276 - SMT



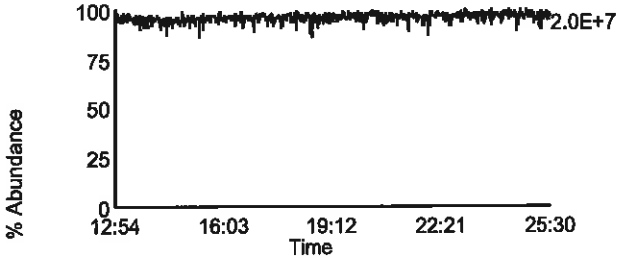
Data File: F130918B_03 G1 C11 - 333.9338
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G1 C14 - 375.8364
CAL CS2-7604-276 - SMT



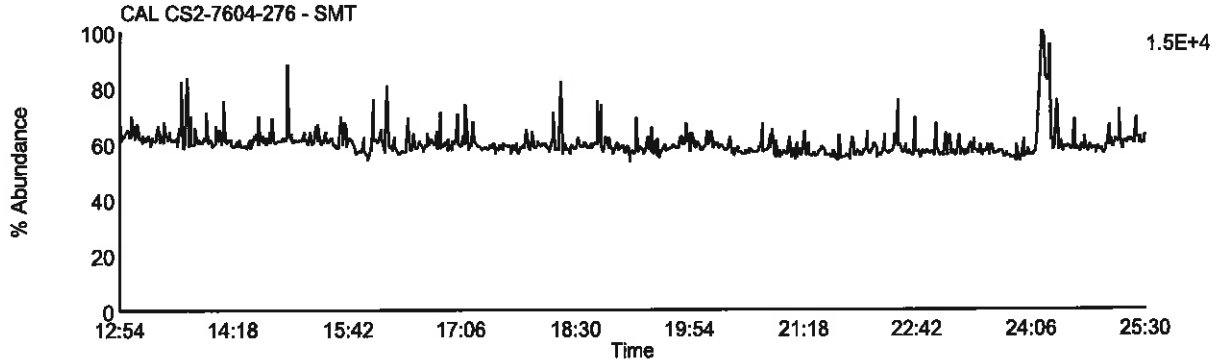
Data File: F130918B_03 G1 C5 - 318.9792
CAL CS2-7604-276 - SMT



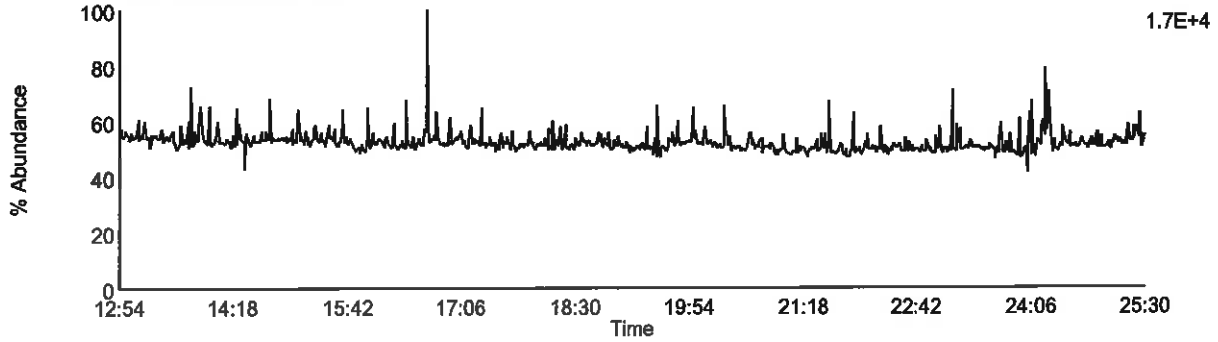
Homologue Group: Penta & Cleanup

Data File Name: F130918B_03	Lab Sample ID: CS2-7604-276
Date Acquired: 9/18/2013	Client Sample ID:
Sample Description: CAL CS2-7604-276 - SMT	Instrument: 10MSHR05 (F)

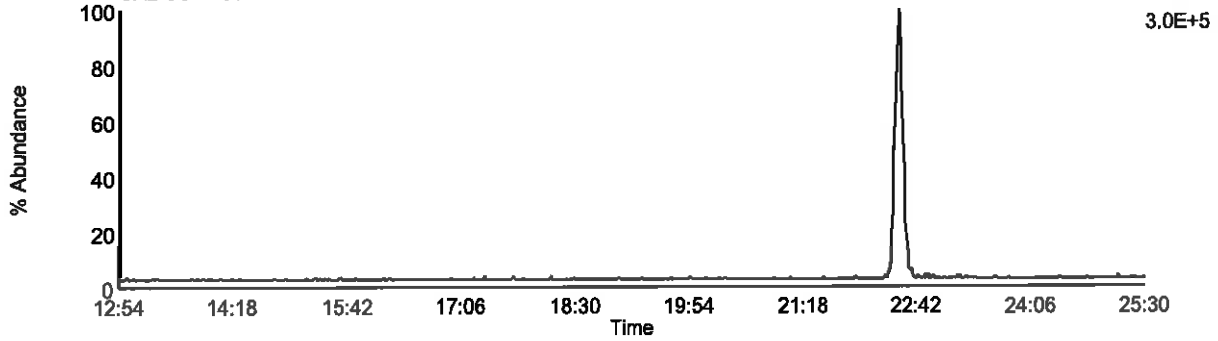
Data File: F130918B_03 G1 C12 - 339.8597
CAL CS2-7604-276 - SMT



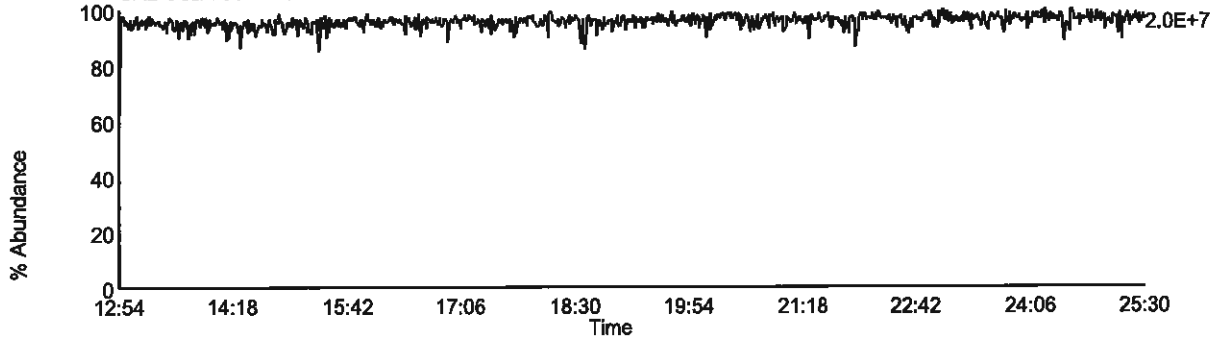
Data File: F130918B_03 G1 C13 - 341.8567
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G1 C9 - 327.8847
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G1 C5 - 318.9792
CAL CS2-7604-276 - SMT

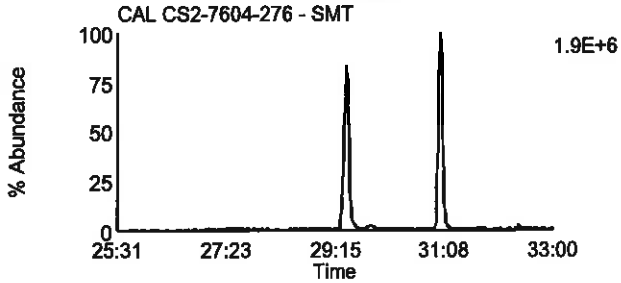


Homologue Group: Pentas

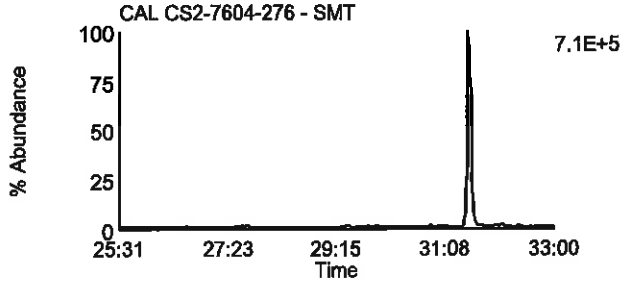
Data File Name: F130918B_03
Date Acquired: 9/18/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR05 (F)

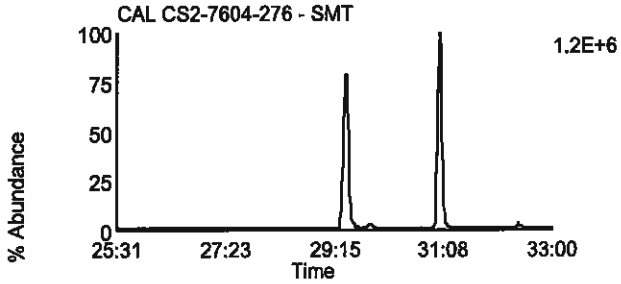
Data File: F130918B_03 G2 C1 - 339.8597
CAL CS2-7604-276 - SMT



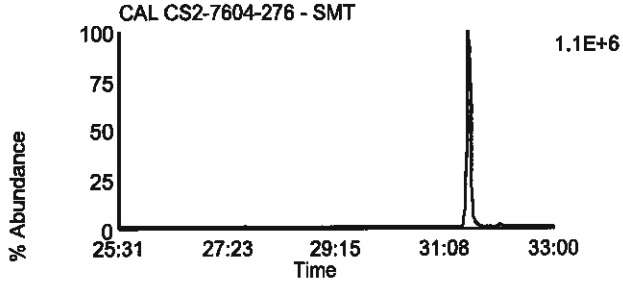
Data File: F130918B_03 G2 C4 - 353.8576
CAL CS2-7604-276 - SMT



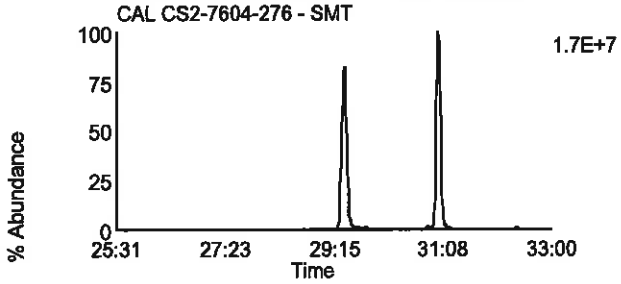
Data File: F130918B_03 G2 C2 - 341.8567
CAL CS2-7604-276 - SMT



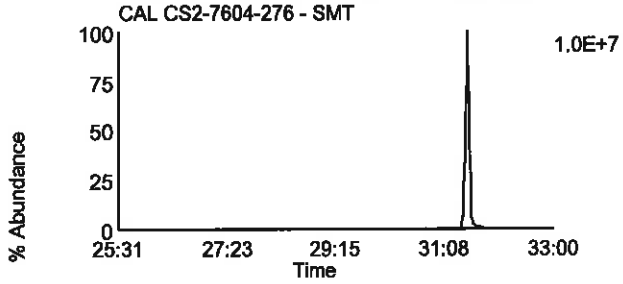
Data File: F130918B_03 G2 C8 - 355.8546
CAL CS2-7604-276 - SMT



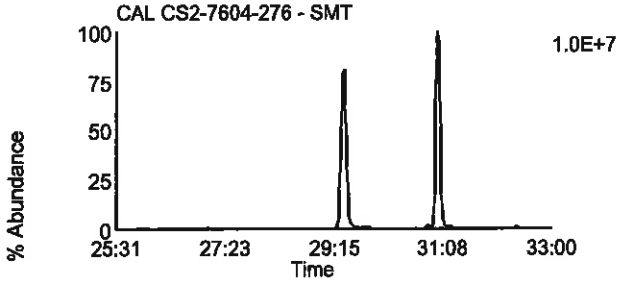
Data File: F130918B_03 G2 C3 - 351.8999
CAL CS2-7604-276 - SMT



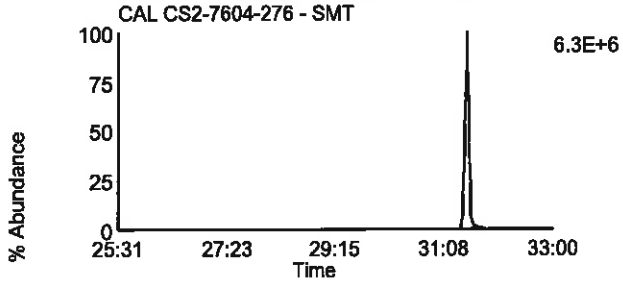
Data File: F130918B_03 G2 C10 - 367.8948
CAL CS2-7604-276 - SMT



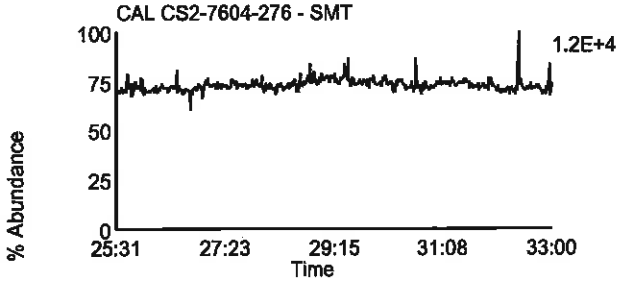
Data File: F130918B_03 G2 C5 - 353.8969
CAL CS2-7604-276 - SMT



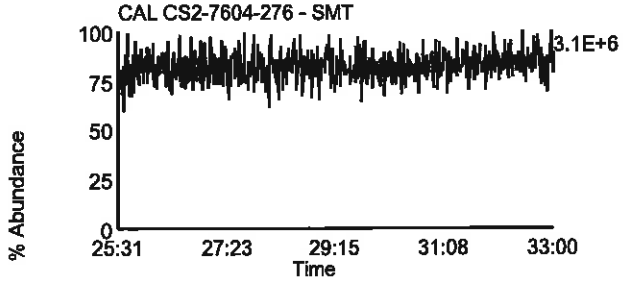
Data File: F130918B_03 G2 C11 - 369.8918
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G2 C12 - 409.7974
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G2 C6 - 354.9792
CAL CS2-7604-276 - SMT

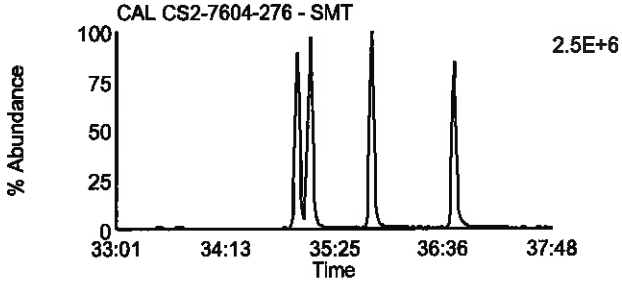


Homologue Group: Hexas

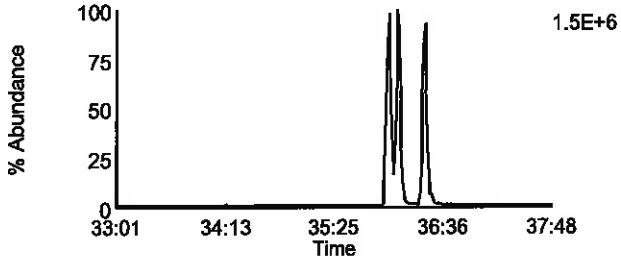
Data File Name: F130918B_03
Date Acquired: 9/18/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR05 (F)

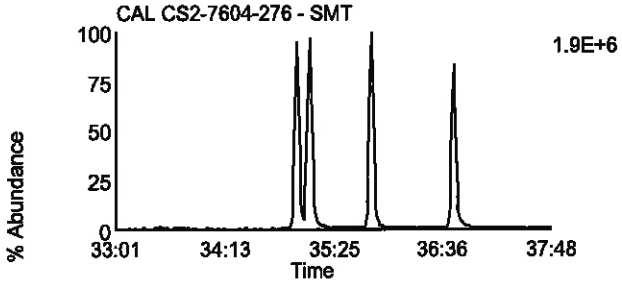
Data File: F130918B_03 G3 C1 - 373.8207
CAL CS2-7604-276 - SMT



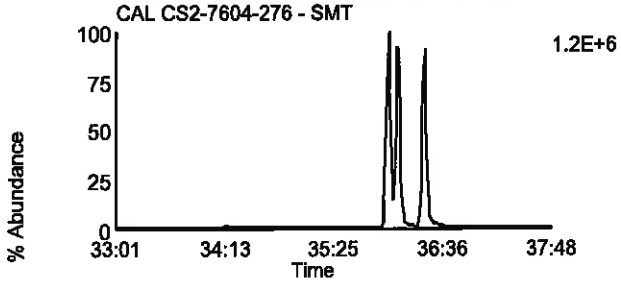
Data File: F130918B_03 G3 C7 - 389.8156
CAL CS2-7604-276 - SMT



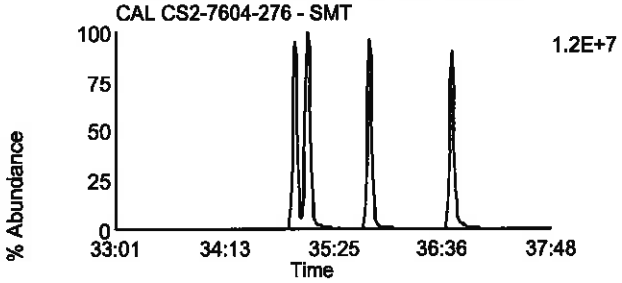
Data File: F130918B_03 G3 C2 - 375.8178
CAL CS2-7604-276 - SMT



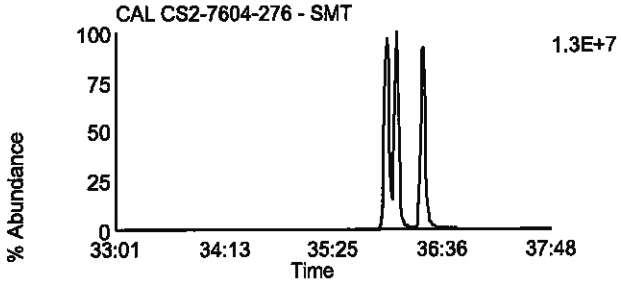
Data File: F130918B_03 G3 C8 - 391.8127
CAL CS2-7604-276 - SMT



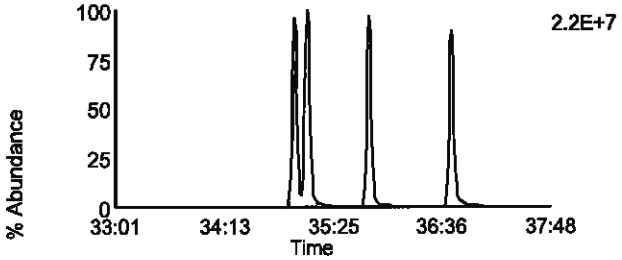
Data File: F130918B_03 G3 C5 - 383.8639
CAL CS2-7604-276 - SMT



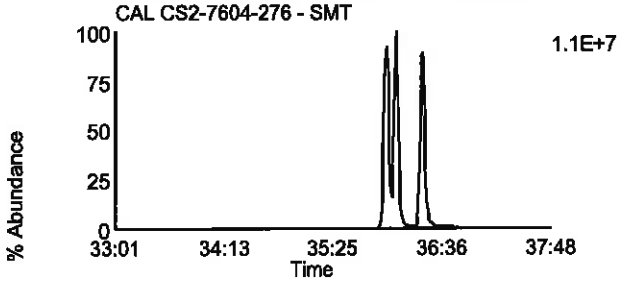
Data File: F130918B_03 G3 C9 - 401.8559
CAL CS2-7604-276 - SMT



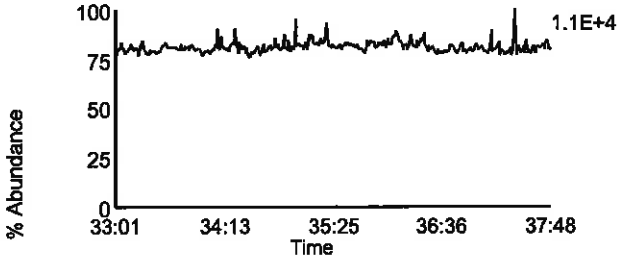
Data File: F130918B_03 G3 C6 - 385.861
CAL CS2-7604-276 - SMT



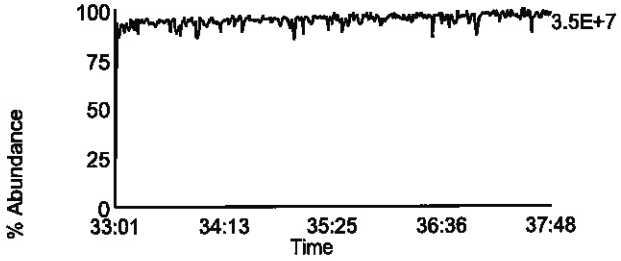
Data File: F130918B_03 G3 C10 - 403.8529
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G3 C11 - 445.7555
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G3 C3 - 380.976
CAL CS2-7604-276 - SMT

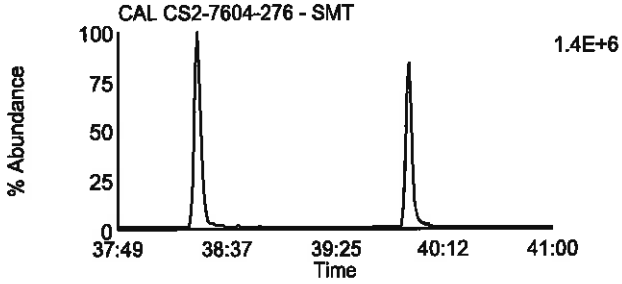


Homologue Group: Heptas

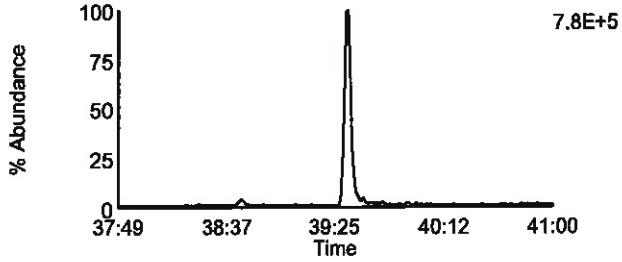
Data File Name: F130918B_03
Date Acquired: 9/18/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR05 (F)

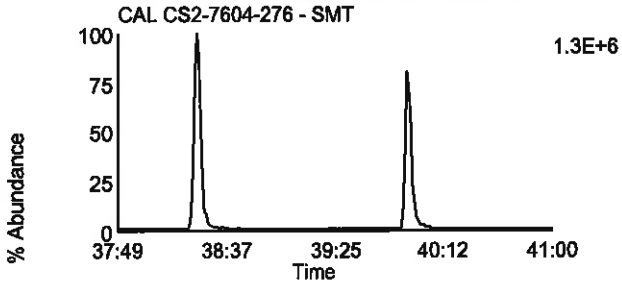
Data File: F130918B_03 G4 C3 - 407.7818
CAL CS2-7604-276 - SMT



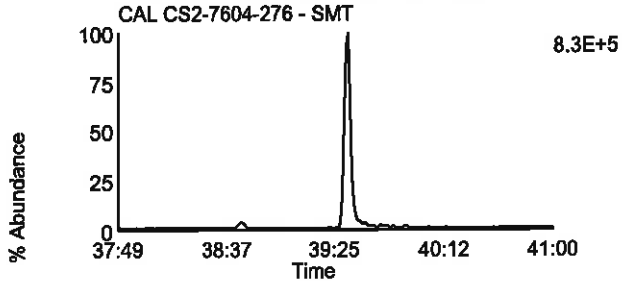
Data File: F130918B_03 G4 C8 - 423.7767
CAL CS2-7604-276 - SMT



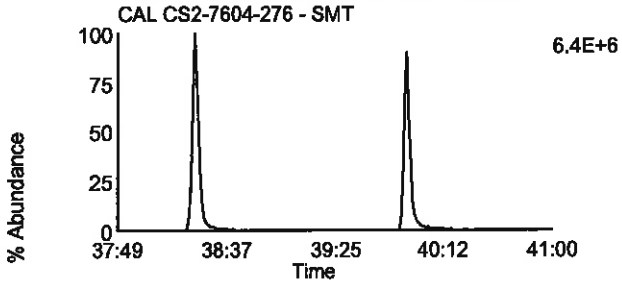
Data File: F130918B_03 G4 C4 - 409.7788
CAL CS2-7604-276 - SMT



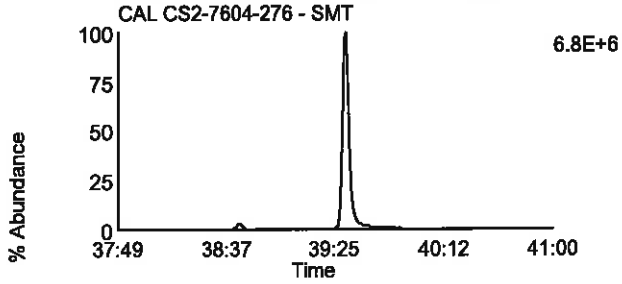
Data File: F130918B_03 G4 C9 - 425.7737
CAL CS2-7604-276 - SMT



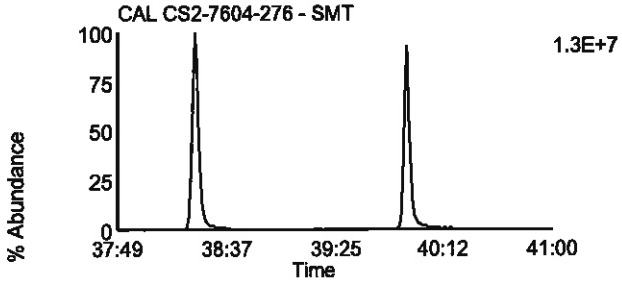
Data File: F130918B_03 G4 C6 - 417.825
CAL CS2-7604-276 - SMT



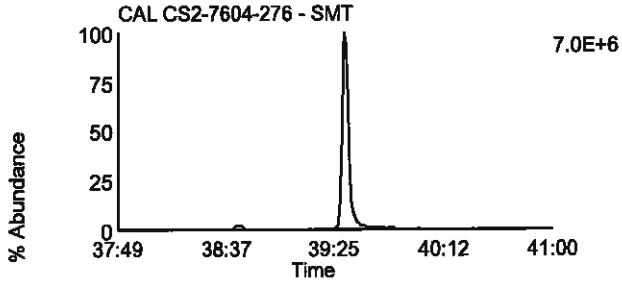
Data File: F130918B_03 G4 C11 - 435.8169
CAL CS2-7604-276 - SMT



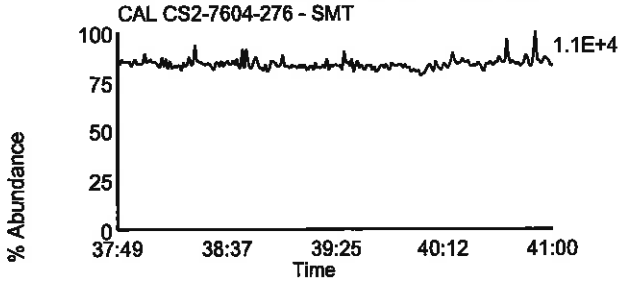
Data File: F130918B_03 G4 C7 - 419.822
CAL CS2-7604-276 - SMT



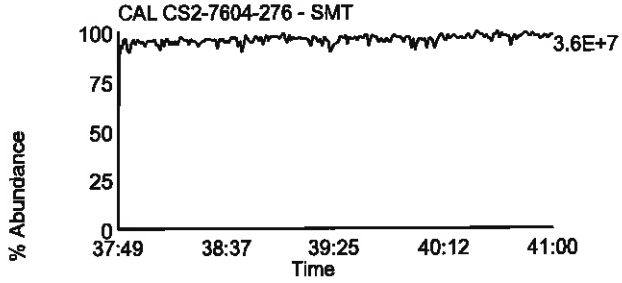
Data File: F130918B_03 G4 C12 - 437.814
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G4 C13 - 479.7165
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G4 C1 - 380.976
CAL CS2-7604-276 - SMT

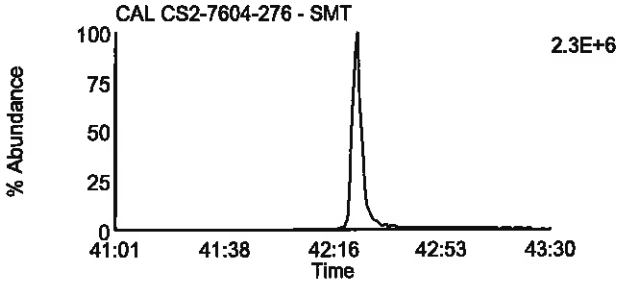


Homologue Group: Octas

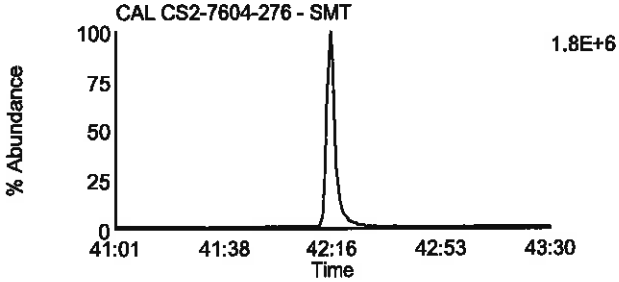
Data File Name: F130918B_03
Date Acquired: 9/18/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR05 (F)

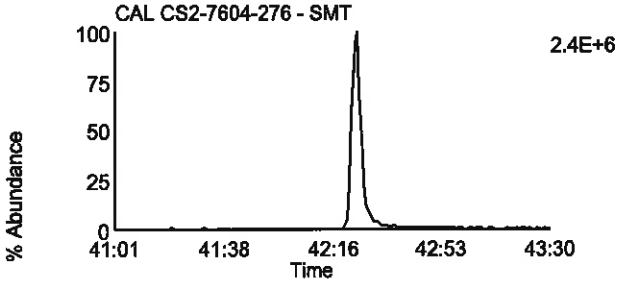
Data File: F130918B_03 G5 C4 - 441.7428
CAL CS2-7604-276 - SMT



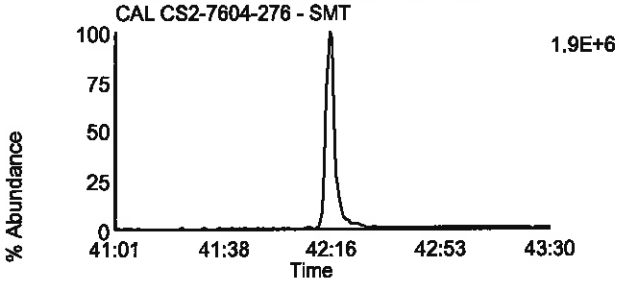
Data File: F130918B_03 G5 C8 - 457.7377
CAL CS2-7604-276 - SMT



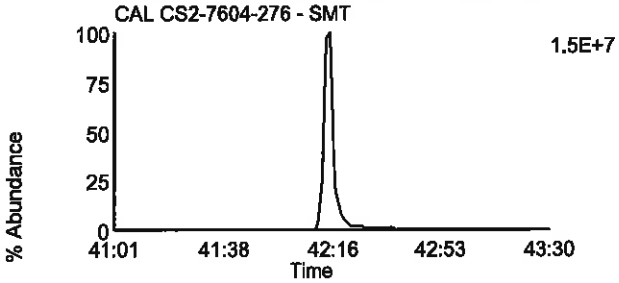
Data File: F130918B_03 G5 C5 - 443.7398
CAL CS2-7604-276 - SMT



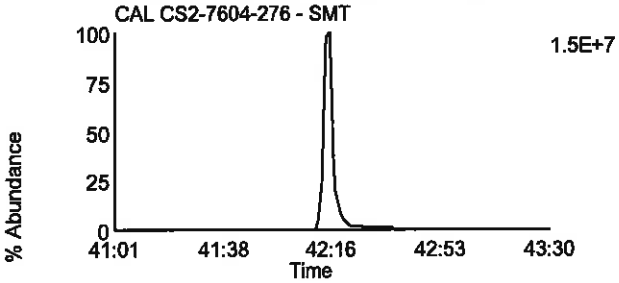
Data File: F130918B_03 G5 C9 - 459.7347
CAL CS2-7604-276 - SMT



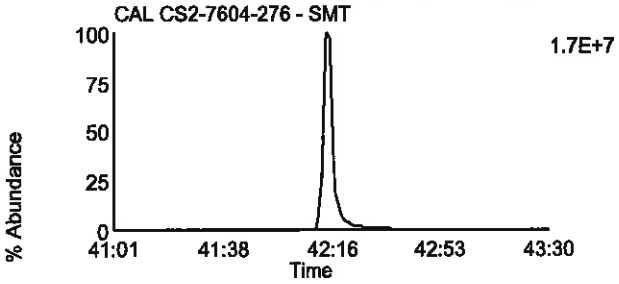
Data File: F130918B_03 G5 C11 - 469.7779
CAL CS2-7604-276 - SMT



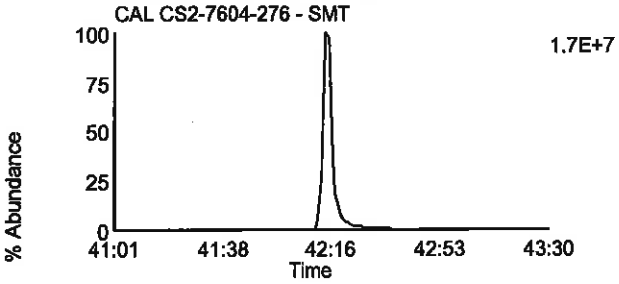
Data File: F130918B_03 G5 C11 - 469.7779
CAL CS2-7604-276 - SMT



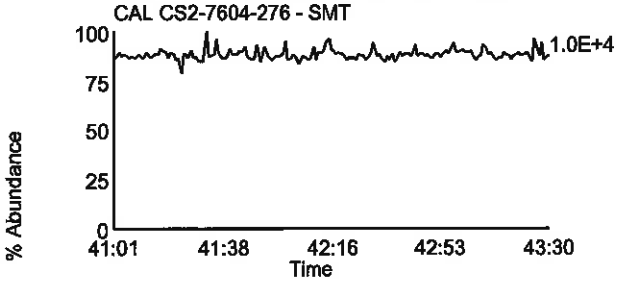
Data File: F130918B_03 G5 C12 - 471.7749
CAL CS2-7604-276 - SMT



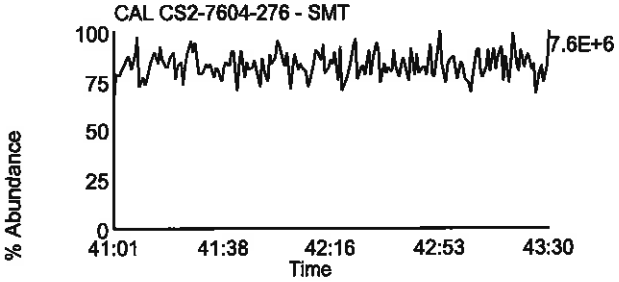
Data File: F130918B_03 G5 C12 - 471.7749
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G5 C13 - 513.6775
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G5 C2 - 430.9728
CAL CS2-7604-276 - SMT

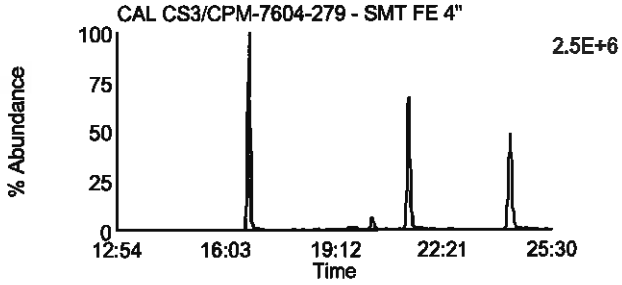


Homologue Group: Tetras

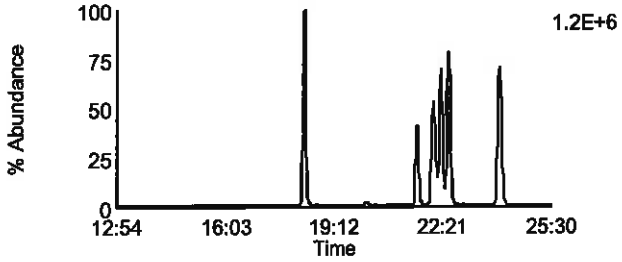
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

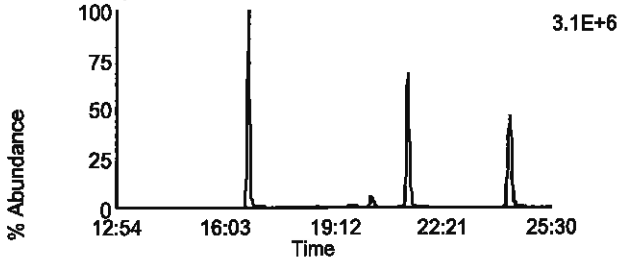
Data File: F130918B_02 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - SMT FE 4"



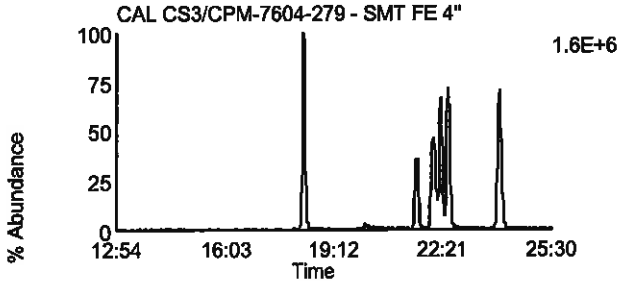
Data File: F130918B_02 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - SMT FE 4"



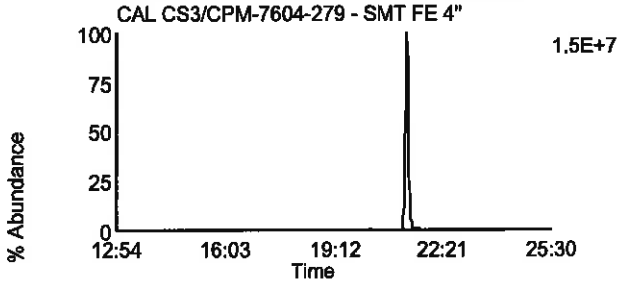
Data File: F130918B_02 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - SMT FE 4"



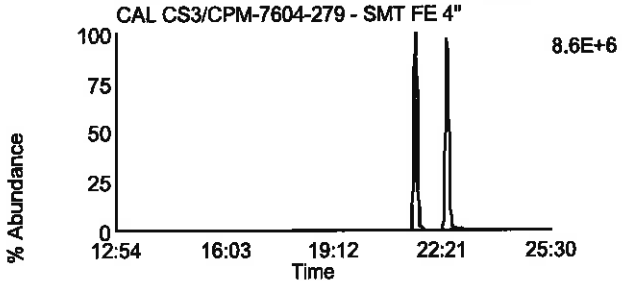
Data File: F130918B_02 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - SMT FE 4"



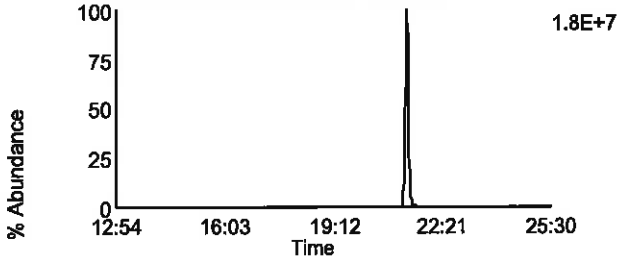
Data File: F130918B_02 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - SMT FE 4"



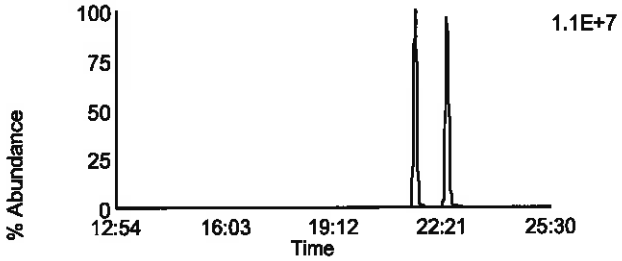
Data File: F130918B_02 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - SMT FE 4"



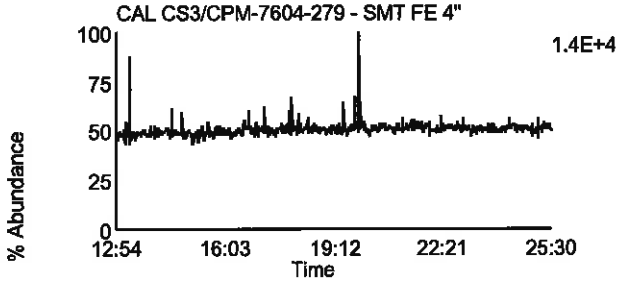
Data File: F130918B_02 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - SMT FE 4"



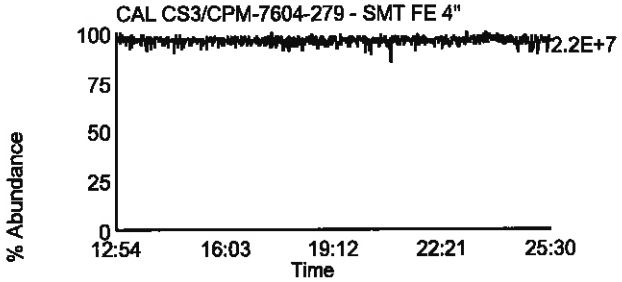
Data File: F130918B_02 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT FE 4"

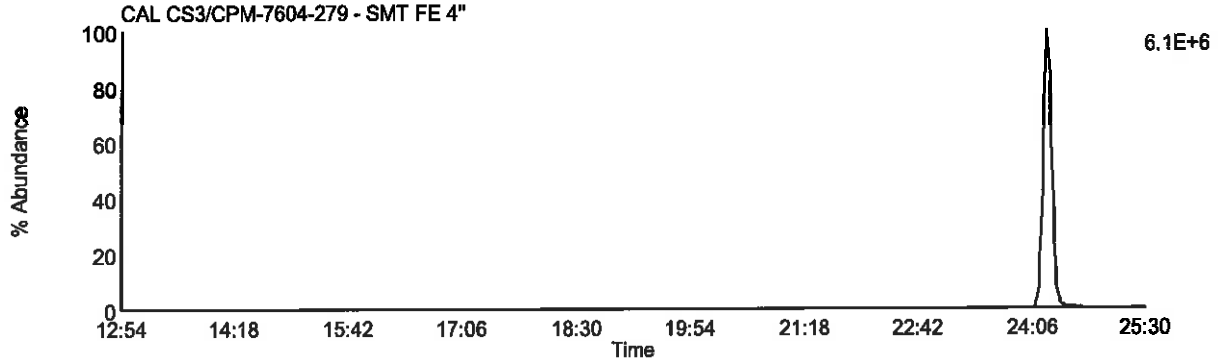


Homologue Group: Penta & Cleanup

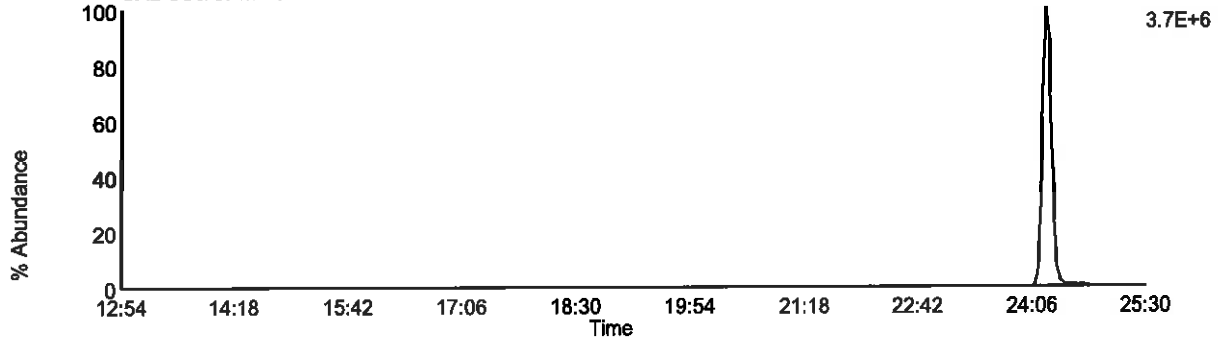
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

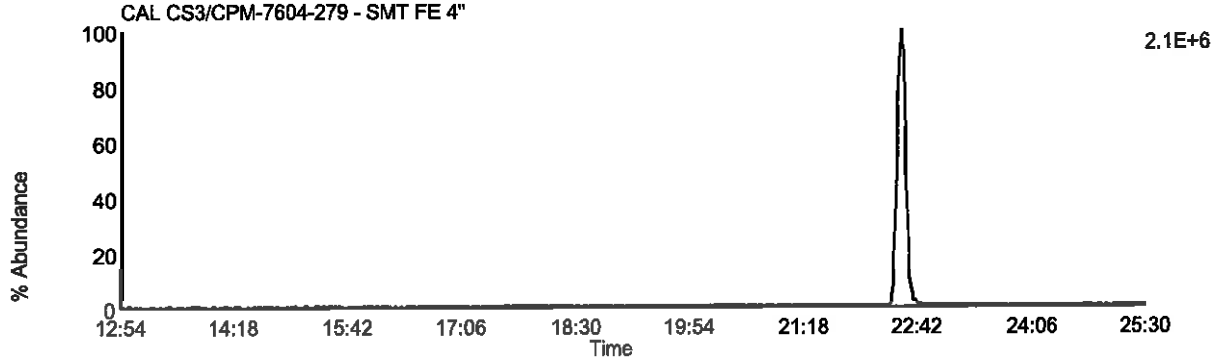
Data File: F130918B_02 G1 C12 - 339.8597
CAL CS3/CPM-7604-279 - SMT FE 4"



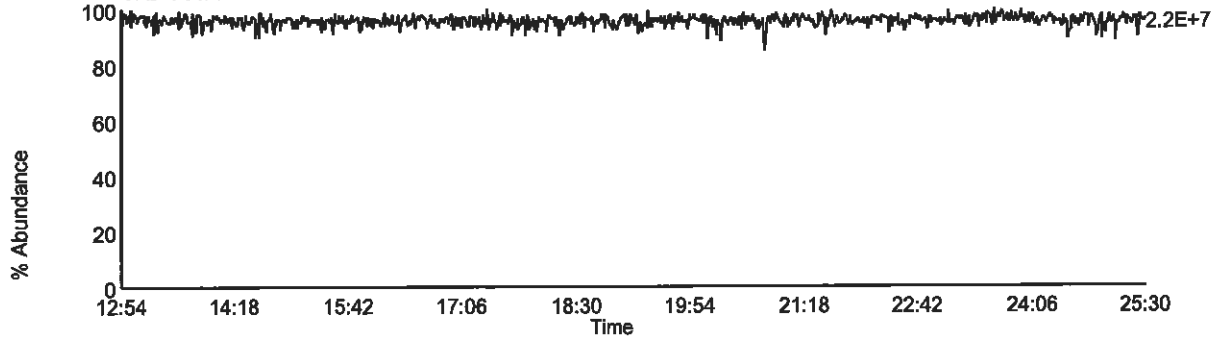
Data File: F130918B_02 G1 C13 - 341.8567
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C9 - 327.8847
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT FE 4"

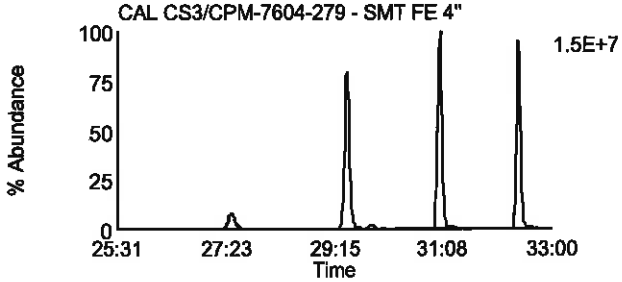


Homologue Group: Pentas

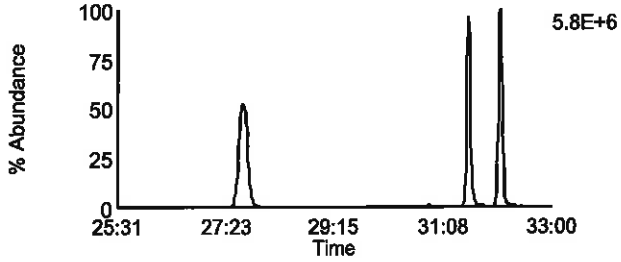
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

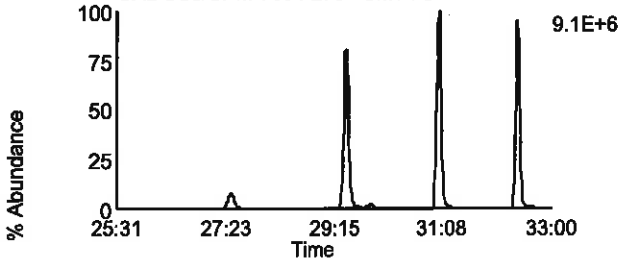
Data File: F130918B_02 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - SMT FE 4"



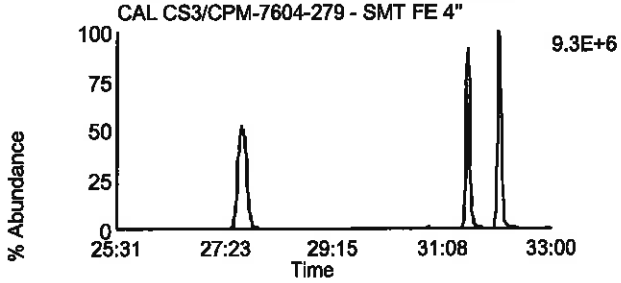
Data File: F130918B_02 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - SMT FE 4"



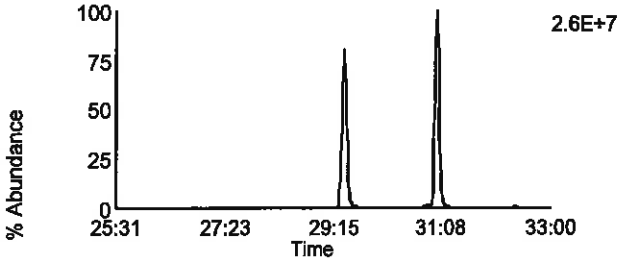
Data File: F130918B_02 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - SMT FE 4"



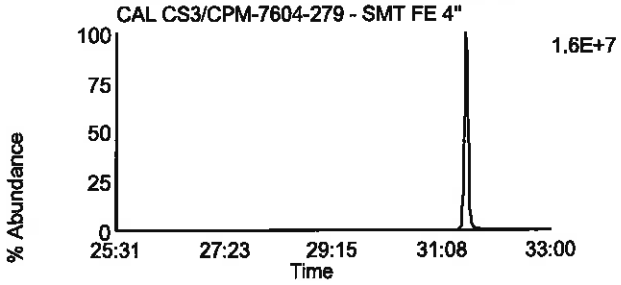
Data File: F130918B_02 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - SMT FE 4"



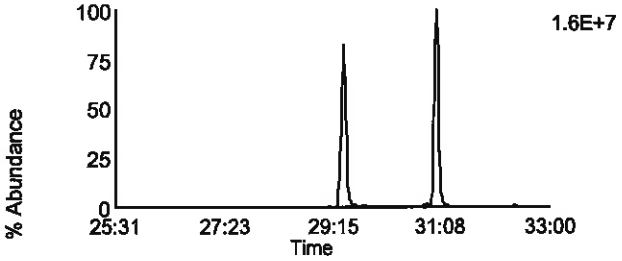
Data File: F130918B_02 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - SMT FE 4"



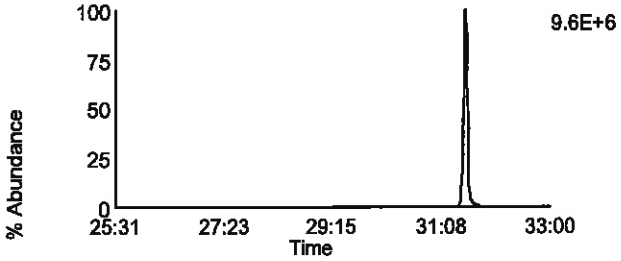
Data File: F130918B_02 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - SMT FE 4"



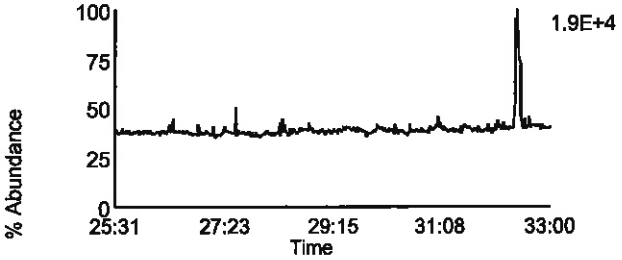
Data File: F130918B_02 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - SMT FE 4"



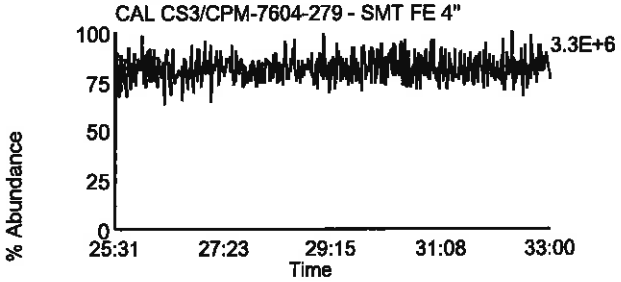
Data File: F130918B_02 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - SMT FE 4"

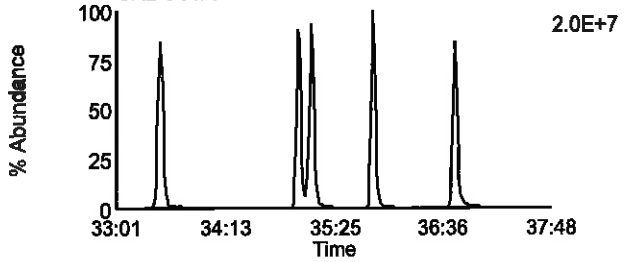


Homologue Group: Hexas

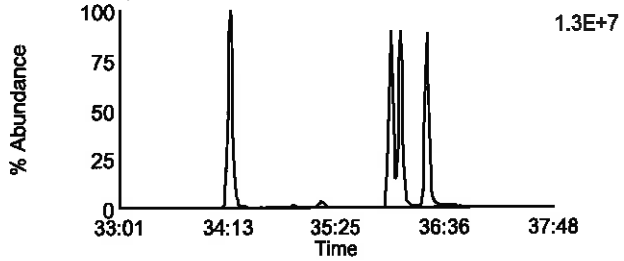
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

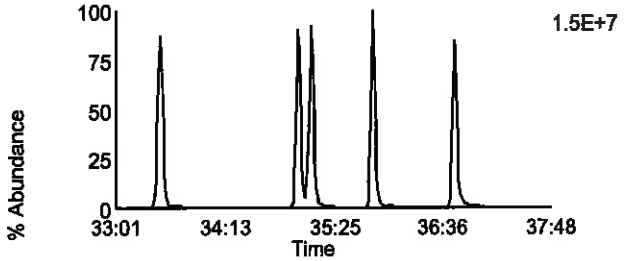
Data File: F130918B_02 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - SMT FE 4"



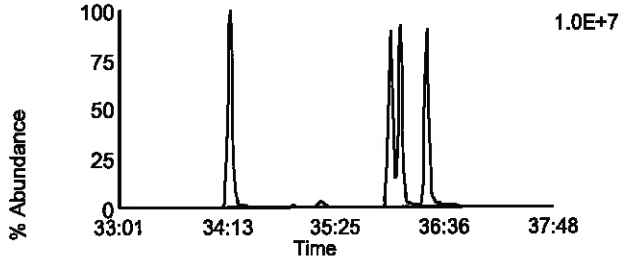
Data File: F130918B_02 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - SMT FE 4"



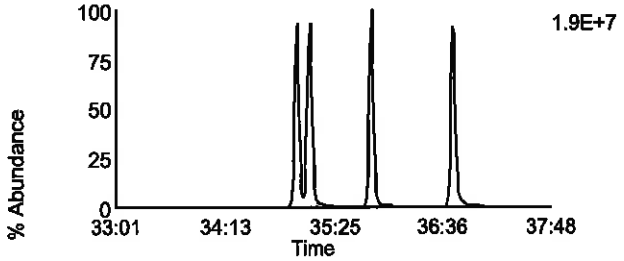
Data File: F130918B_02 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - SMT FE 4"



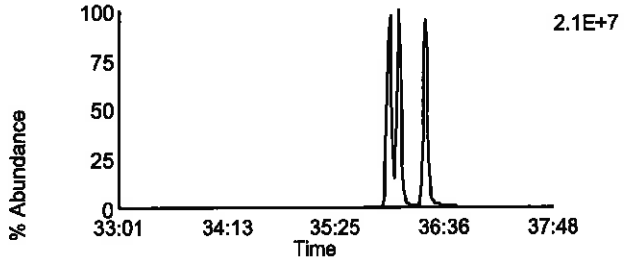
Data File: F130918B_02 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - SMT FE 4"



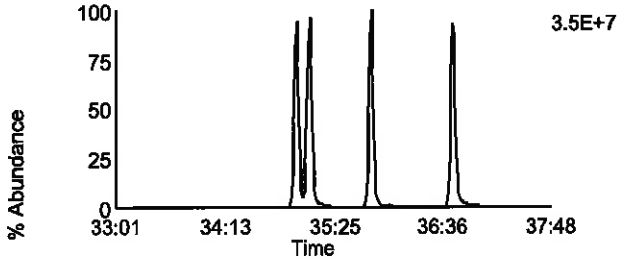
Data File: F130918B_02 G3 C5 - 383.8639
CAL CS3/CPM-7604-279 - SMT FE 4"



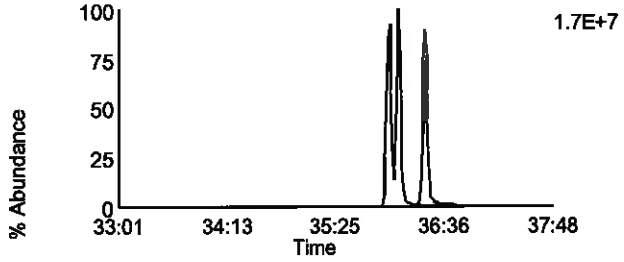
Data File: F130918B_02 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - SMT FE 4"



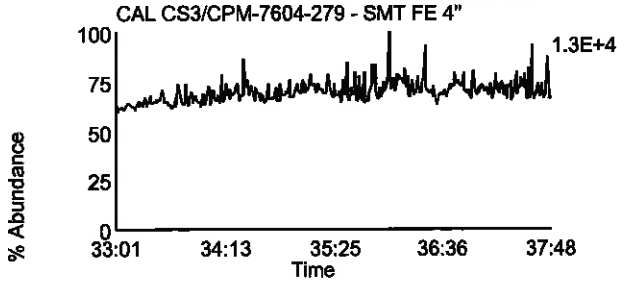
Data File: F130918B_02 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - SMT FE 4"



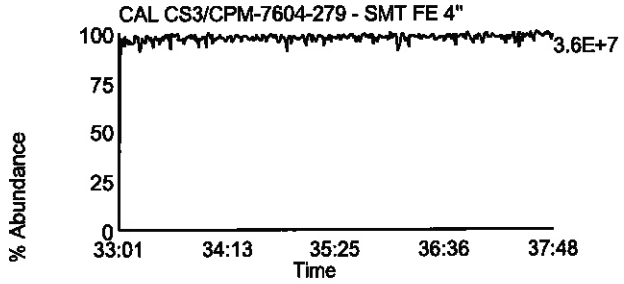
Data File: F130918B_02 G3 C10 - 403.8529
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - SMT FE 4"

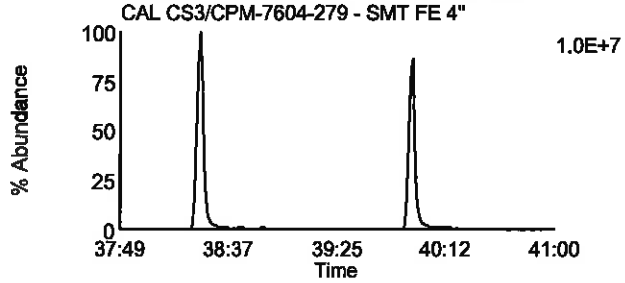


Homologue Group: Heptas

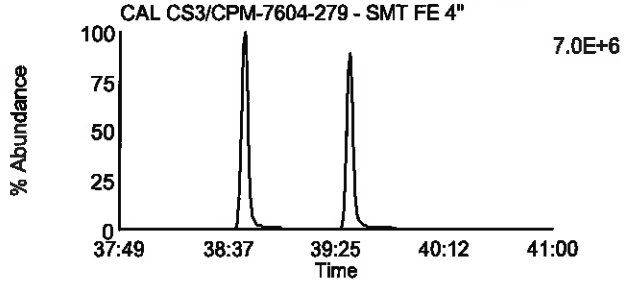
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

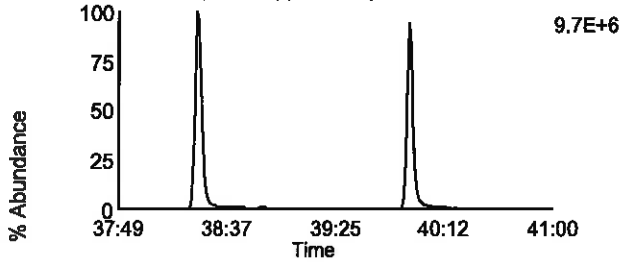
Data File: F130918B_02 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - SMT FE 4"



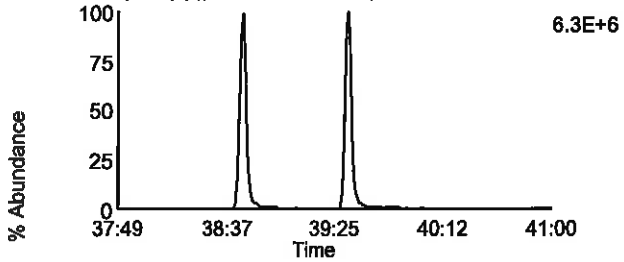
Data File: F130918B_02 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - SMT FE 4"



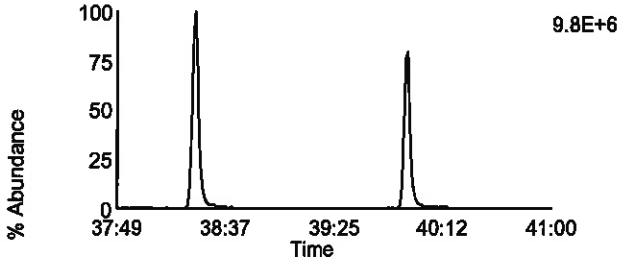
Data File: F130918B_02 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - SMT FE 4"



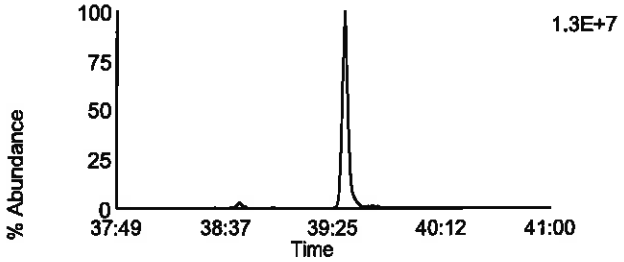
Data File: F130918B_02 G4 C9 - 425.7737
CAL CS3/CPM-7604-279 - SMT FE 4"



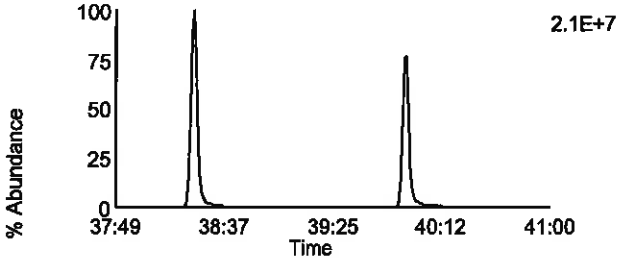
Data File: F130918B_02 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - SMT FE 4"



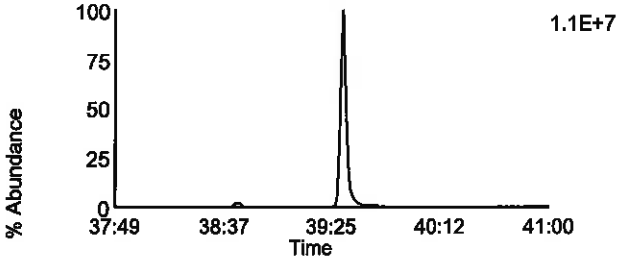
Data File: F130918B_02 G4 C11 - 435.8169
CAL CS3/CPM-7604-279 - SMT FE 4"



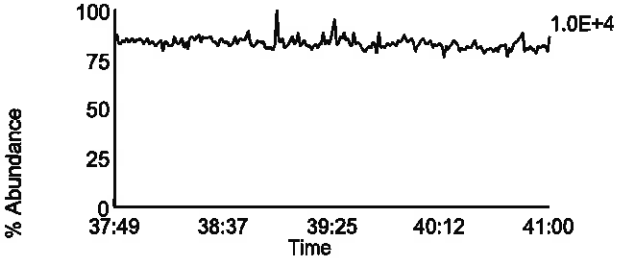
Data File: F130918B_02 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - SMT FE 4"



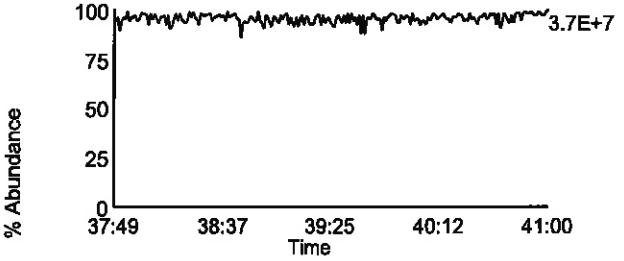
Data File: F130918B_02 G4 C12 - 437.814
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G4 C13 - 479.7165
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - SMT FE 4"

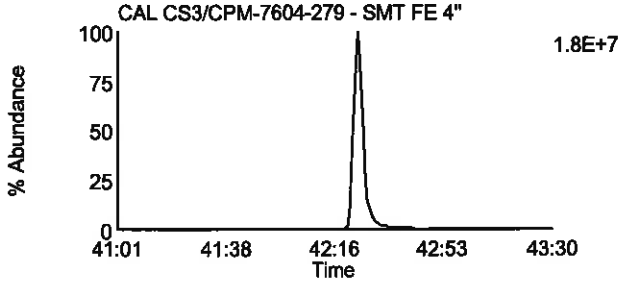


Homologue Group: Octas

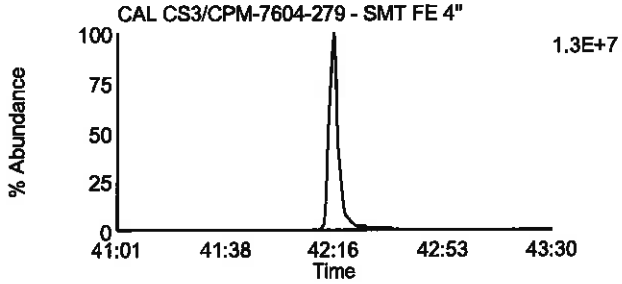
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

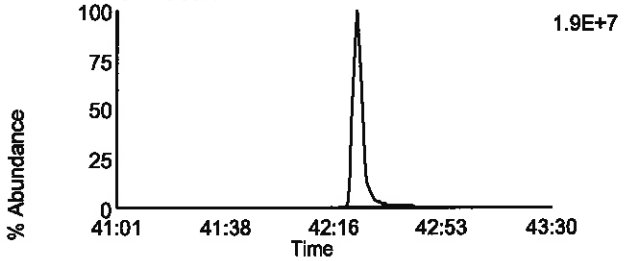
Data File: F130918B_02 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - SMT FE 4"



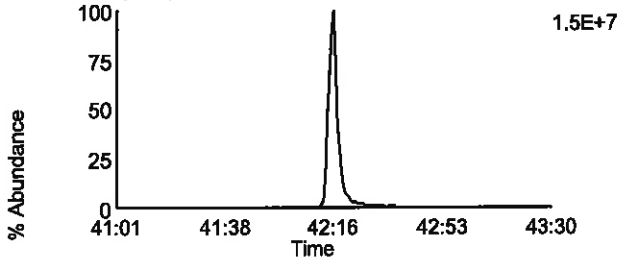
Data File: F130918B_02 G5 C8 - 457.7377
CAL CS3/CPM-7604-279 - SMT FE 4"



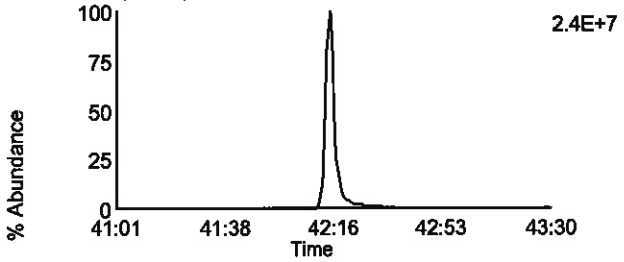
Data File: F130918B_02 G5 C5 - 443.7398
CAL CS3/CPM-7604-279 - SMT FE 4"



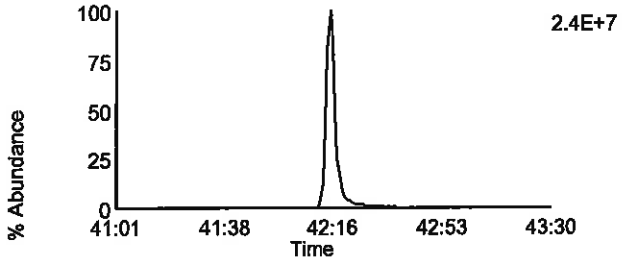
Data File: F130918B_02 G5 C9 - 459.7347
CAL CS3/CPM-7604-279 - SMT FE 4"



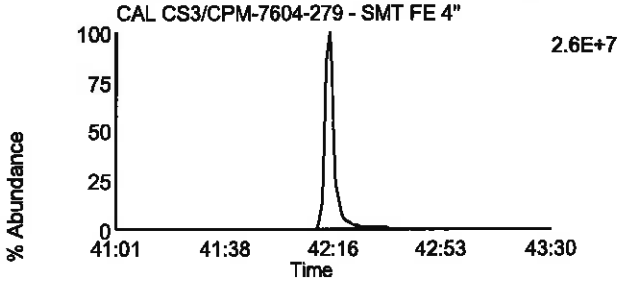
Data File: F130918B_02 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT FE 4"



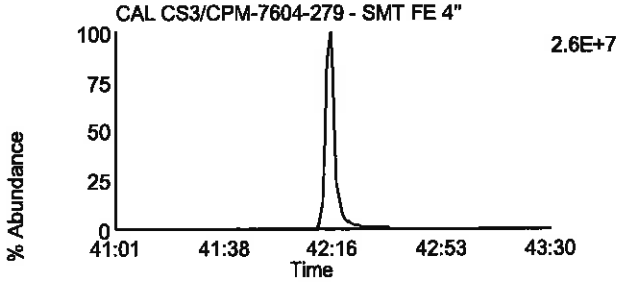
Data File: F130918B_02 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT FE 4"



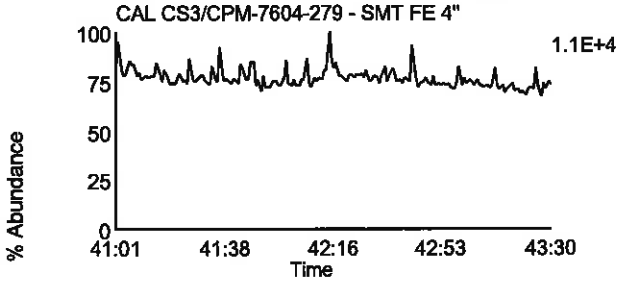
Data File: F130918B_02 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT FE 4"



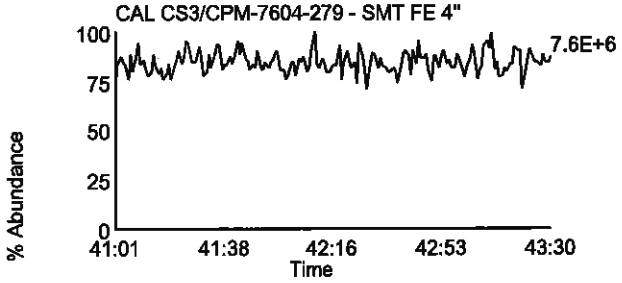
Data File: F130918B_02 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G5 C2 - 430.9728
CAL CS3/CPM-7604-279 - SMT FE 4"

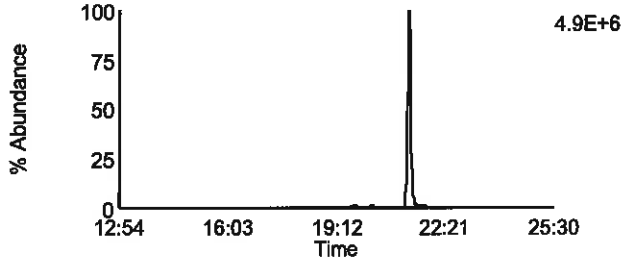


Homologue Group: Tetras

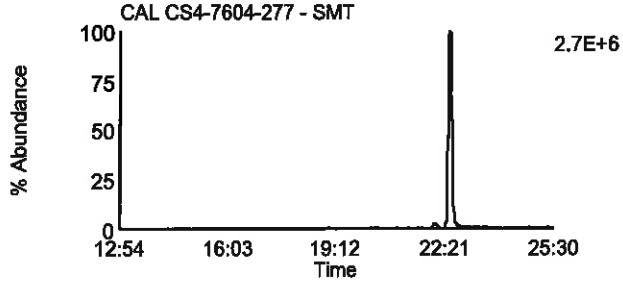
Data File Name: F130918B_06
Date Acquired: 9/18/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR05 (F)

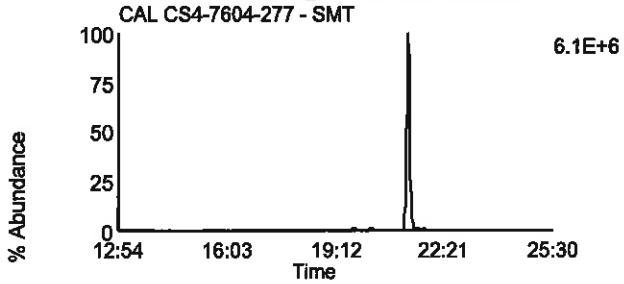
Data File: F130918B_06 G1 C1 - 303.9016
CAL CS4-7604-277 - SMT



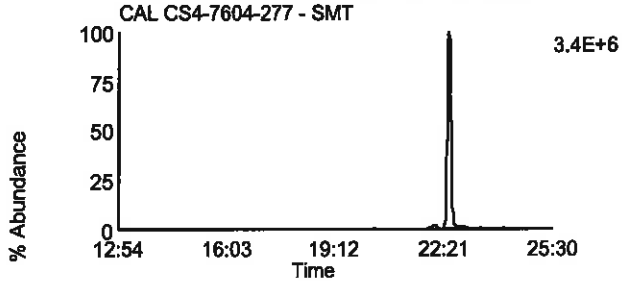
Data File: F130918B_06 G1 C7 - 319.8965
CAL CS4-7604-277 - SMT



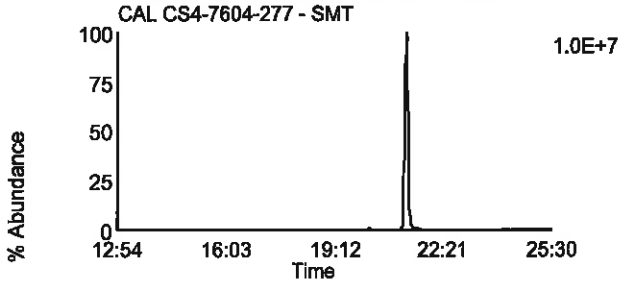
Data File: F130918B_06 G1 C2 - 305.8987
CAL CS4-7604-277 - SMT



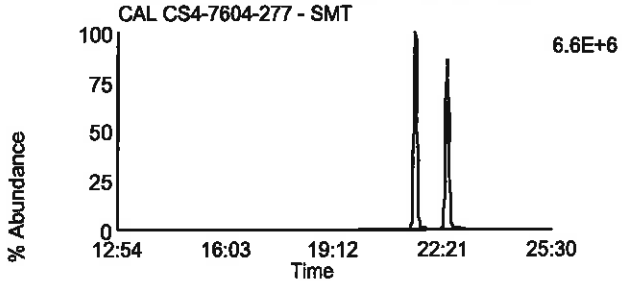
Data File: F130918B_06 G1 C8 - 321.8936
CAL CS4-7604-277 - SMT



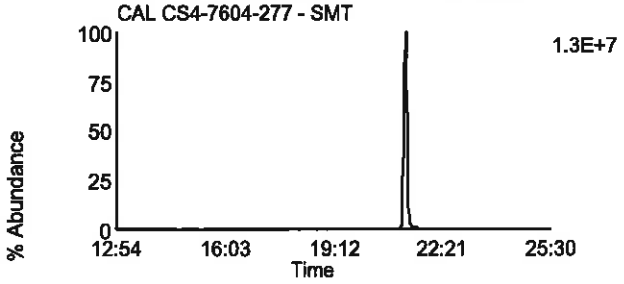
Data File: F130918B_06 G1 C3 - 315.9418
CAL CS4-7604-277 - SMT



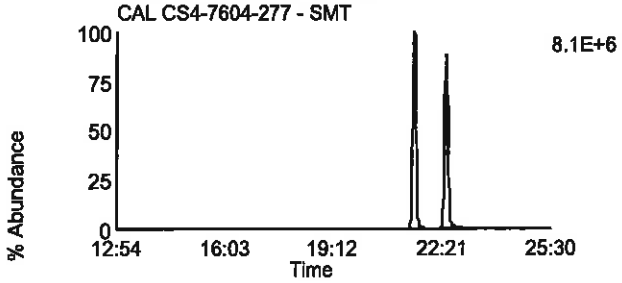
Data File: F130918B_06 G1 C10 - 331.9367
CAL CS4-7604-277 - SMT



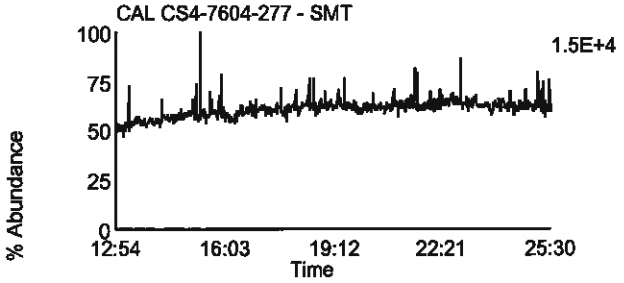
Data File: F130918B_06 G1 C4 - 317.9389
CAL CS4-7604-277 - SMT



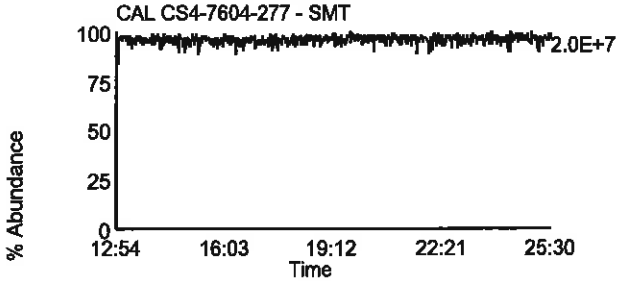
Data File: F130918B_06 G1 C11 - 333.9338
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G1 C14 - 375.8364
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G1 C5 - 318.9792
CAL CS4-7604-277 - SMT

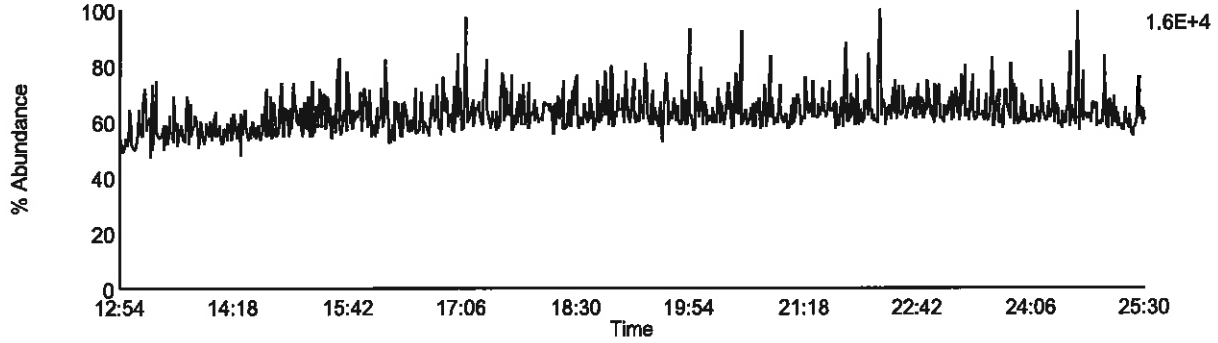


Homologue Group: Penta & Cleanup

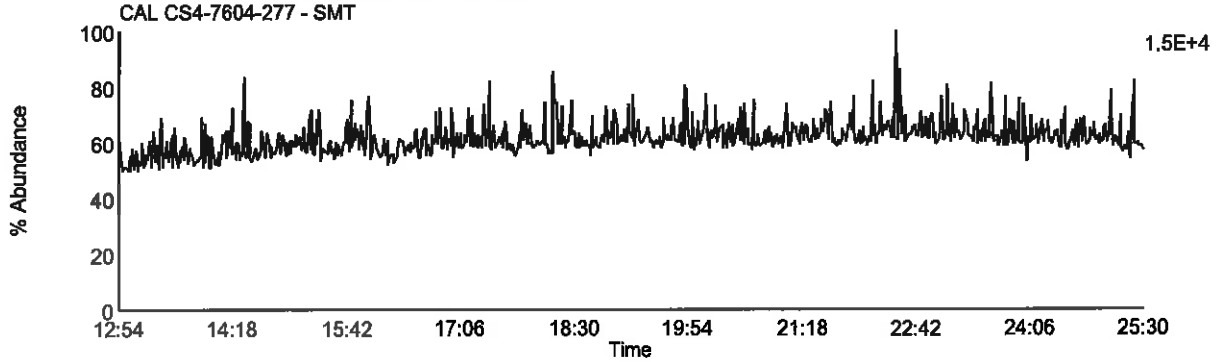
Data File Name: F130918B_06
Date Acquired: 9/18/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR05 (F)

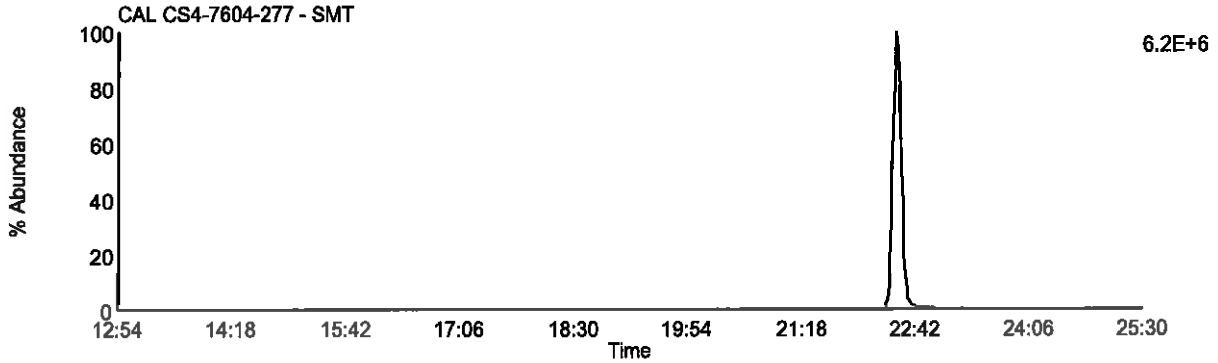
Data File: F130918B_06 G1 C12 - 339.8597
CAL CS4-7604-277 - SMT



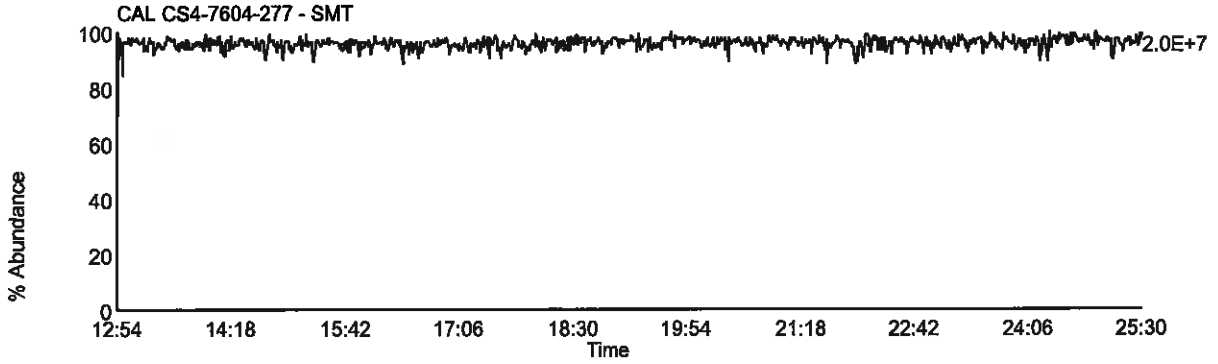
Data File: F130918B_06 G1 C13 - 341.8567
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G1 C9 - 327.8847
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G1 C5 - 318.9792
CAL CS4-7604-277 - SMT

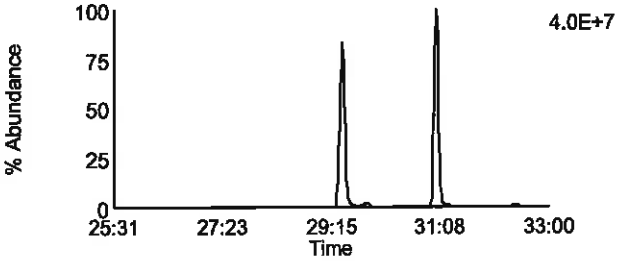


Homologue Group: Pentas

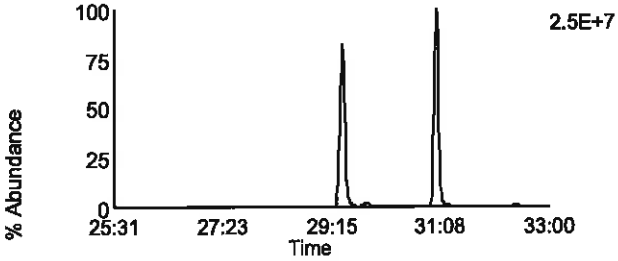
Data File Name: F130918B_06
Date Acquired: 9/18/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130918B_06 G2 C1 - 339.8597
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G2 C2 - 341.8567
CAL CS4-7604-277 - SMT



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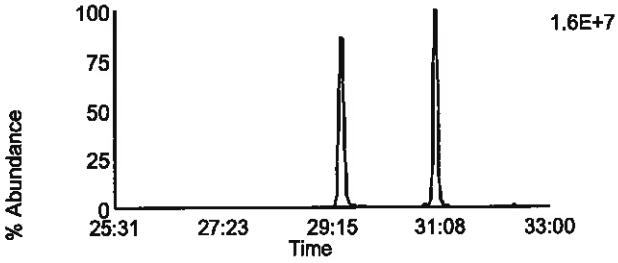
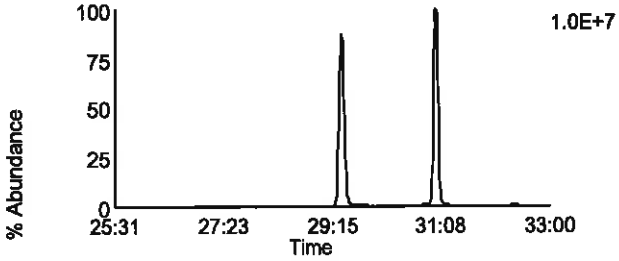
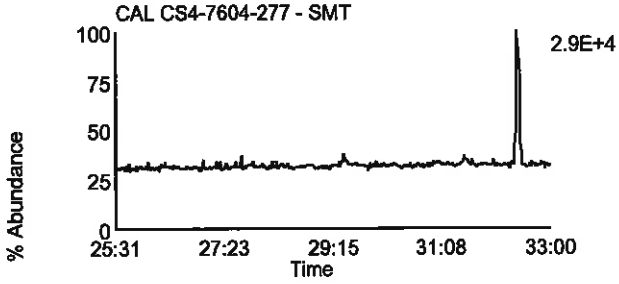
CAL CS4-7604-277 - SMT



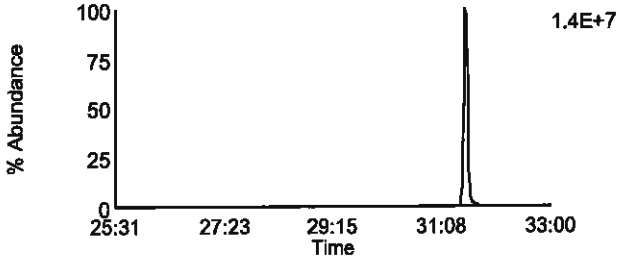
Data File: F130918B_06 G2 C5 - 353.8969
CAL CS4-7604-277 - SMT



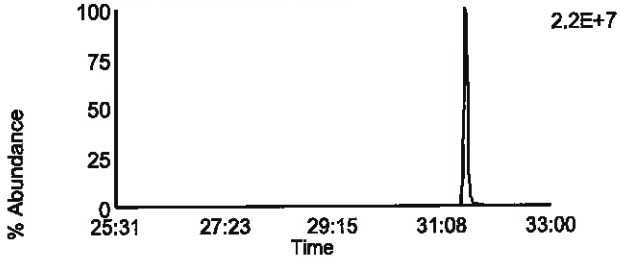
Data File: F130918B_06 G2 C12 - 409.7974
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G2 C4 - 353.8576
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G2 C8 - 355.8546
CAL CS4-7604-277 - SMT



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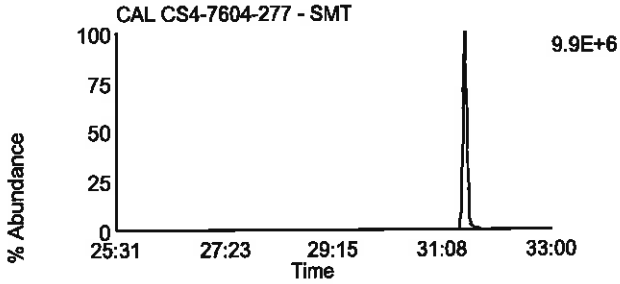
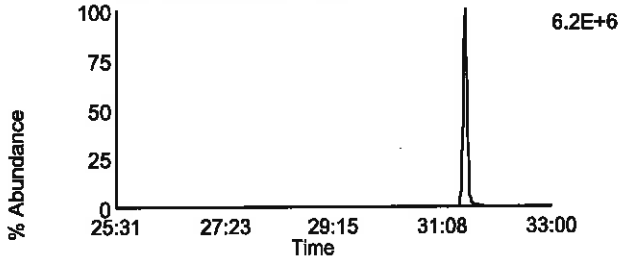
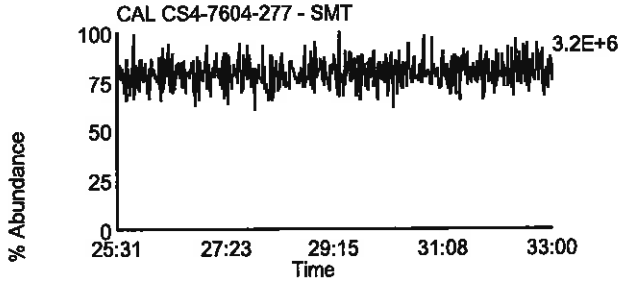
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G2 C11 - 369.8918
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G2 C6 - 354.9792
CAL CS4-7604-277 - SMT

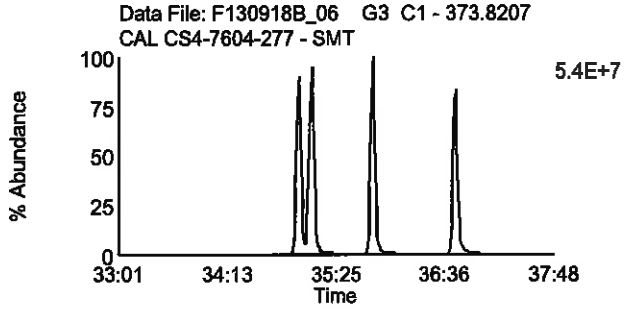


Homologue Group: Hexas

Data File Name: F130918B_06
Date Acquired: 9/18/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130918B_06 G3 C1 - 373.8207
CAL CS4-7604-277 - SMT



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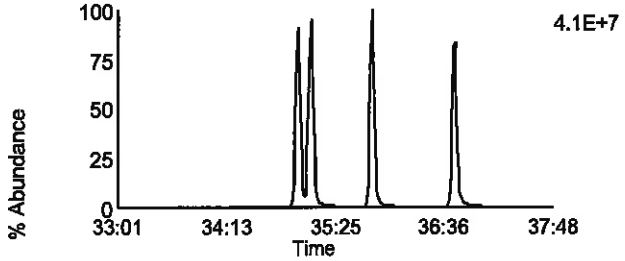
CAL CS4-7604-277 - SMT



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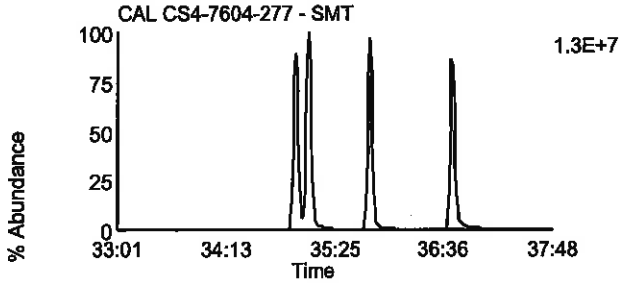
CAL CS4-7604-277 - SMT



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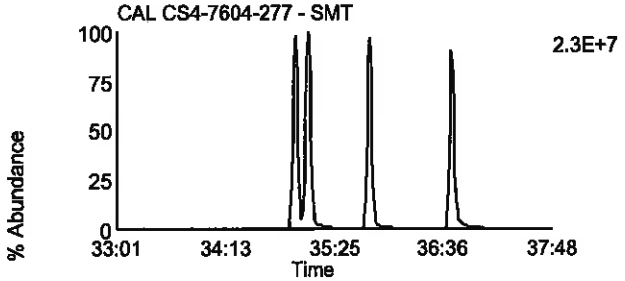
CAL CS4-7604-277 - SMT



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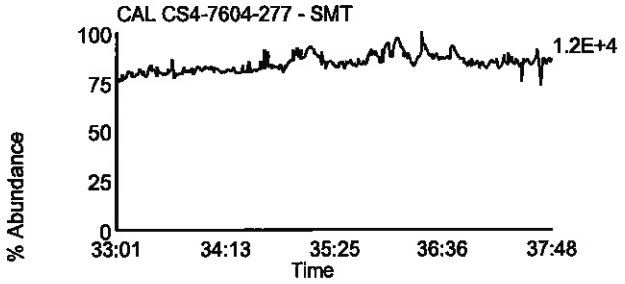
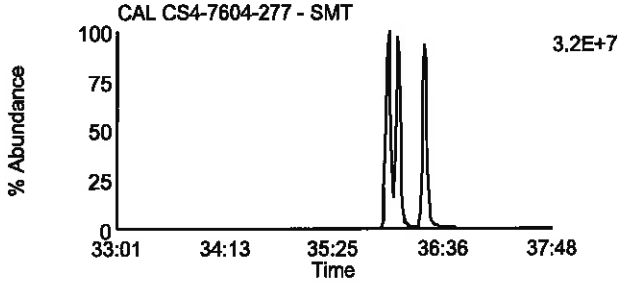
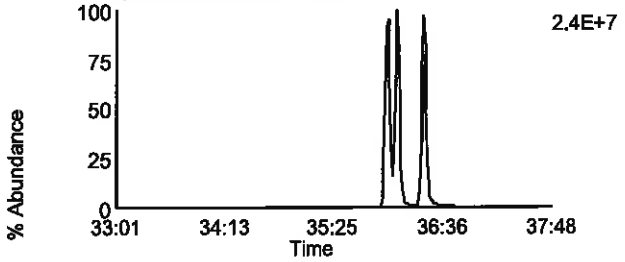
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G3 C7 - 389.8156
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G3 C8 - 391.8127
CAL CS4-7604-277 - SMT



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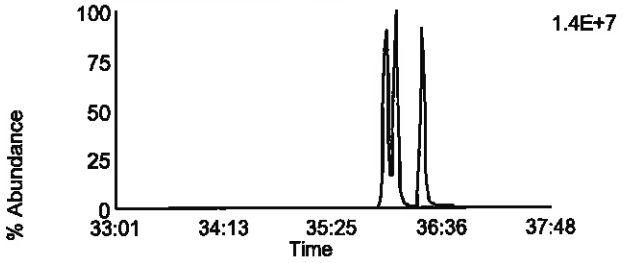
CAL CS4-7604-277 - SMT



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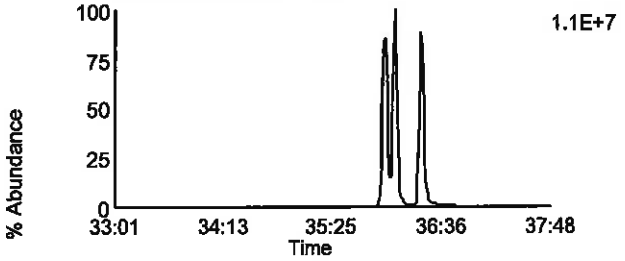
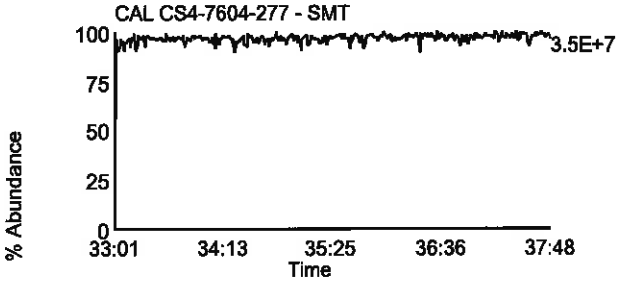
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G3 C3 - 380.976
CAL CS4-7604-277 - SMT

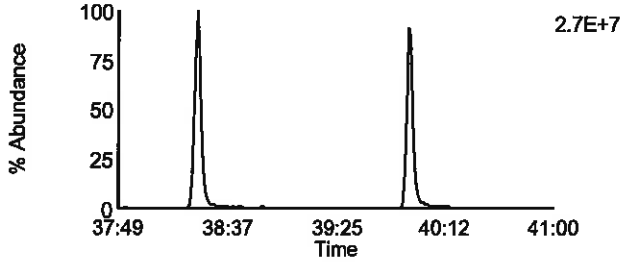


Homologue Group: Heptas

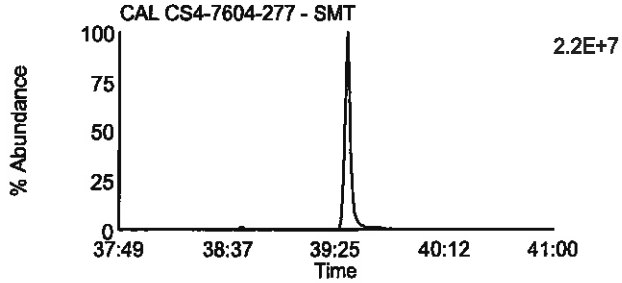
Data File Name: F130918B_06
Date Acquired: 9/18/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR05 (F)

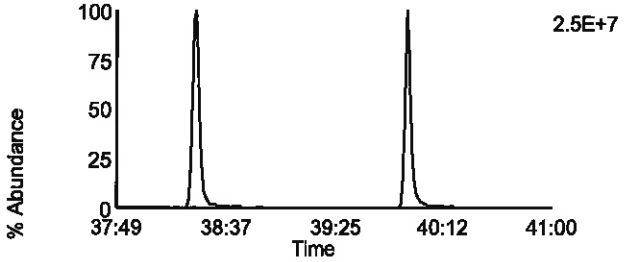
Data File: F130918B_06 G4 C3 - 407.7818
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G4 C8 - 423.7767
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G4 C4 - 409.7788
CAL CS4-7604-277 - SMT



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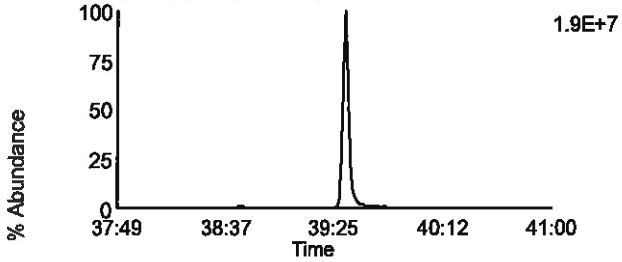
CAL CS4-7604-277 - SMT



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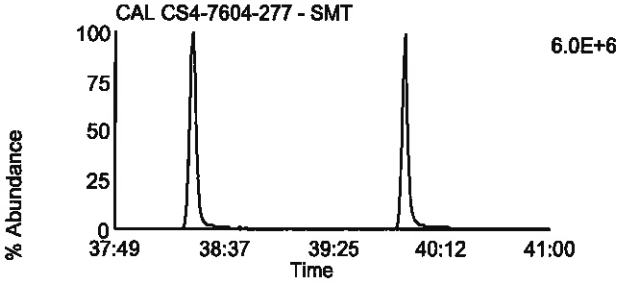
CAL CS4-7604-277 - SMT



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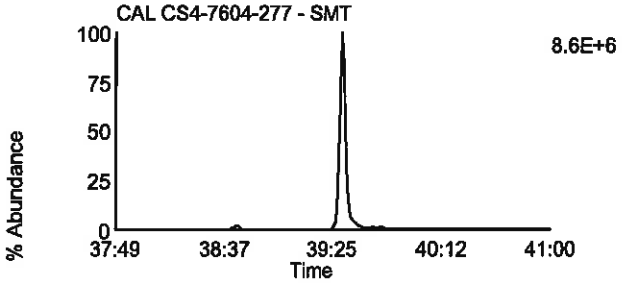
CAL CS4-7604-277 - SMT



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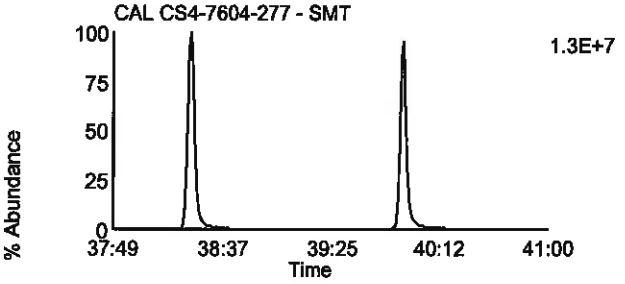
CAL CS4-7604-277 - SMT



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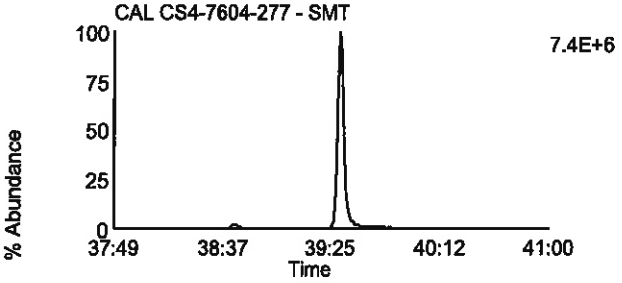

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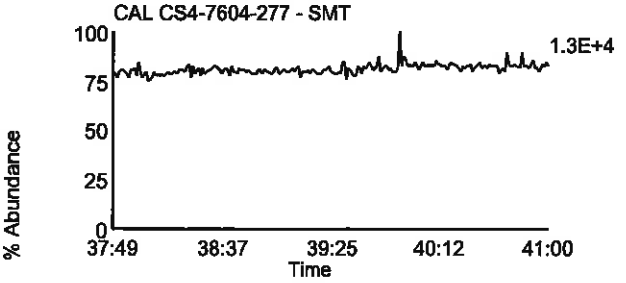
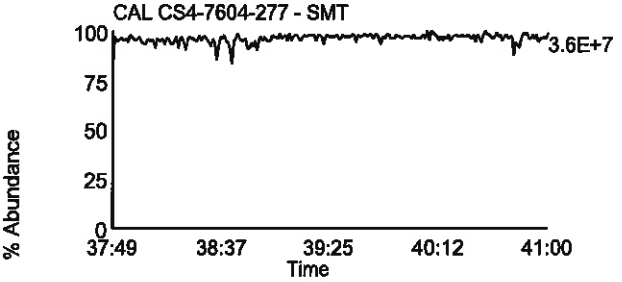
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G4 C1 - 380.976
CAL CS4-7604-277 - SMT

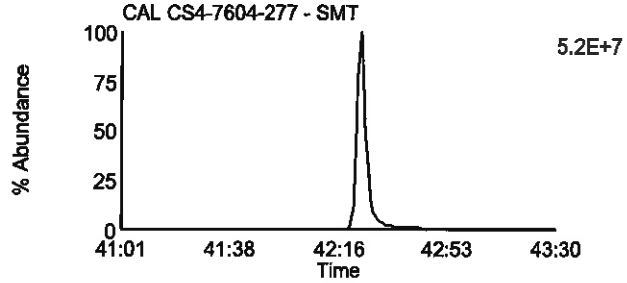


Homologue Group: Octas

Data File Name: F130918B_06
Date Acquired: 9/18/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130918B_06 G5 C4 - 441.7428
CAL CS4-7604-277 - SMT



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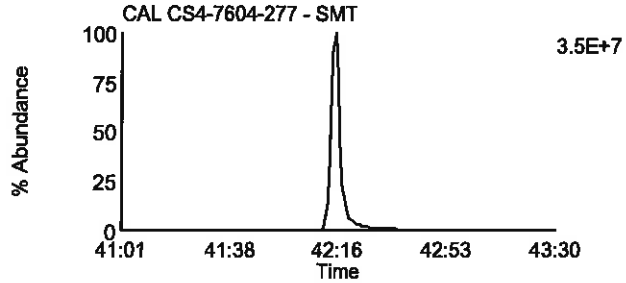
CAL CS4-7604-277 - SMT



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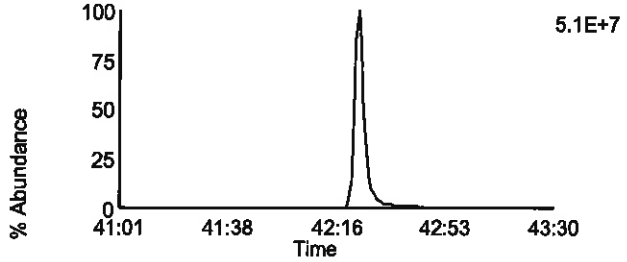
CAL CS4-7604-277 - SMT



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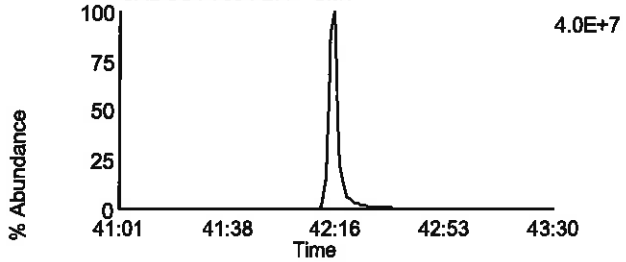
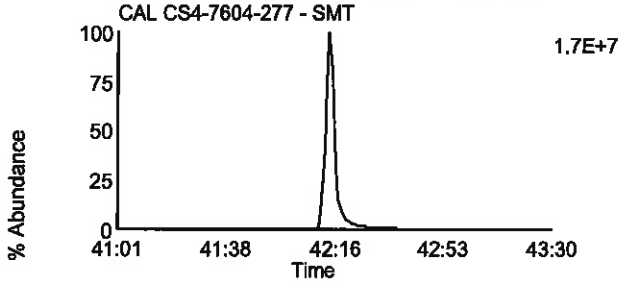
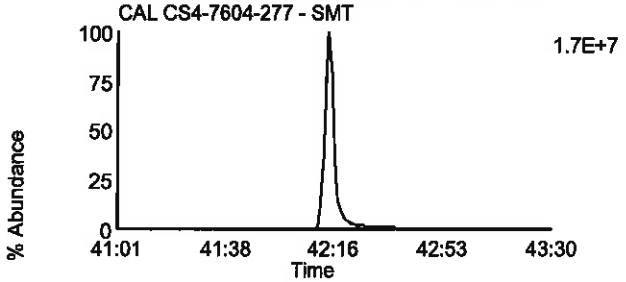
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G5 C11 - 469.7779
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G5 C11 - 469.7779
CAL CS4-7604-277 - SMT



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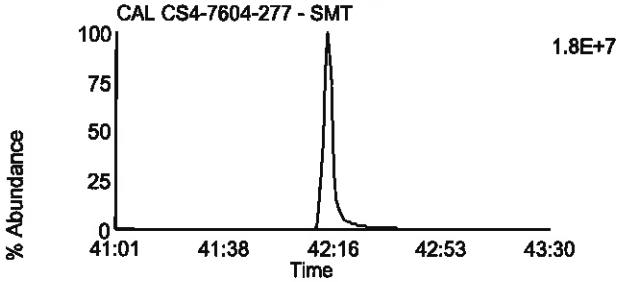
CAL CS4-7604-277 - SMT



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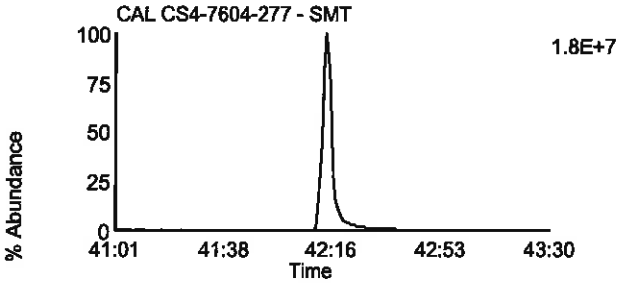
CAL CS4-7604-277 - SMT



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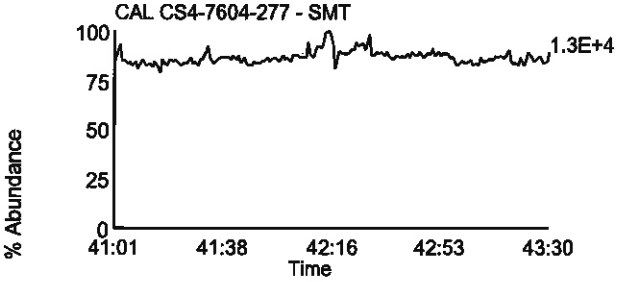
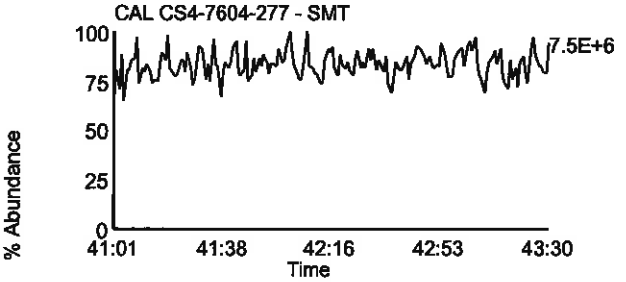
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G5 C2 - 430.9728
CAL CS4-7604-277 - SMT

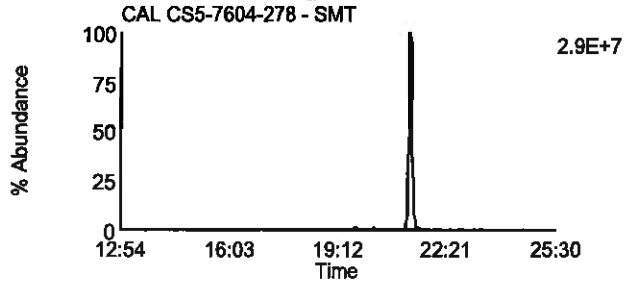


Homologue Group: Tetras

Data File Name: F130918B_05
Date Acquired: 9/18/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130918B_05 G1 C1 - 303.9016
CAL CS5-7604-278 - SMT



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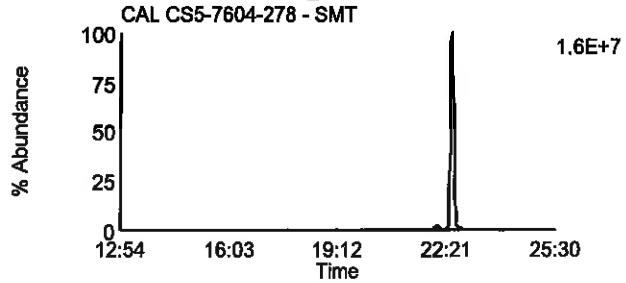
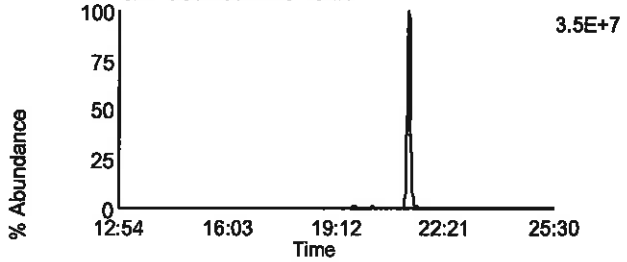
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C2 - 305.8987
CAL CS5-7604-278 - SMT



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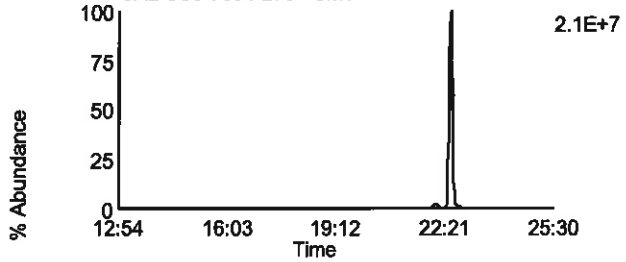
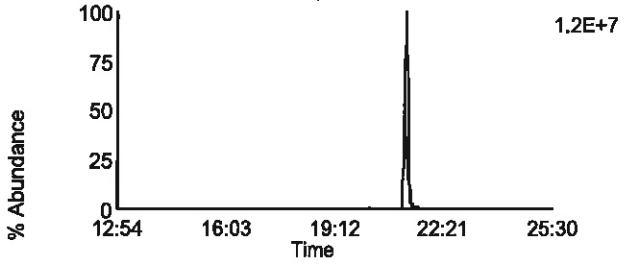
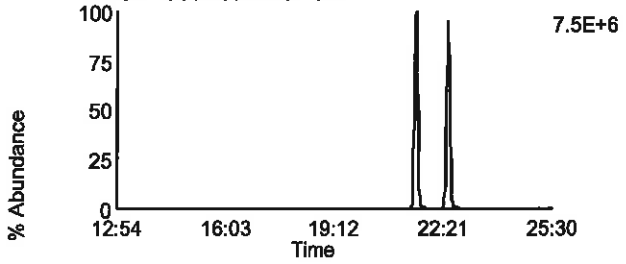
CAL CS5-7604-278 - SMT



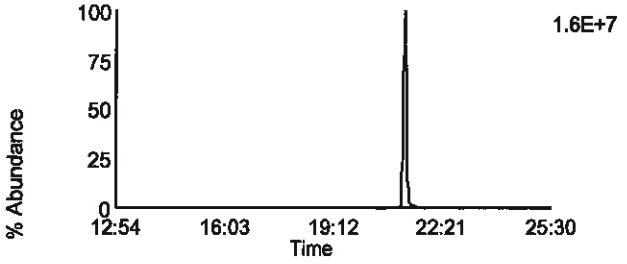
Data File: F130918B_05 G1 C3 - 315.9418
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C10 - 331.9367
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C4 - 317.9389
CAL CS5-7604-278 - SMT



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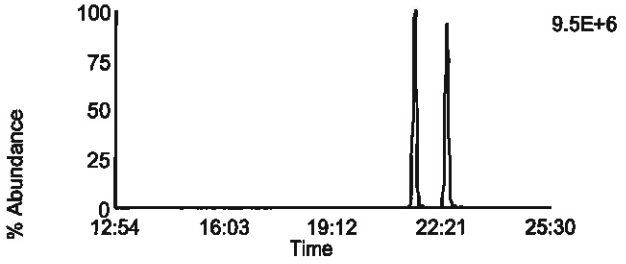
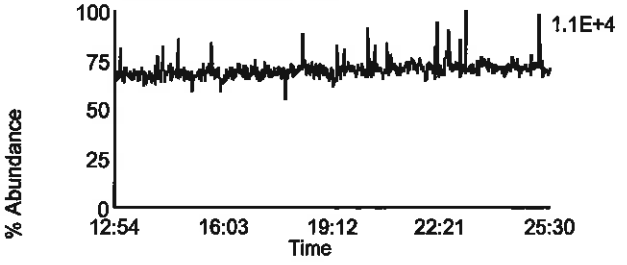
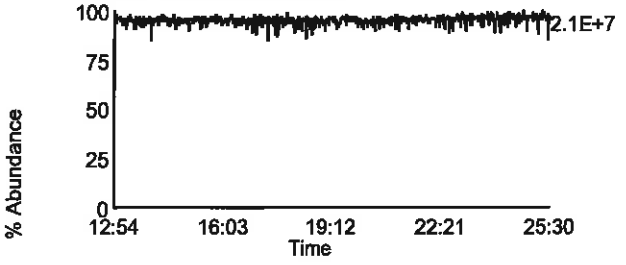
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C14 - 375.8364
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C5 - 318.9792
CAL CS5-7604-278 - SMT

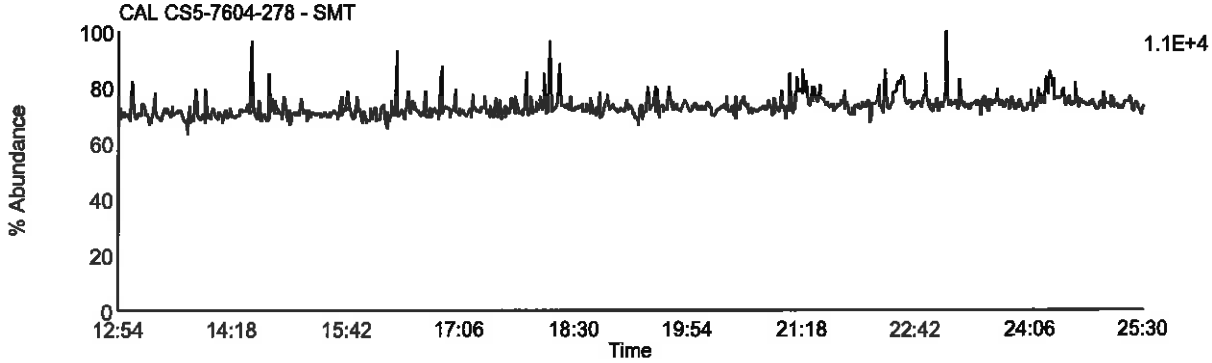


Homologue Group: Penta & Cleanup

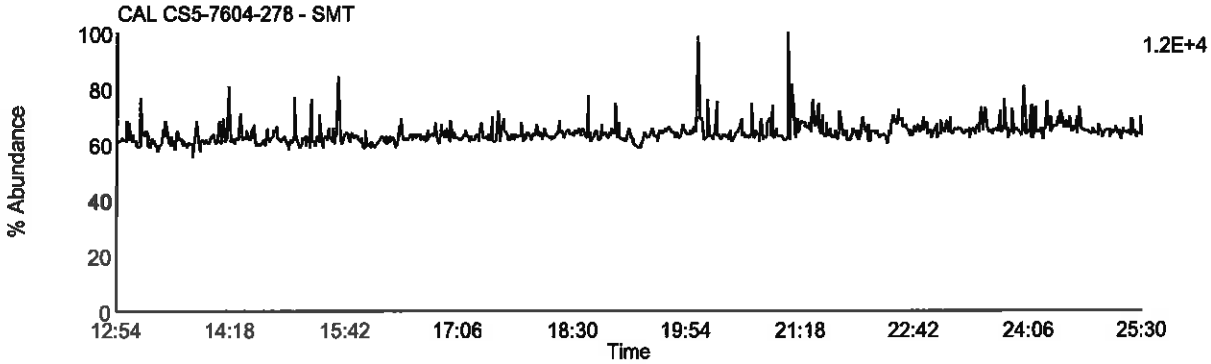
Data File Name: F130918B_05
Date Acquired: 9/18/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR05 (F)

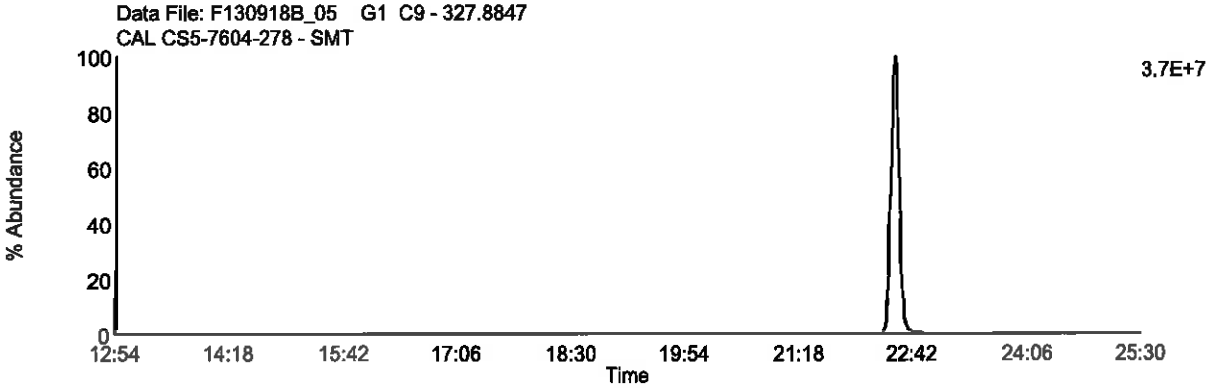
Data File: F130918B_05 G1 C12 - 339.8597
CAL CS5-7604-278 - SMT



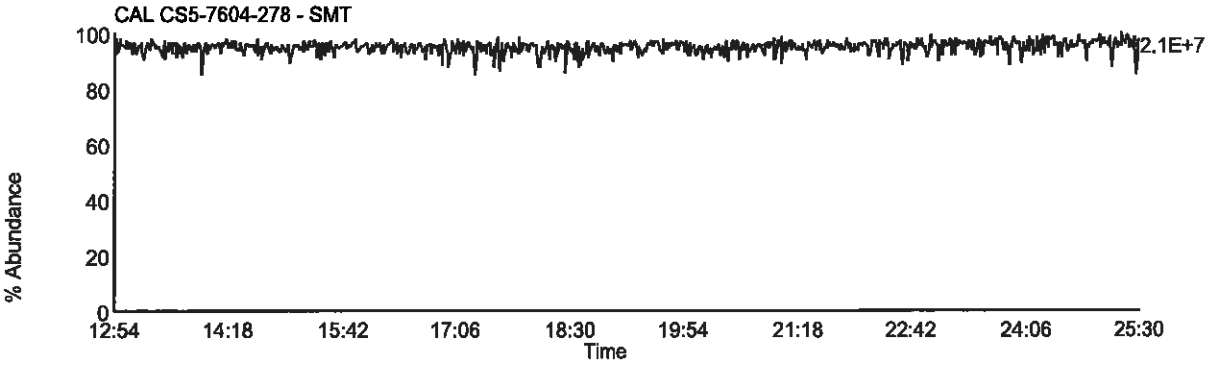
Data File: F130918B_05 G1 C13 - 341.8567
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C9 - 327.8847
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C5 - 318.9792
CAL CS5-7604-278 - SMT

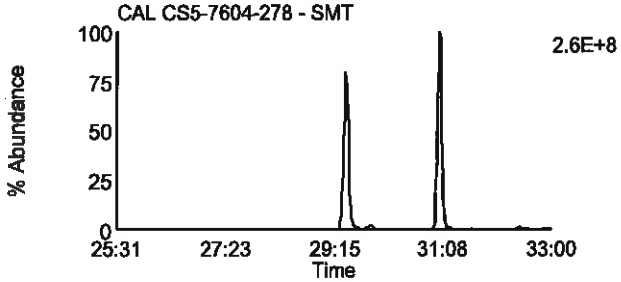


Homologue Group: Pentas

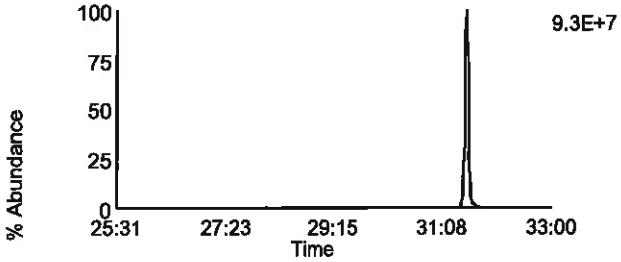
Data File Name: F130918B_05
Date Acquired: 9/18/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR05 (F)

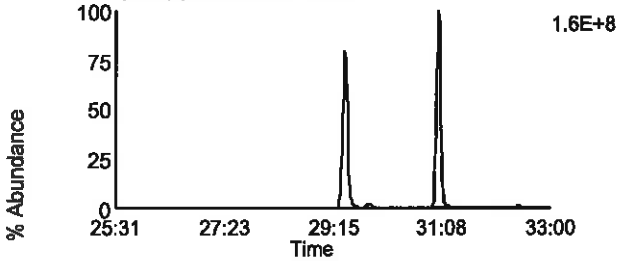
Data File: F130918B_05 G2 C1 - 339.8597
CAL CS5-7604-278 - SMT



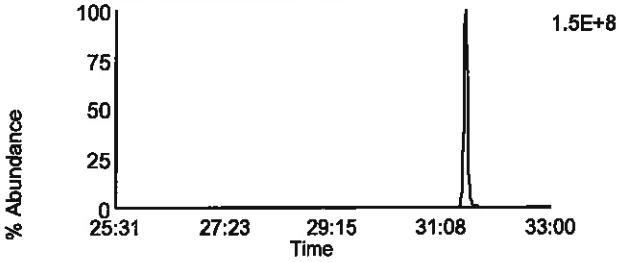
Data File: F130918B_05 G2 C4 - 353.8576
CAL CS5-7604-278 - SMT



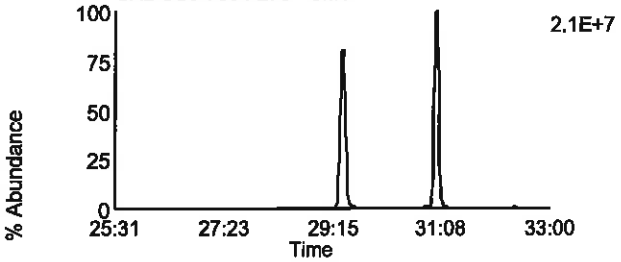
Data File: F130918B_05 G2 C2 - 341.8567
CAL CS5-7604-278 - SMT



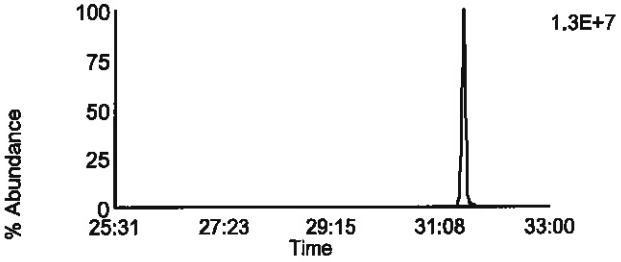
Data File: F130918B_05 G2 C8 - 355.8546
CAL CS5-7604-278 - SMT



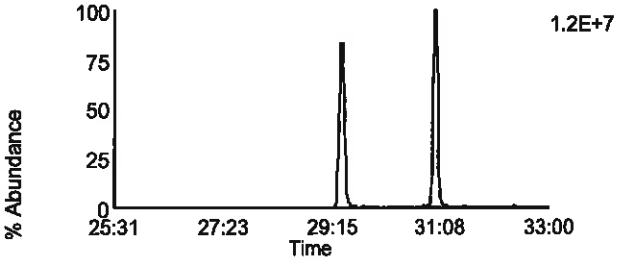
Data File: F130918B_05 G2 C3 - 351.8999
CAL CS5-7604-278 - SMT



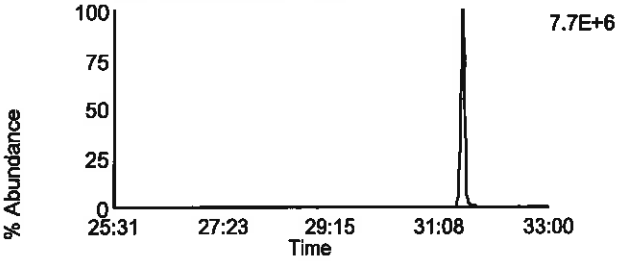
Data File: F130918B_05 G2 C10 - 367.8948
CAL CS5-7604-278 - SMT



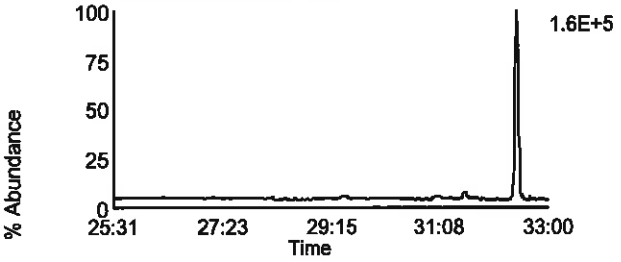
Data File: F130918B_05 G2 C5 - 353.8969
CAL CS5-7604-278 - SMT



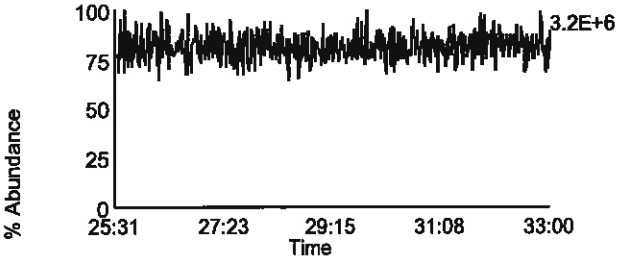
Data File: F130918B_05 G2 C11 - 369.8918
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G2 C12 - 409.7974
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G2 C6 - 354.9792
CAL CS5-7604-278 - SMT

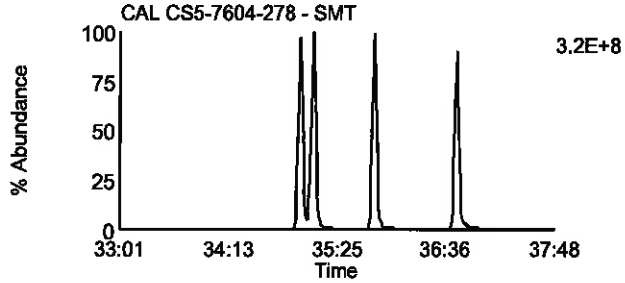


Homologue Group: Hexas

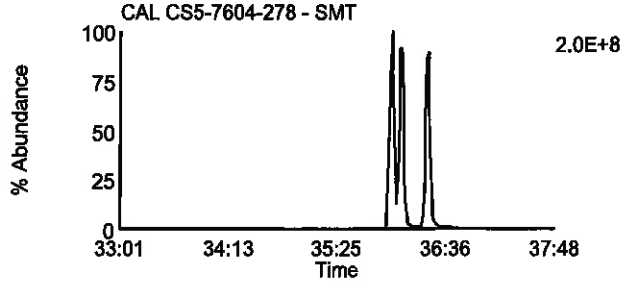
Data File Name: F130918B_05
Date Acquired: 9/18/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR05 (F)

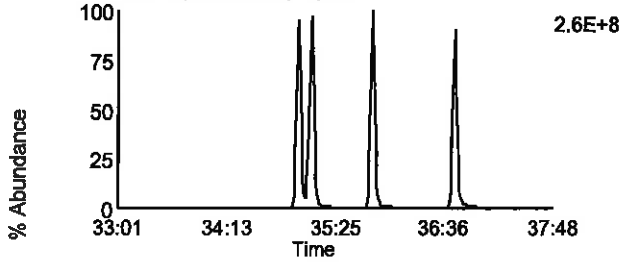
Data File: F130918B_05 G3 C1 - 373.8207
CAL CS5-7604-278 - SMT



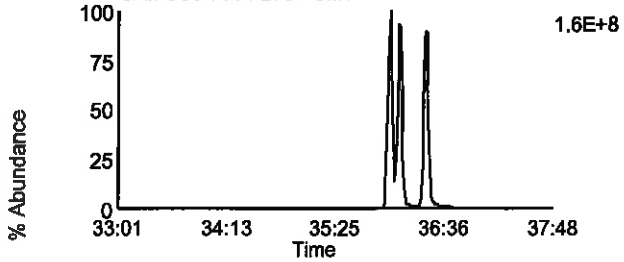
Data File: F130918B_05 G3 C7 - 389.8156
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G3 C2 - 375.8178
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G3 C8 - 391.8127
CAL CS5-7604-278 - SMT



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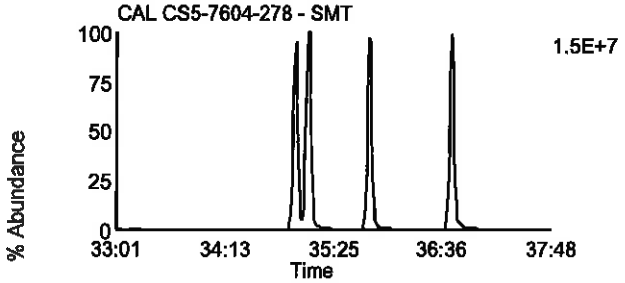
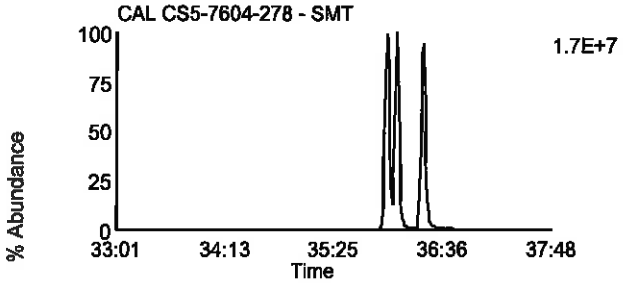
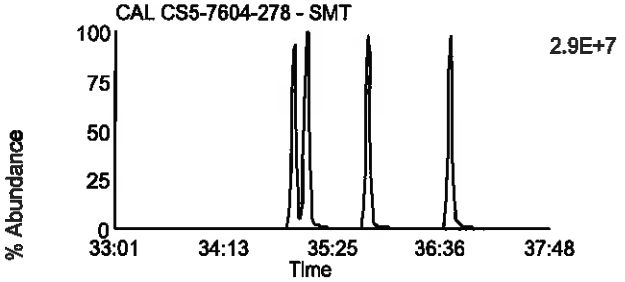
CAL CS5-7604-278 - SMT



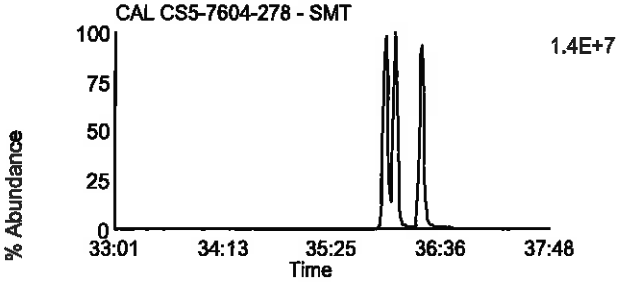
Data File: F130918B_05 G3 C9 - 401.8559
CAL CS5-7604-278 - SMT



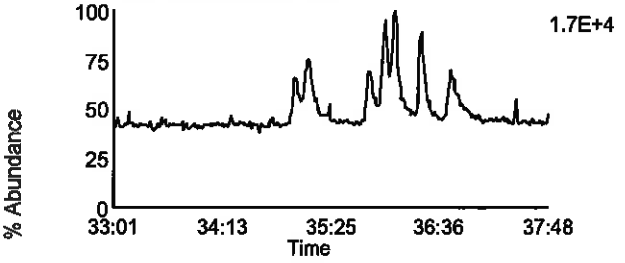
Data File: F130918B_05 G3 C6 - 385.861
CAL CS5-7604-278 - SMT



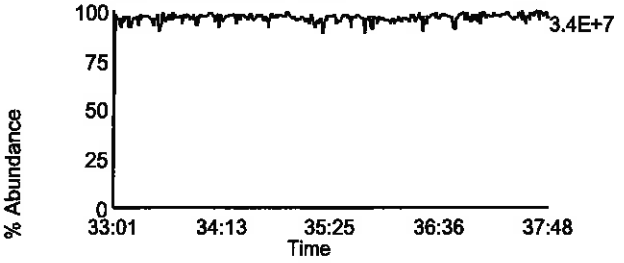
Data File: F130918B_05 G3 C10 - 403.8529
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G3 C11 - 445.7555
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G3 C3 - 380.976
CAL CS5-7604-278 - SMT

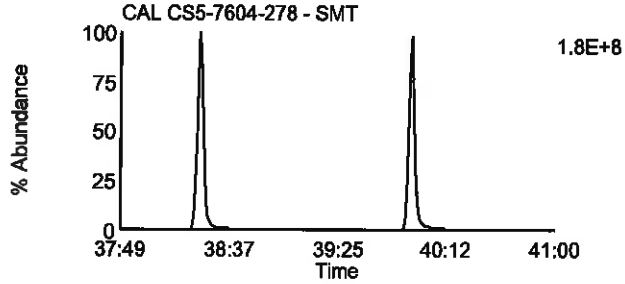


Homologue Group: Heptas

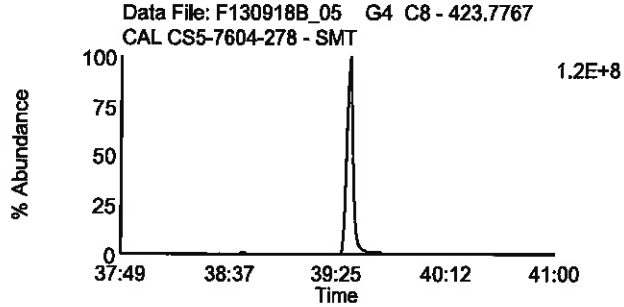
Data File Name: F130918B_05
Date Acquired: 9/18/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR05 (F)

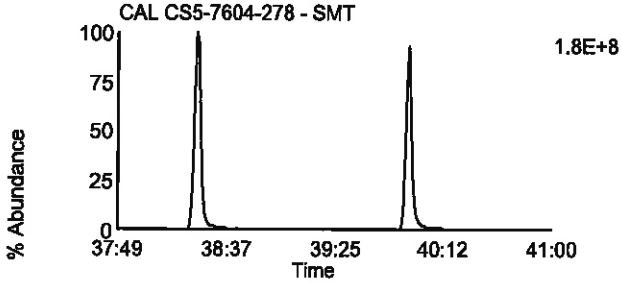
Data File: F130918B_05 G4 C3 - 407.7818
CAL CS5-7604-278 - SMT



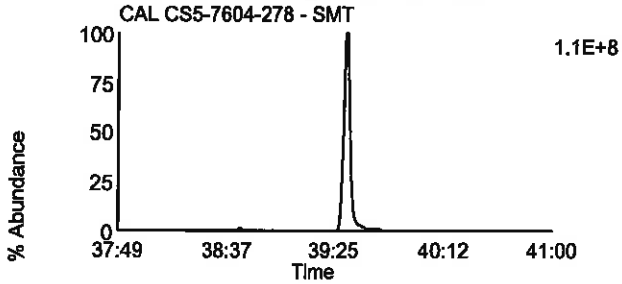
Data File: F130918B_05 G4 C8 - 423.7767
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G4 C4 - 409.7788
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G4 C9 - 425.7737
CAL CS5-7604-278 - SMT



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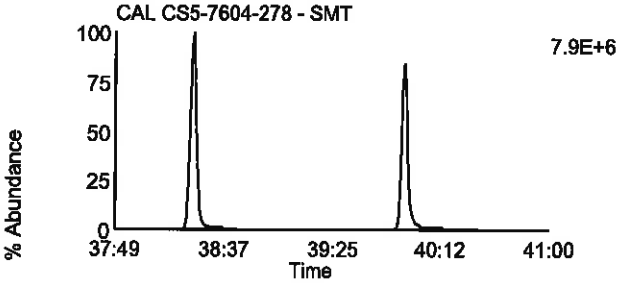
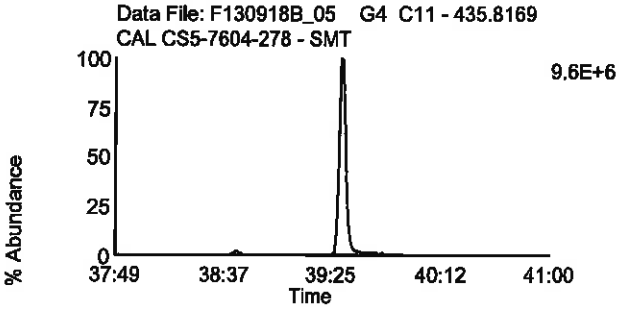
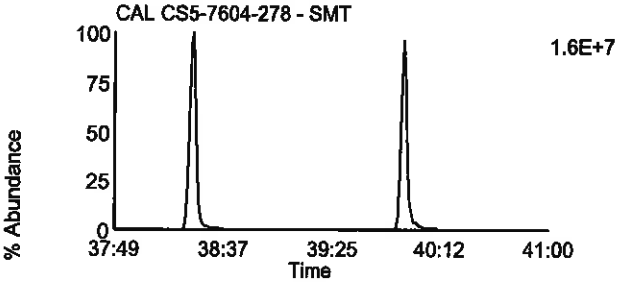
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G4 C11 - 435.8169
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G4 C7 - 419.822
CAL CS5-7604-278 - SMT



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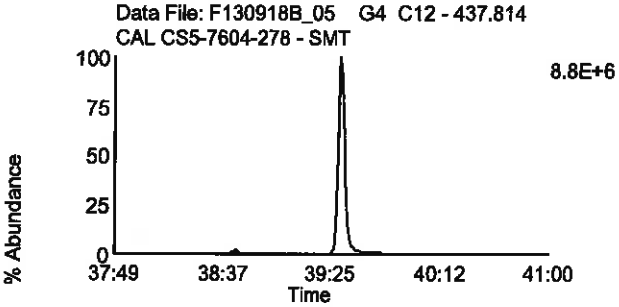
CAL CS5-7604-278 - SMT



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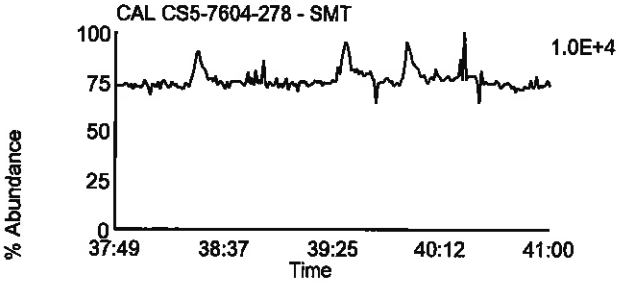
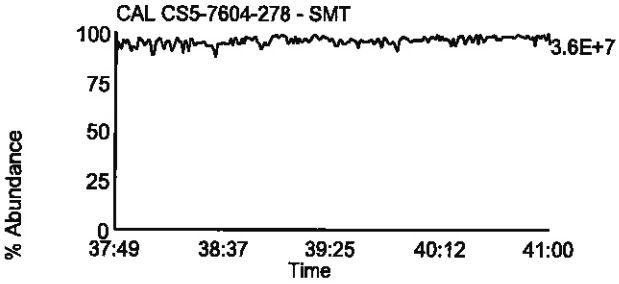
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G4 C1 - 380.976
CAL CS5-7604-278 - SMT

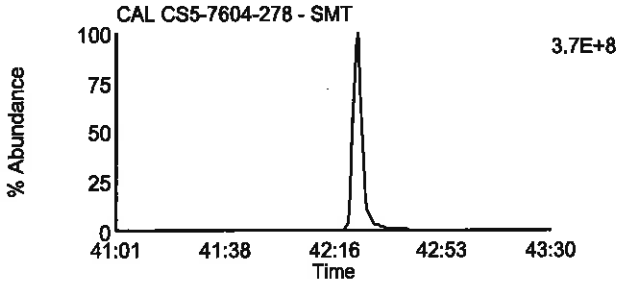


Homologue Group: Octas

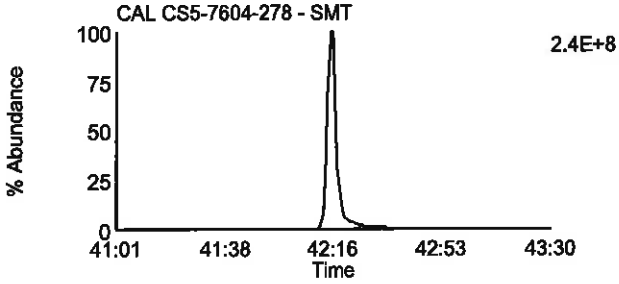
Data File Name: F130918B_05
Date Acquired: 9/18/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130918B_05 G5 C4 - 441.7428
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G5 C8 - 457.7377
CAL CS5-7604-278 - SMT



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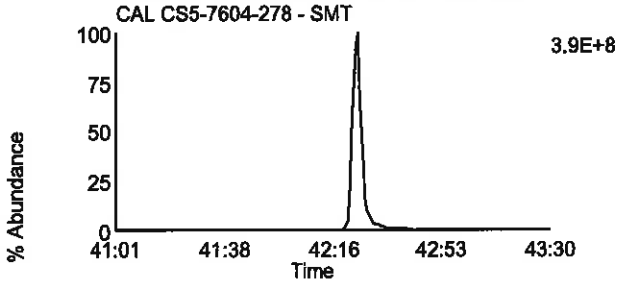
CAL CS5-7604-278 - SMT



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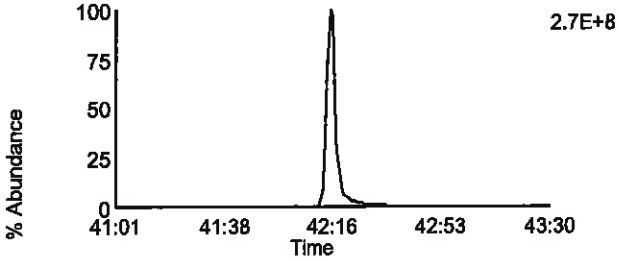
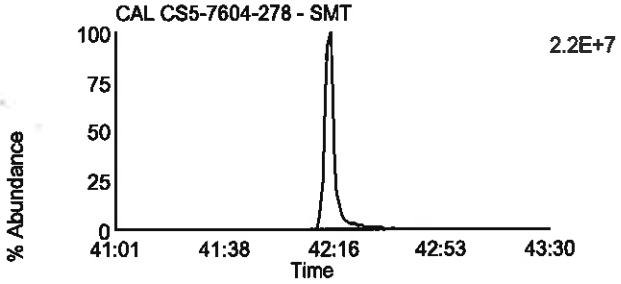
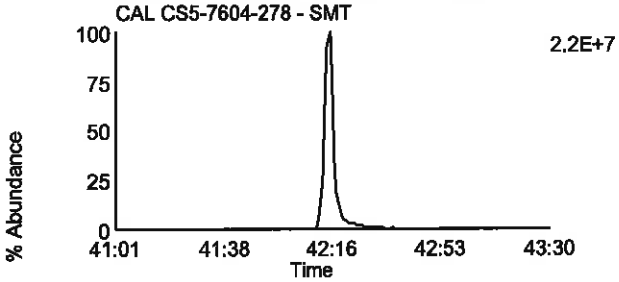
CAL CS5-7604-278 - SMT



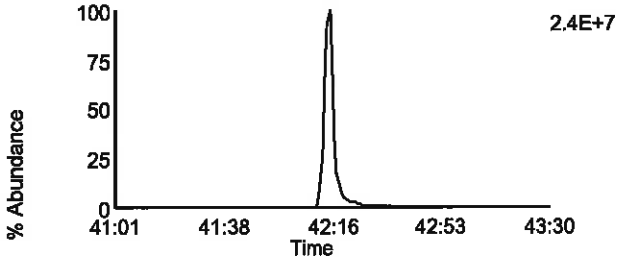
Data File: F130918B_05 G5 C11 - 469.7779
CAL CS5-7604-278 - SMT



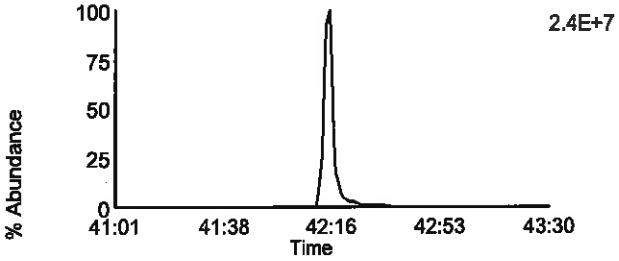
Data File: F130918B_05 G5 C11 - 469.7779
CAL CS5-7604-278 - SMT



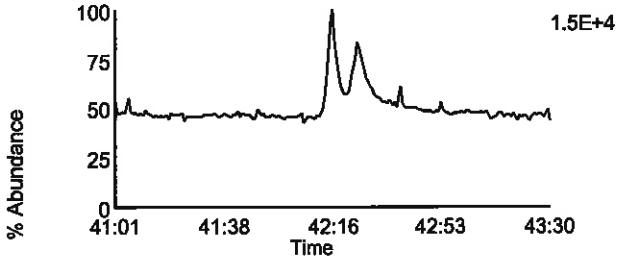
Data File: F130918B_05 G5 C12 - 471.7749
CAL CS5-7604-278 - SMT



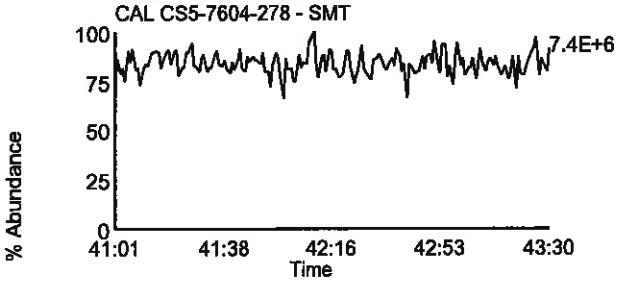
Data File: F130918B_05 G5 C12 - 471.7749
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G5 C13 - 513.6775
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G5 C2 - 430.9728
CAL CS5-7604-278 - SMT

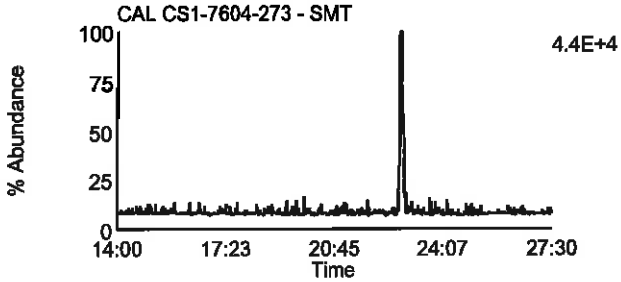


Homologue Group: Tetras

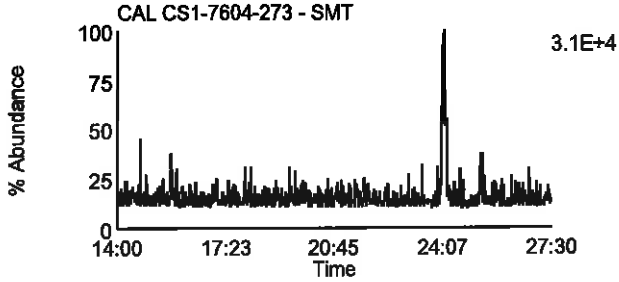
Data File Name: U130729B_11
Date Acquired: 7/29/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U130729B_11 G1 C1 - 303.9016
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G1 C7 - 319.8965
CAL CS1-7604-273 - SMT



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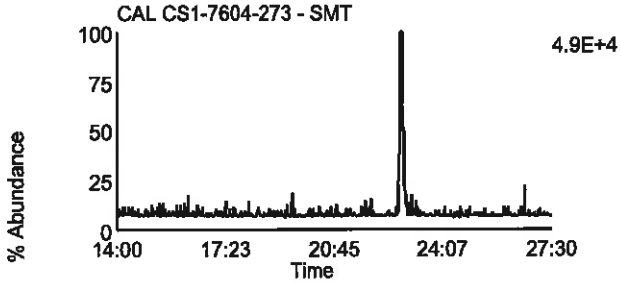
CAL CS1-7604-273 - SMT



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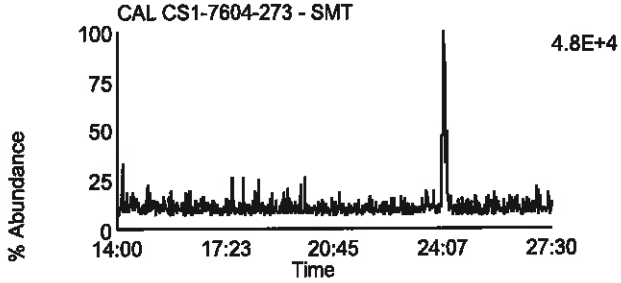
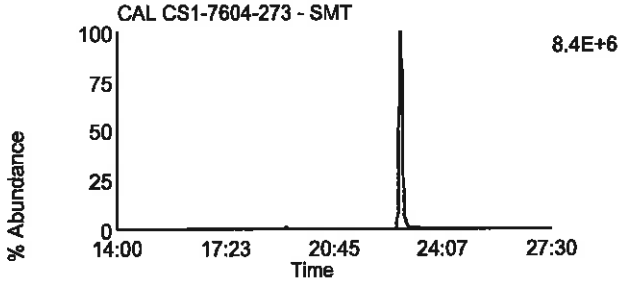
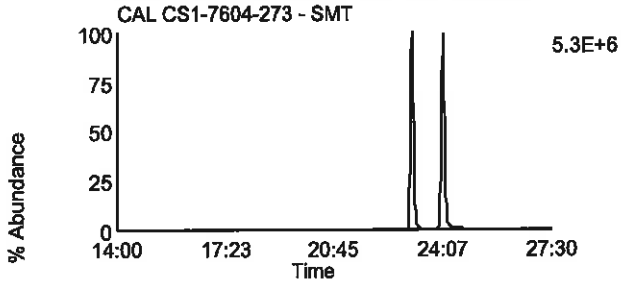
CAL CS1-7604-273 - SMT



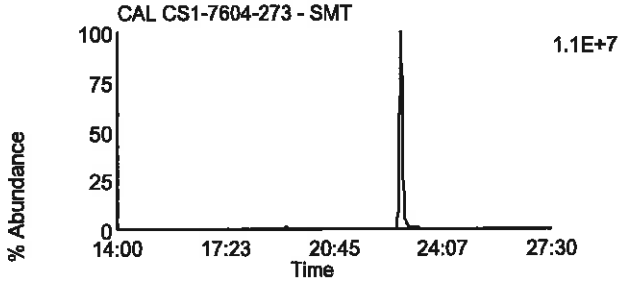
Data File: U130729B_11 G1 C3 - 315.9418
CAL CS1-7604-273 - SMT



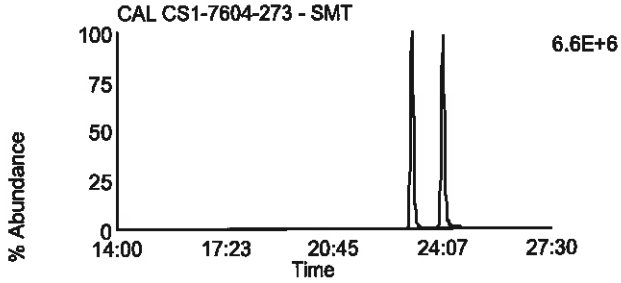
Data File: U130729B_11 G1 C10 - 331.9367
CAL CS1-7604-273 - SMT



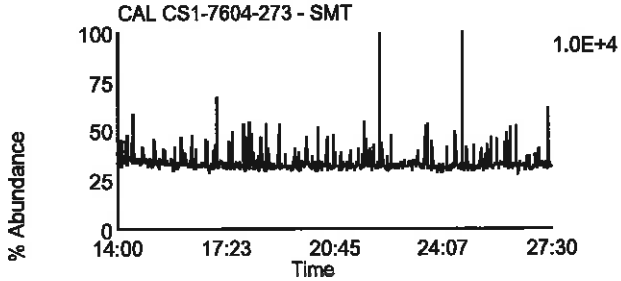
Data File: U130729B_11 G1 C4 - 317.9389
CAL CS1-7604-273 - SMT



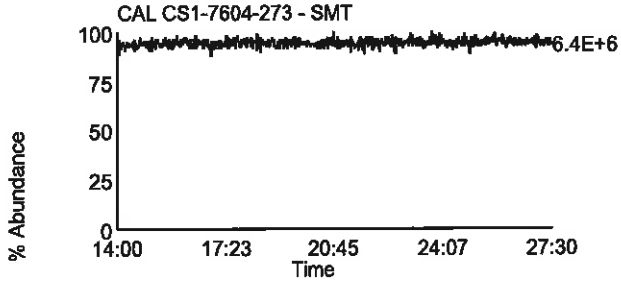
Data File: U130729B_11 G1 C11 - 333.9338
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G1 C14 - 375.8364
CAL CS1-7604-273 - SMT



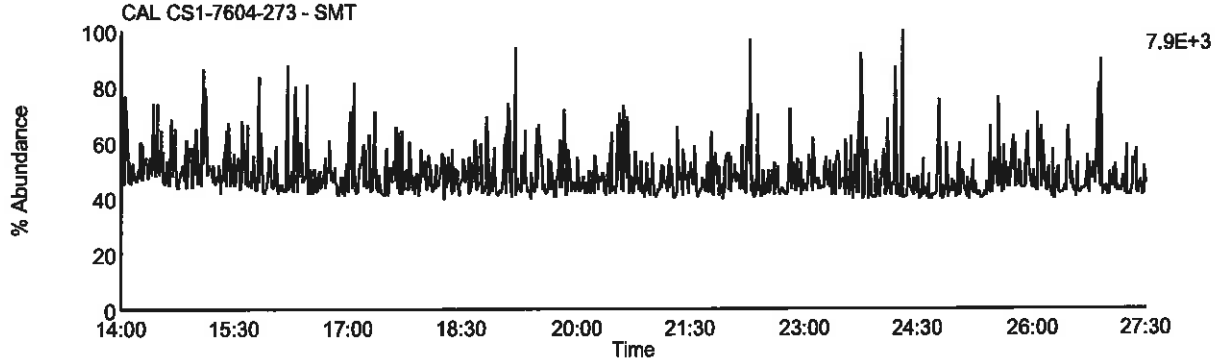
Data File: U130729B_11 G1 C5 - 318.9792
CAL CS1-7604-273 - SMT



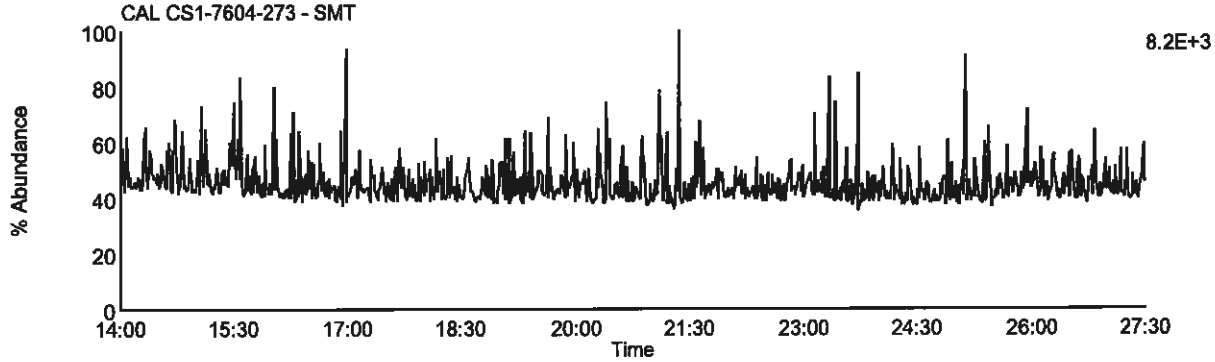
Homologue Group: Penta & Cleanup

Data File Name: U130729B_11	Lab Sample ID: CS1-7604-273
Date Acquired: 7/29/2013	Client Sample ID:
Sample Description: CAL CS1-7604-273 - SMT	Instrument: 10MSHR06 (U)

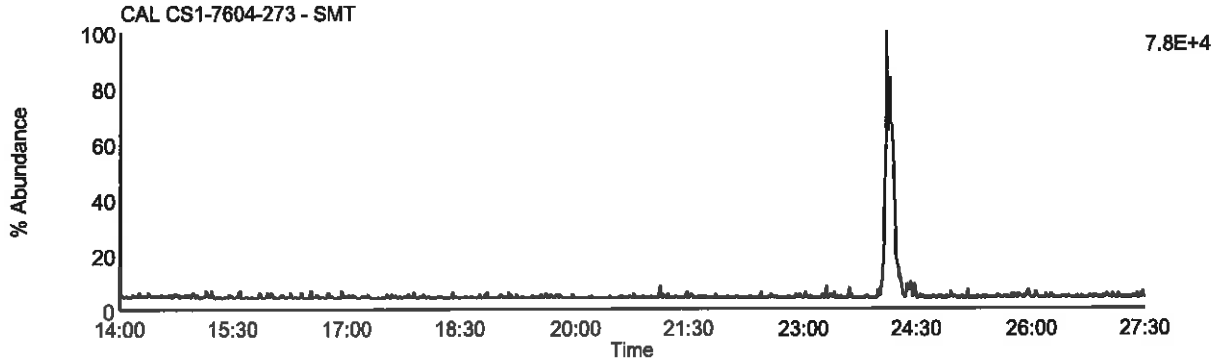
Data File: U130729B_11 G1 C12 - 339.8597
CAL CS1-7604-273 - SMT



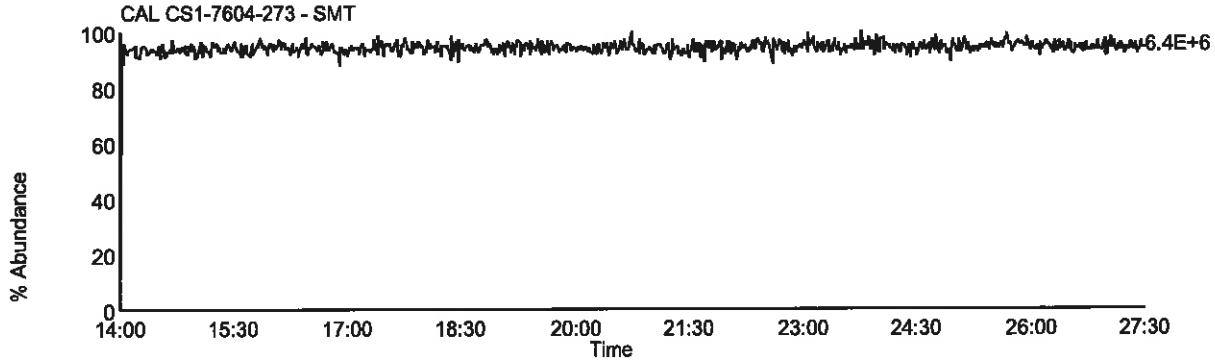
Data File: U130729B_11 G1 C13 - 341.8567
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G1 C9 - 327.8847
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G1 C5 - 318.9792
CAL CS1-7604-273 - SMT

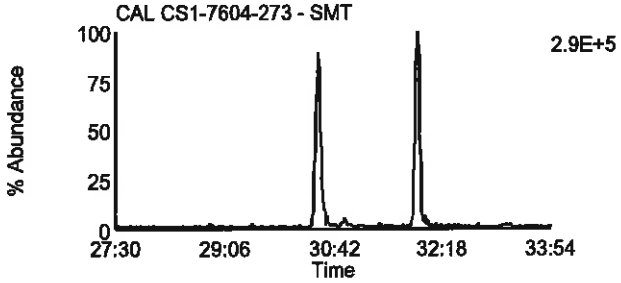


Homologue Group: Pentas

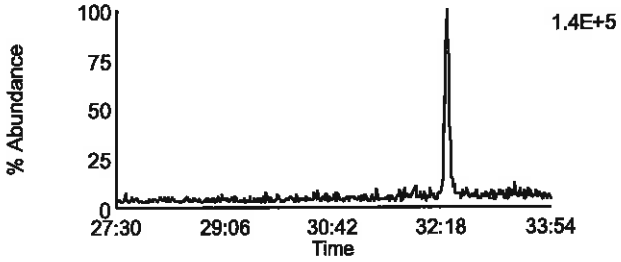
Data File Name: U130729B_11
Date Acquired: 7/29/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR06 (U)

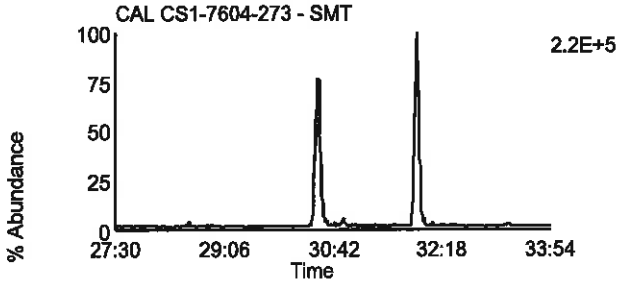
Data File: U130729B_11 G2 C1 - 339.8597
CAL CS1-7604-273 - SMT



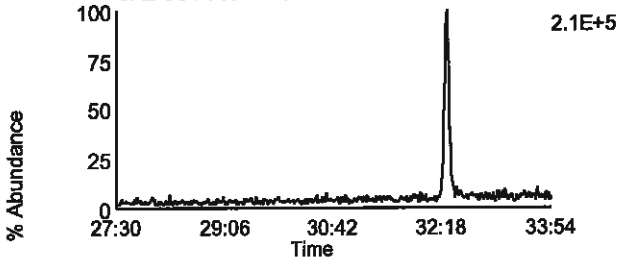
Data File: U130729B_11 G2 C4 - 353.8576
CAL CS1-7604-273 - SMT



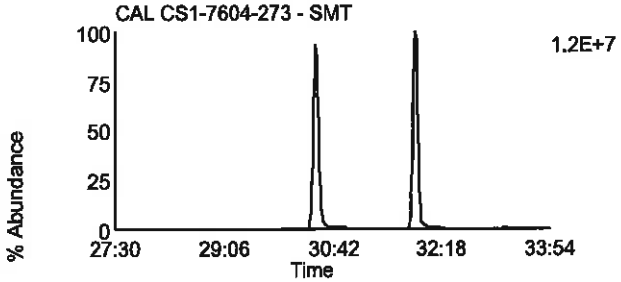
Data File: U130729B_11 G2 C2 - 341.8567
CAL CS1-7604-273 - SMT



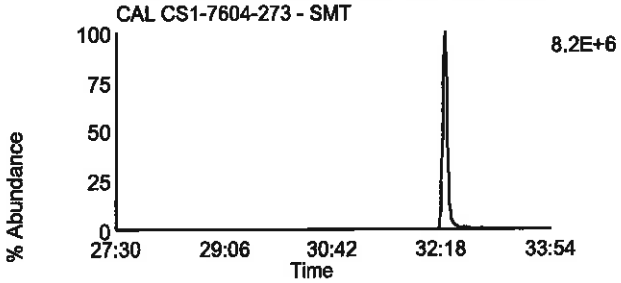
Data File: U130729B_11 G2 C8 - 355.8546
CAL CS1-7604-273 - SMT



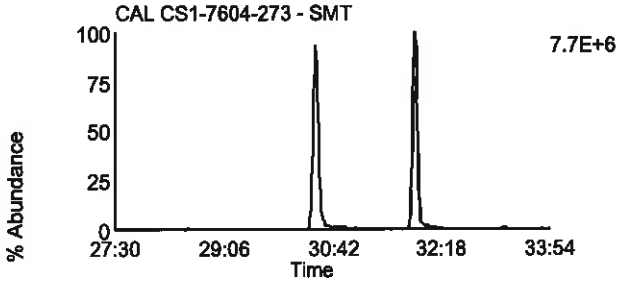
Data File: U130729B_11 G2 C3 - 351.8999
CAL CS1-7604-273 - SMT



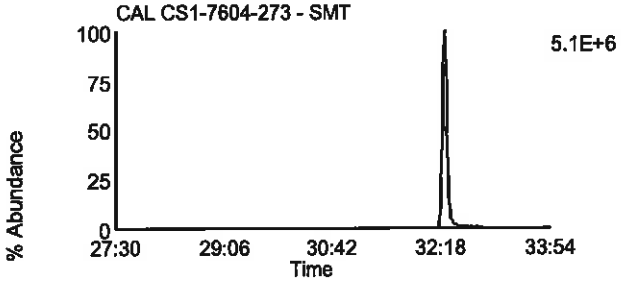
Data File: U130729B_11 G2 C10 - 367.8948
CAL CS1-7604-273 - SMT



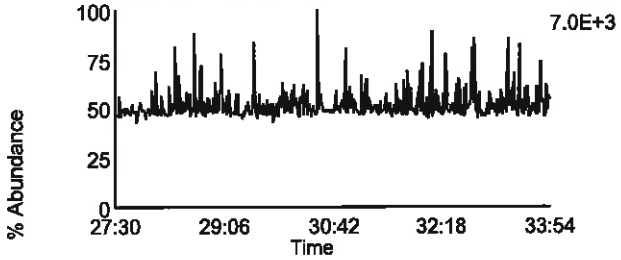
Data File: U130729B_11 G2 C5 - 353.8969
CAL CS1-7604-273 - SMT



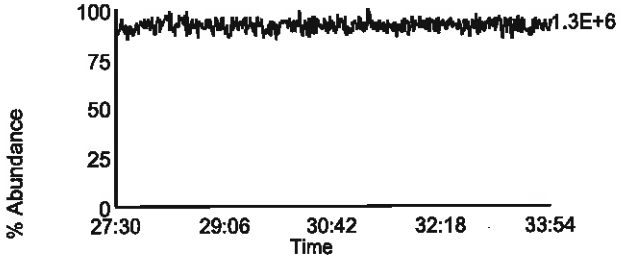
Data File: U130729B_11 G2 C11 - 369.8918
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G2 C12 - 409.7974
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G2 C6 - 354.9792
CAL CS1-7604-273 - SMT

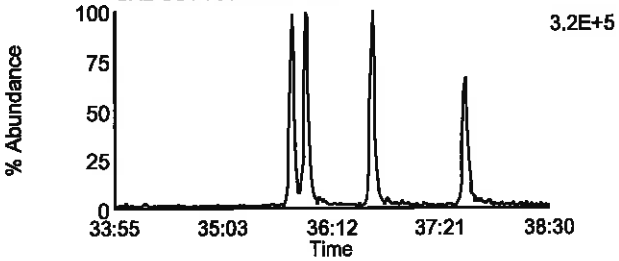


Homologue Group: Hexas

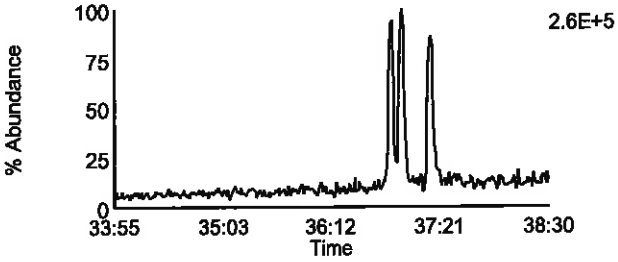
Data File Name: U130729B_11
Date Acquired: 7/29/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U130729B_11 G3 C1 - 373.8207
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G3 C7 - 389.8156
CAL CS1-7604-273 - SMT



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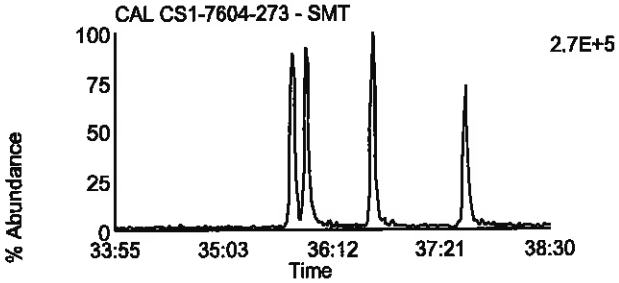
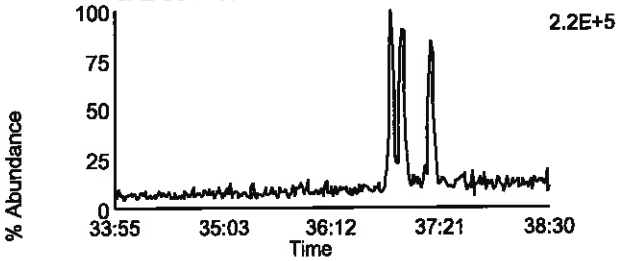
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G3 C8 - 391.8127
CAL CS1-7604-273 - SMT



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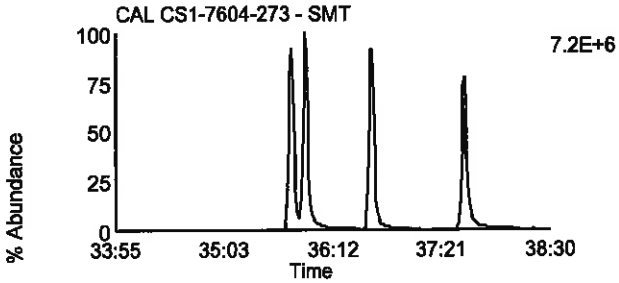
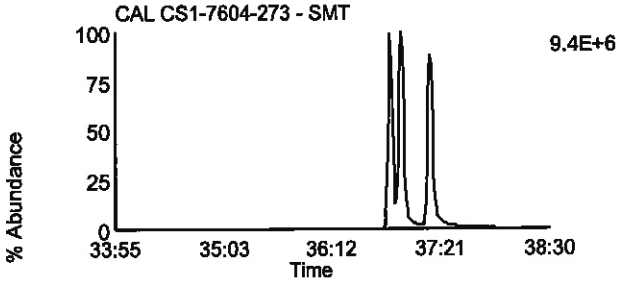
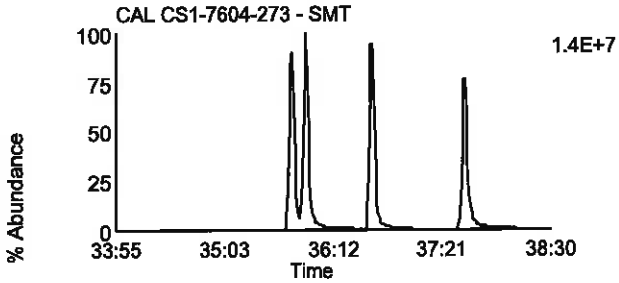
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G3 C9 - 401.8559
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G3 C6 - 385.861
CAL CS1-7604-273 - SMT



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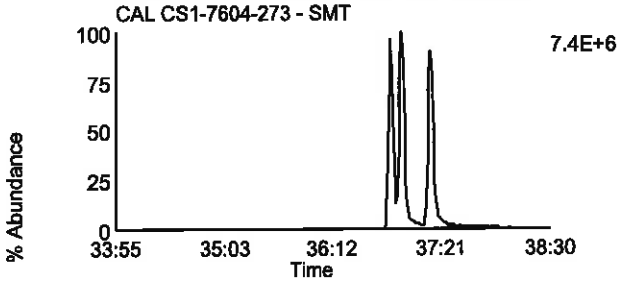
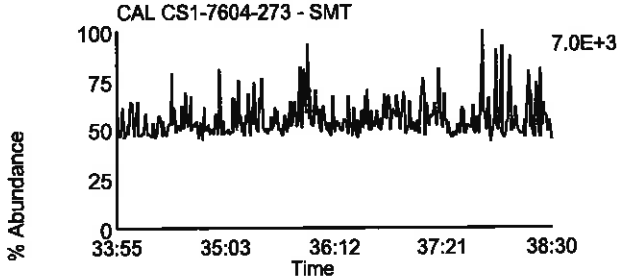
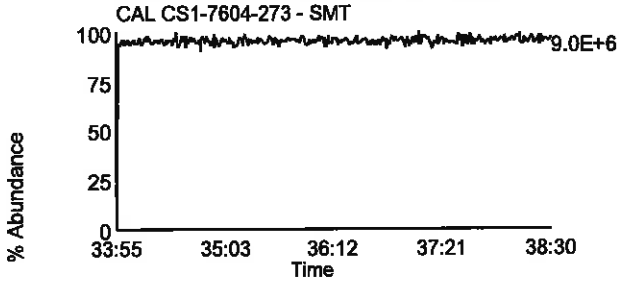
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G3 C11 - 445.7555
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G3 C3 - 380.976
CAL CS1-7604-273 - SMT

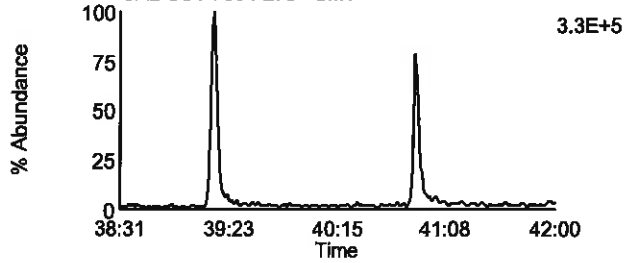


Homologue Group: Heptas

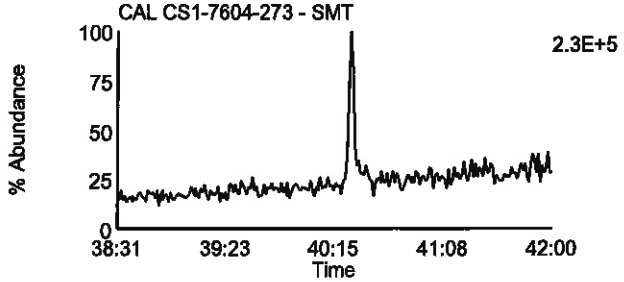
Data File Name: U130729B_11
Date Acquired: 7/29/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR06 (U)

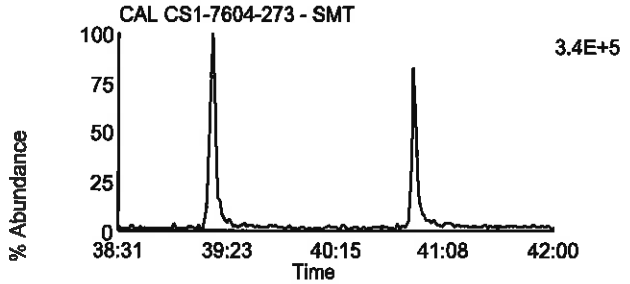
Data File: U130729B_11 G4 C3 - 407.7818
CAL CS1-7604-273 - SMT



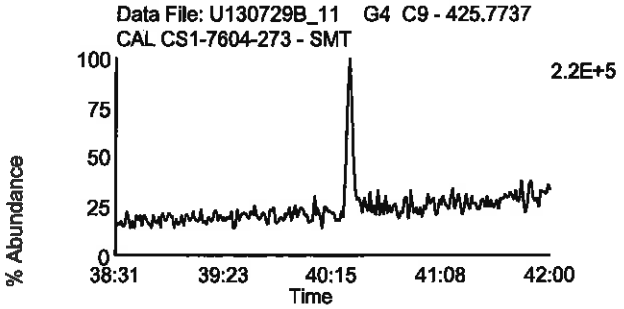
Data File: U130729B_11 G4 C8 - 423.7767
CAL CS1-7604-273 - SMT



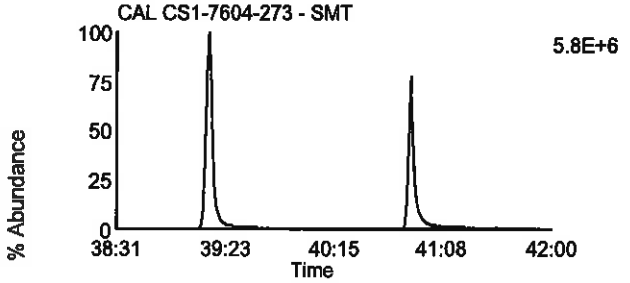
Data File: U130729B_11 G4 C4 - 409.7788
CAL CS1-7604-273 - SMT



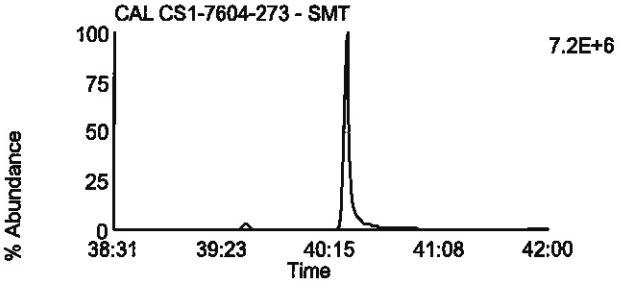
Data File: U130729B_11 G4 C9 - 425.7737
CAL CS1-7604-273 - SMT



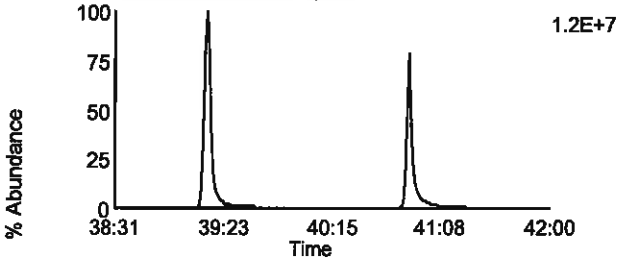
Data File: U130729B_11 G4 C6 - 417.825
CAL CS1-7604-273 - SMT



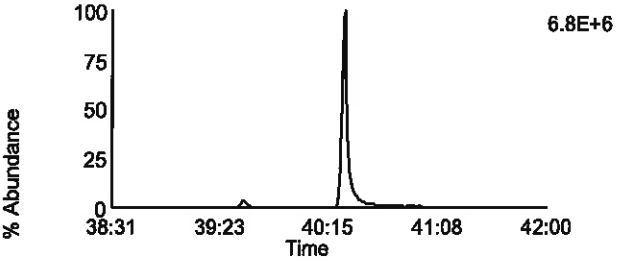
Data File: U130729B_11 G4 C11 - 435.8169
CAL CS1-7604-273 - SMT



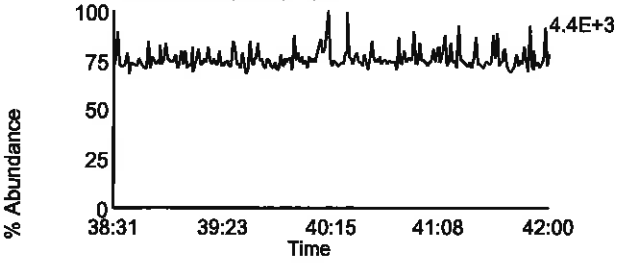
Data File: U130729B_11 G4 C7 - 419.822
CAL CS1-7604-273 - SMT



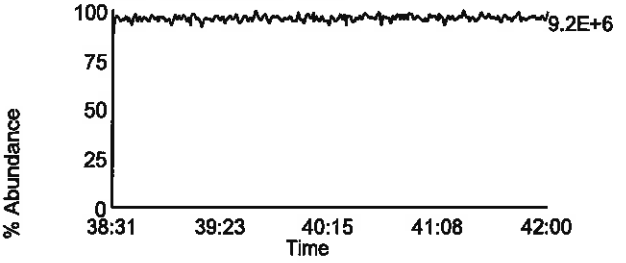
Data File: U130729B_11 G4 C12 - 437.814
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G4 C13 - 479.7165
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G4 C1 - 380.976
CAL CS1-7604-273 - SMT

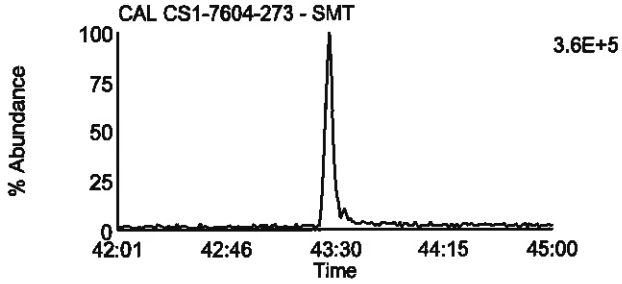


Homologue Group: Octas

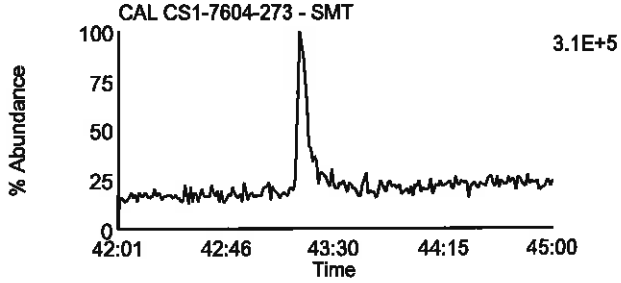
Data File Name: U130729B_11
Date Acquired: 7/29/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR06 (U)

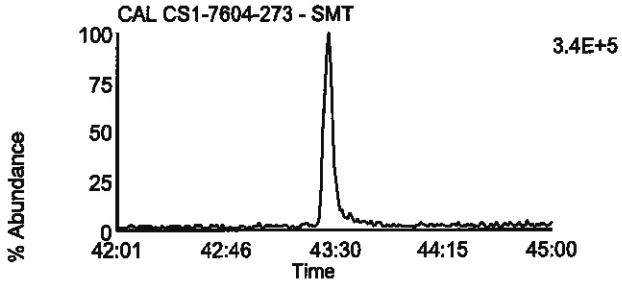
Data File: U130729B_11 G5 C4 - 441.7428
CAL CS1-7604-273 - SMT



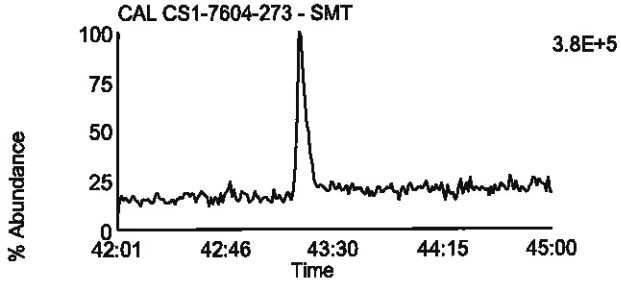
Data File: U130729B_11 G5 C8 - 457.7377
CAL CS1-7604-273 - SMT



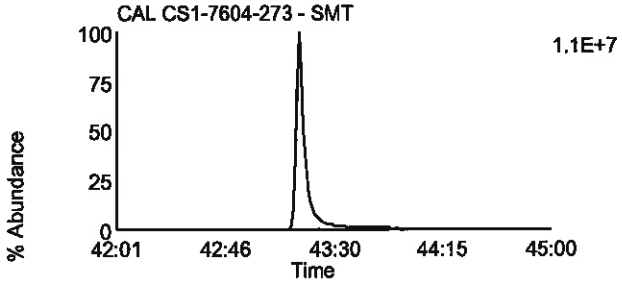
Data File: U130729B_11 G5 C5 - 443.7398
CAL CS1-7604-273 - SMT



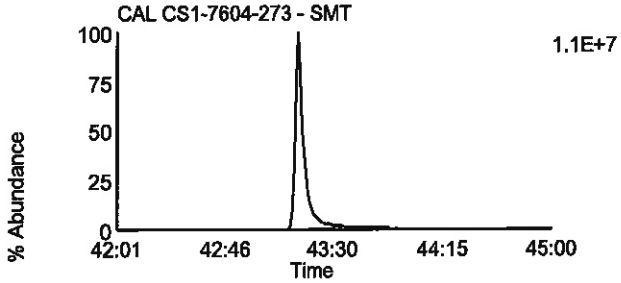
Data File: U130729B_11 G5 C9 - 459.7347
CAL CS1-7604-273 - SMT



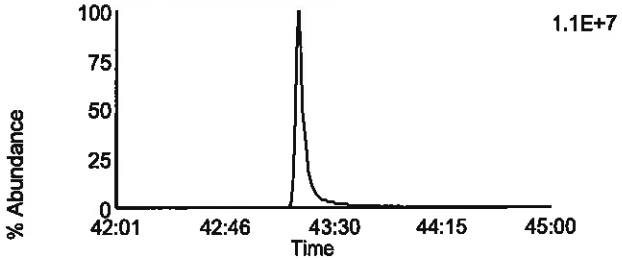
Data File: U130729B_11 G5 C11 - 469.7779
CAL CS1-7604-273 - SMT



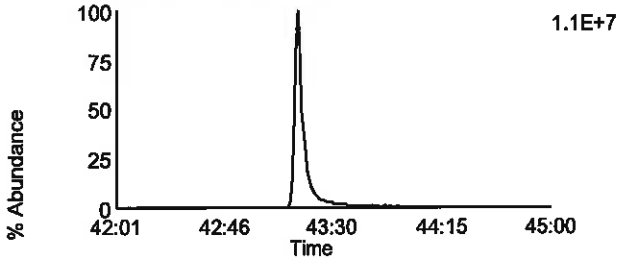
Data File: U130729B_11 G5 C11 - 469.7779
CAL CS1-7604-273 - SMT



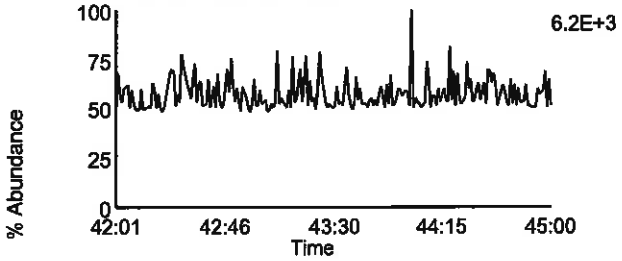
Data File: U130729B_11 G5 C12 - 471.7749
CAL CS1-7604-273 - SMT



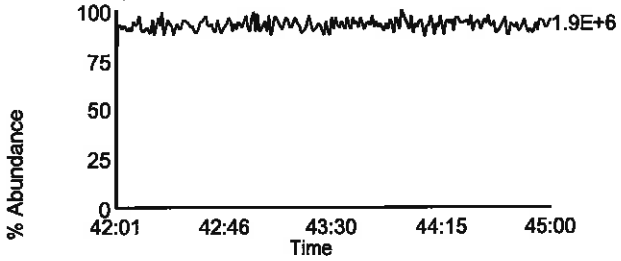
Data File: U130729B_11 G5 C12 - 471.7749
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G5 C13 - 513.6775
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G5 C2 - 430.9728
CAL CS1-7604-273 - SMT

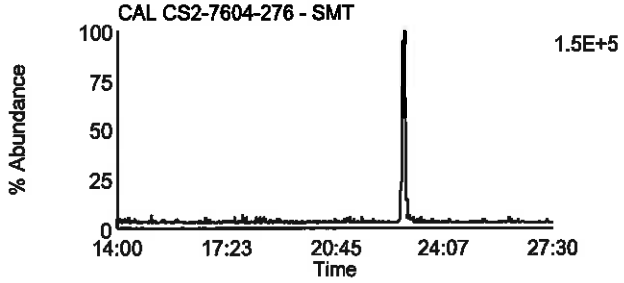


Homologue Group: Tetras

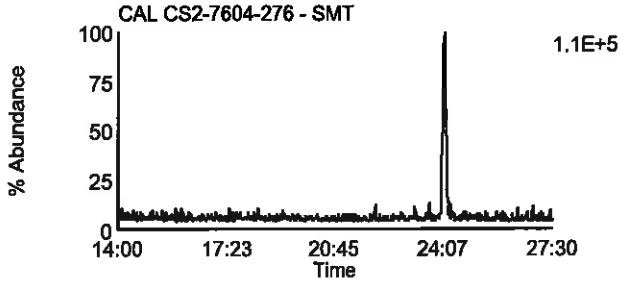
Data File Name: U130729B_10
Date Acquired: 7/29/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR06 (U)

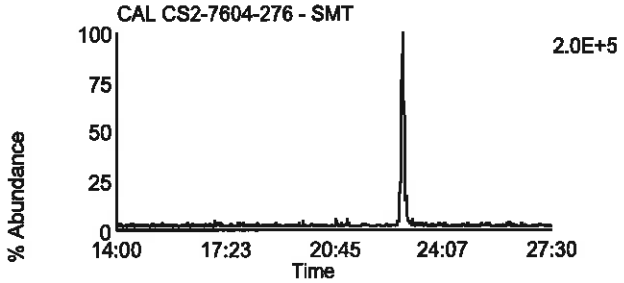
Data File: U130729B_10 G1 C1 - 303.9016
CAL CS2-7604-276 - SMT



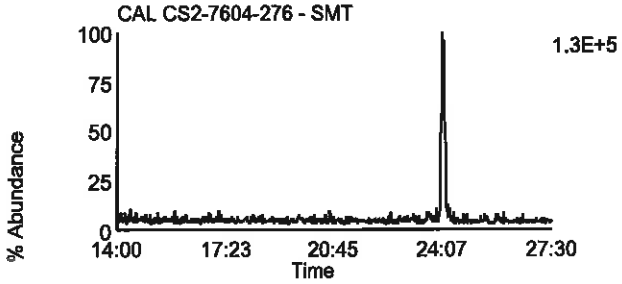
Data File: U130729B_10 G1 C7 - 319.8965
CAL CS2-7604-276 - SMT



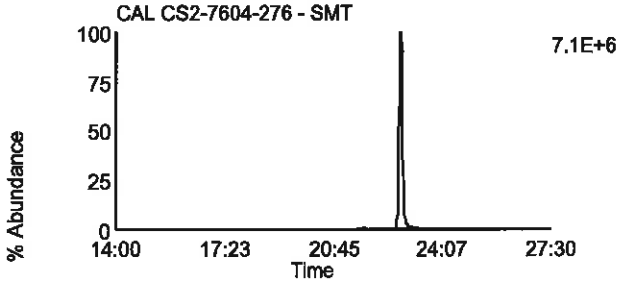
Data File: U130729B_10 G1 C2 - 305.8987
CAL CS2-7604-276 - SMT



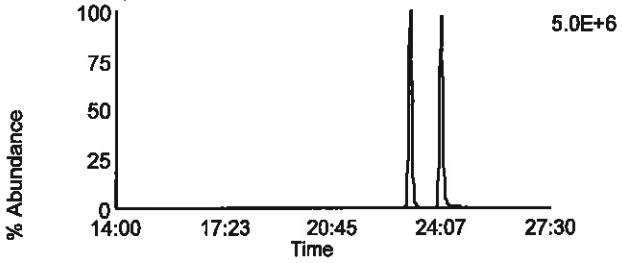
Data File: U130729B_10 G1 C8 - 321.8936
CAL CS2-7604-276 - SMT



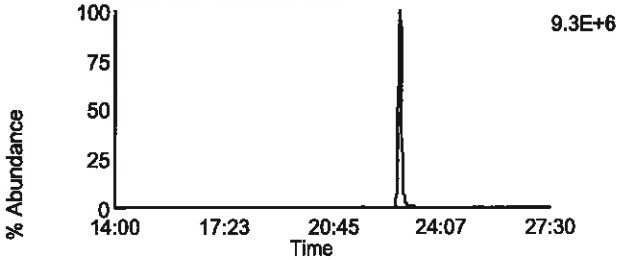
Data File: U130729B_10 G1 C3 - 315.9418
CAL CS2-7604-276 - SMT



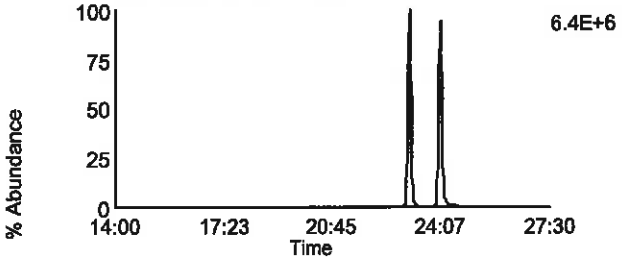
Data File: U130729B_10 G1 C10 - 331.9367
CAL CS2-7604-276 - SMT



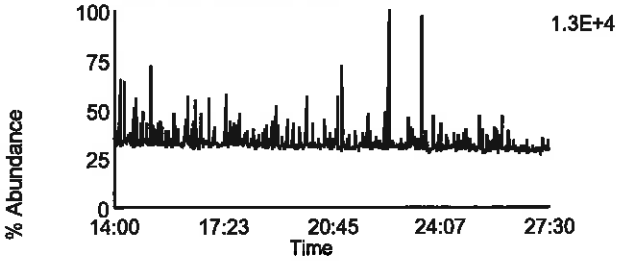
Data File: U130729B_10 G1 C4 - 317.9389
CAL CS2-7604-276 - SMT



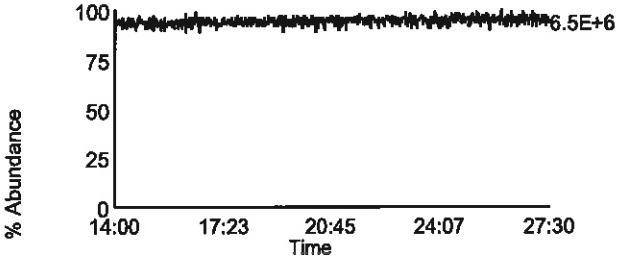
Data File: U130729B_10 G1 C11 - 333.9338
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G1 C14 - 375.8364
CAL CS2-7604-276 - SMT



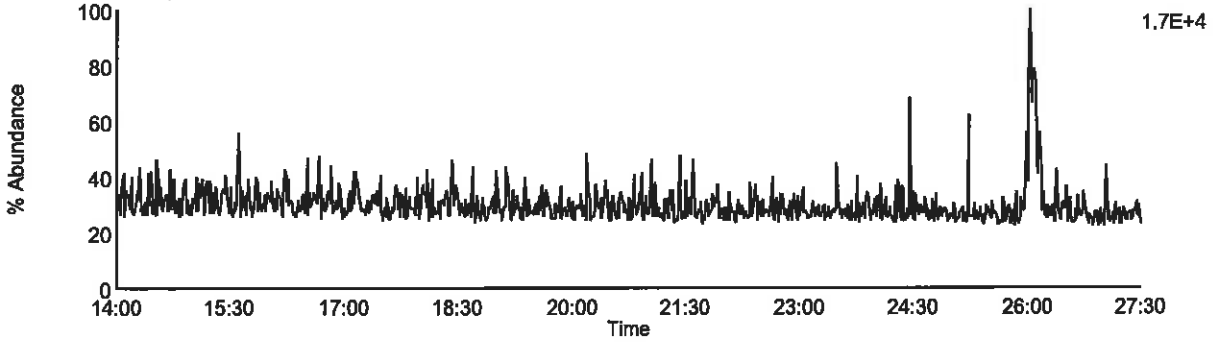
Data File: U130729B_10 G1 C5 - 318.9792
CAL CS2-7604-276 - SMT



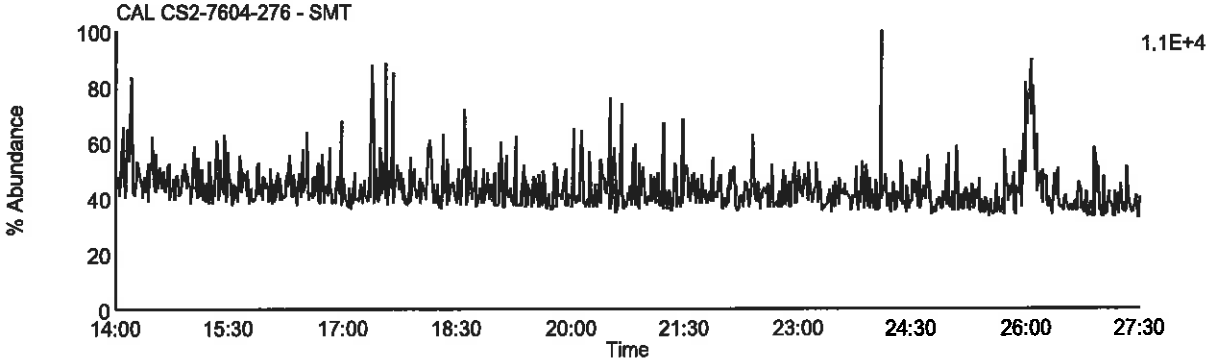
Homologue Group: Penta & Cleanup

Data File Name: U130729B_10	Lab Sample ID: CS2-7604-276
Date Acquired: 7/29/2013	Client Sample ID:
Sample Description: CAL CS2-7604-276 - SMT	Instrument: 10MSHR06 (U)

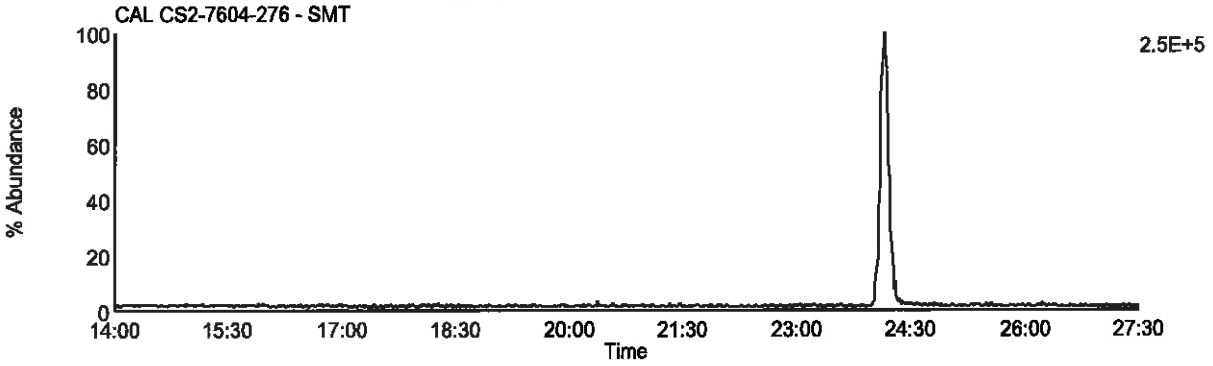
Data File: U130729B_10 G1 C12 - 339.8597
CAL CS2-7604-276 - SMT



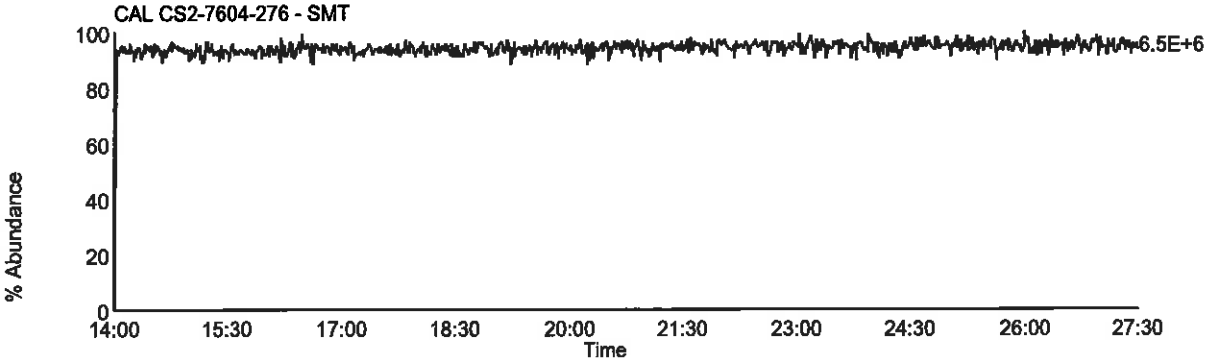
Data File: U130729B_10 G1 C13 - 341.8567
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G1 C9 - 327.8847
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G1 C5 - 318.9792
CAL CS2-7604-276 - SMT

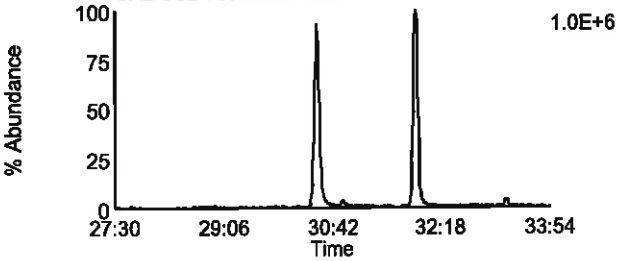


Homologue Group: Pentas

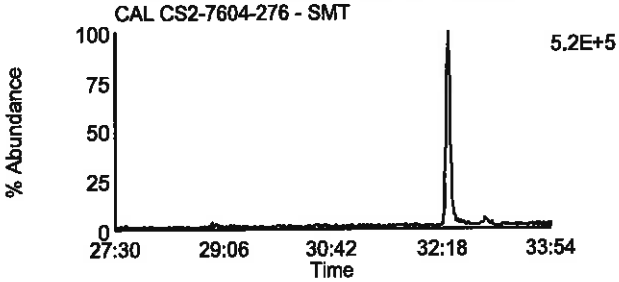
Data File Name: U130729B_10
Date Acquired: 7/29/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR06 (U)

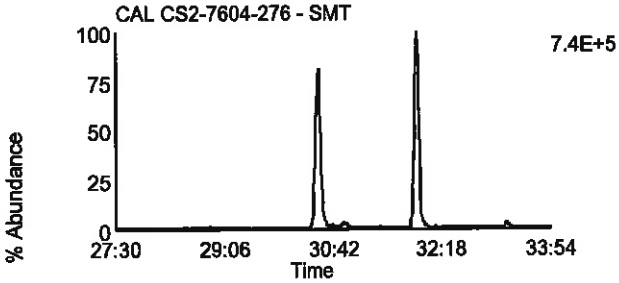
Data File: U130729B_10 G2 C1 - 339.8597
CAL CS2-7604-276 - SMT



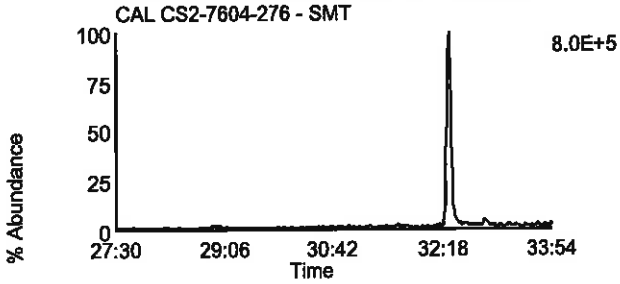
Data File: U130729B_10 G2 C4 - 353.8576
CAL CS2-7604-276 - SMT



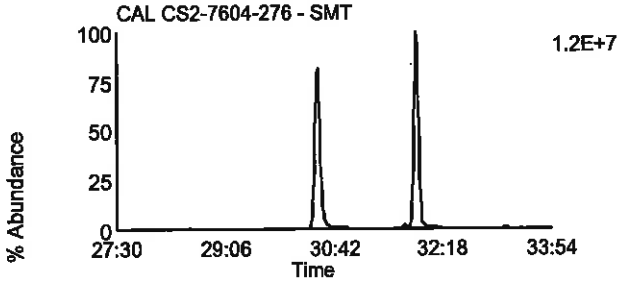
Data File: U130729B_10 G2 C2 - 341.8567
CAL CS2-7604-276 - SMT



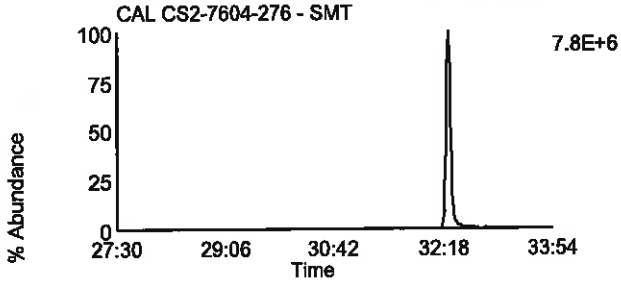
Data File: U130729B_10 G2 C8 - 355.8546
CAL CS2-7604-276 - SMT



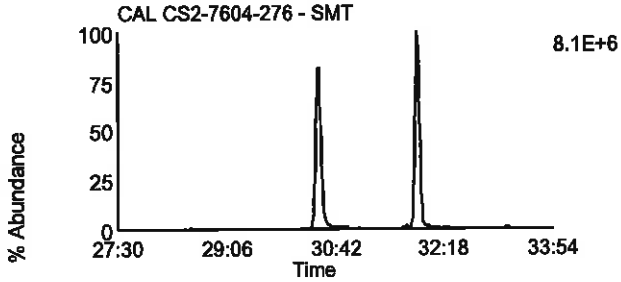
Data File: U130729B_10 G2 C3 - 351.8999
CAL CS2-7604-276 - SMT



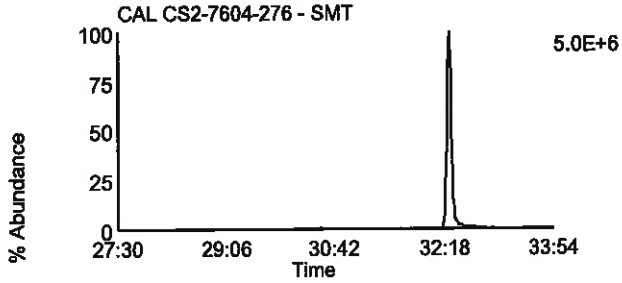
Data File: U130729B_10 G2 C10 - 367.8948
CAL CS2-7604-276 - SMT



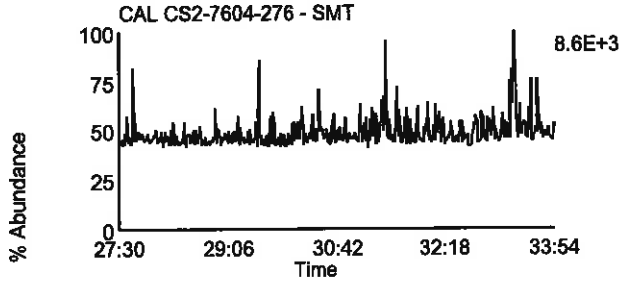
Data File: U130729B_10 G2 C5 - 353.8969
CAL CS2-7604-276 - SMT



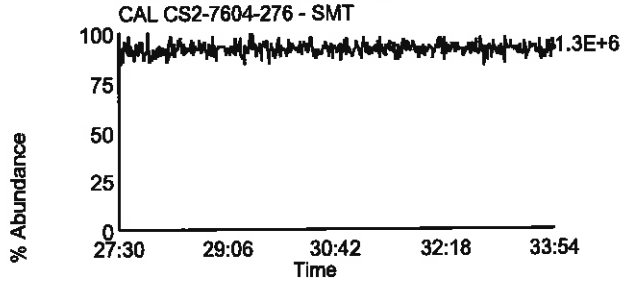
Data File: U130729B_10 G2 C11 - 369.8918
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G2 C12 - 409.7974
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G2 C6 - 354.9792
CAL CS2-7604-276 - SMT

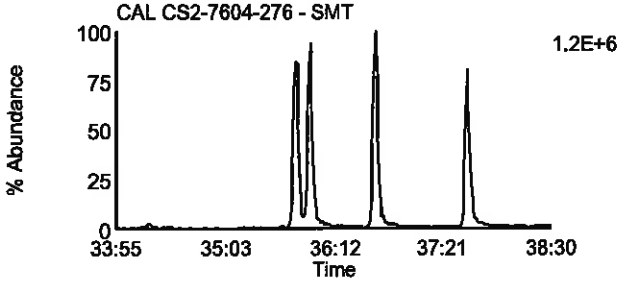


Homologue Group: Hexas

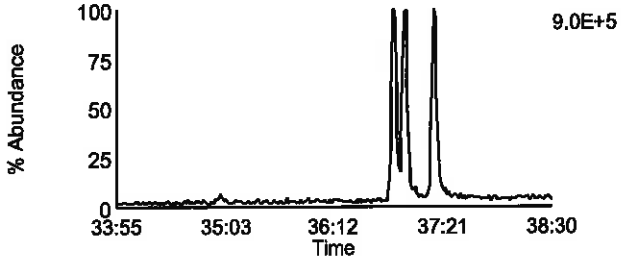
Data File Name: U130729B_10
Date Acquired: 7/29/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR06 (U)

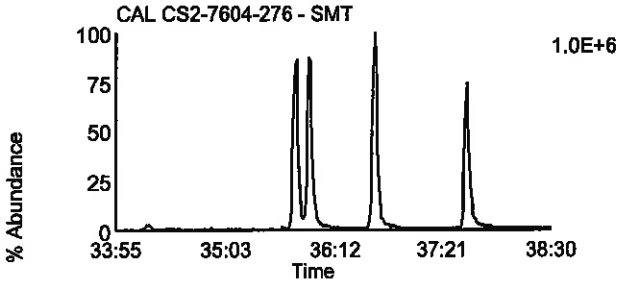
Data File: U130729B_10 G3 C1 - 373.8207
CAL CS2-7604-276 - SMT



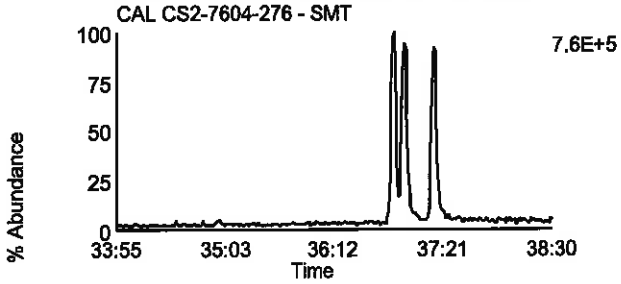
Data File: U130729B_10 G3 C7 - 389.8156
CAL CS2-7604-276 - SMT



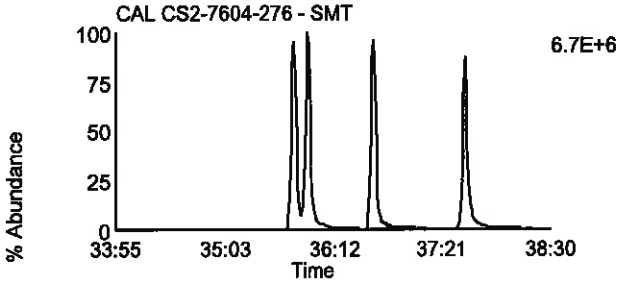
Data File: U130729B_10 G3 C2 - 375.8178
CAL CS2-7604-276 - SMT



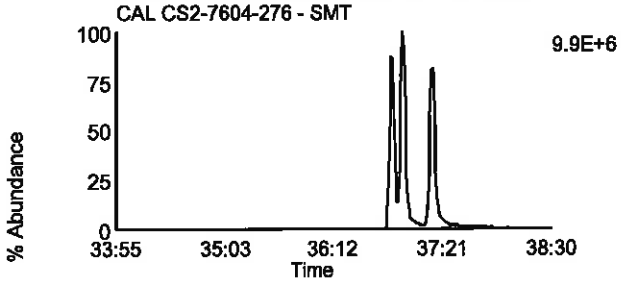
Data File: U130729B_10 G3 C8 - 391.8127
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G3 C5 - 383.8639
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G3 C9 - 401.8559
CAL CS2-7604-276 - SMT



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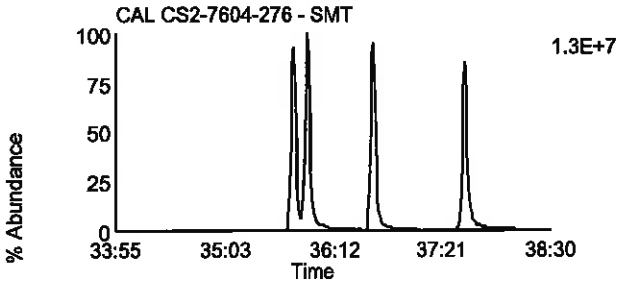
CAL CS2-7604-276 - SMT



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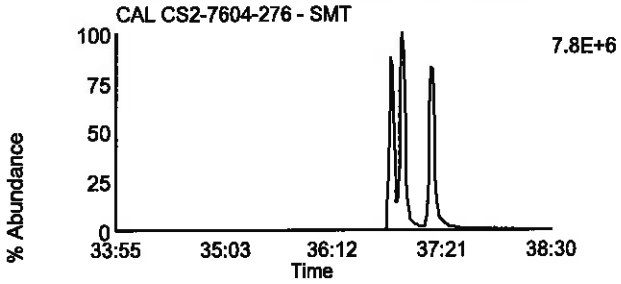
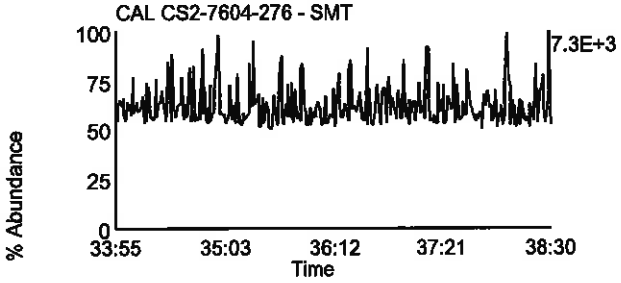
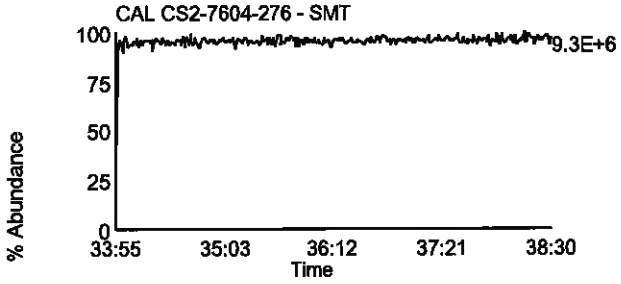
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G3 C11 - 445.7555
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G3 C3 - 380.976
CAL CS2-7604-276 - SMT

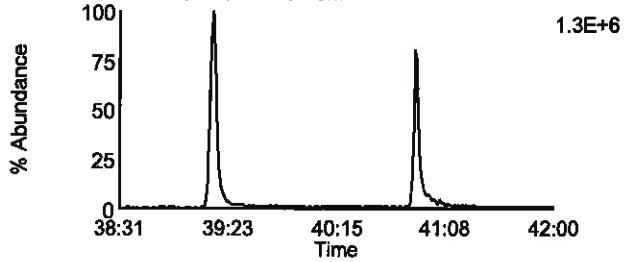


Homologue Group: Heptas

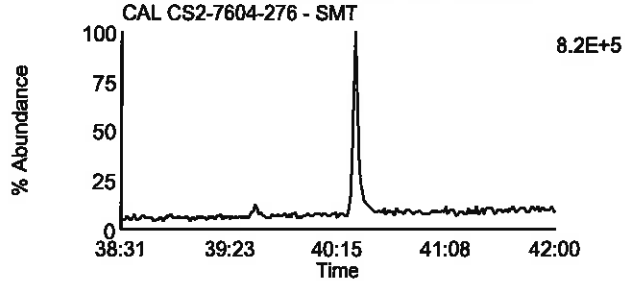
Data File Name: U130729B_10
Date Acquired: 7/29/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR06 (U)

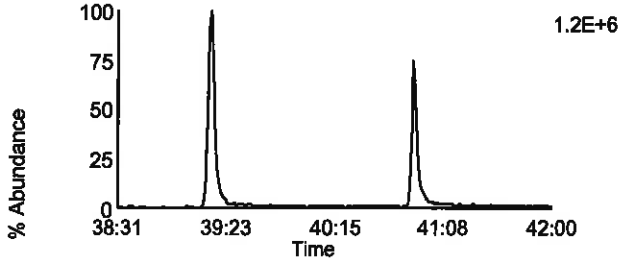
Data File: U130729B_10 G4 C3 - 407.7818
CAL CS2-7604-276 - SMT



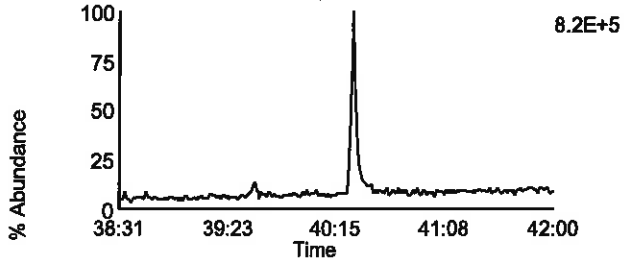
Data File: U130729B_10 G4 C8 - 423.7767
CAL CS2-7604-276 - SMT



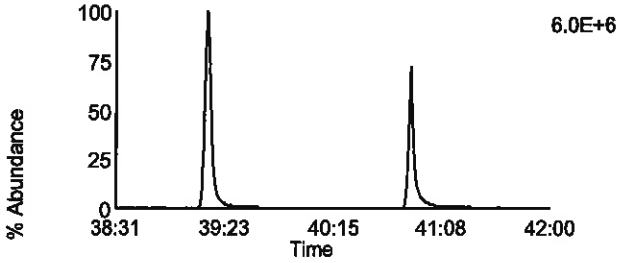
Data File: U130729B_10 G4 C4 - 409.7788
CAL CS2-7604-276 - SMT



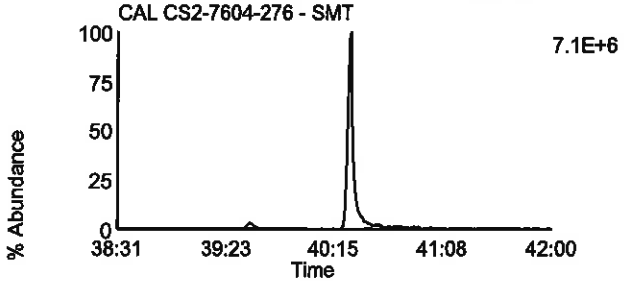
Data File: U130729B_10 G4 C9 - 425.7737
CAL CS2-7604-276 - SMT



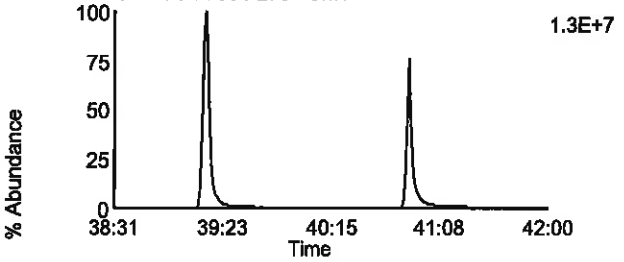
Data File: U130729B_10 G4 C6 - 417.825
CAL CS2-7604-276 - SMT



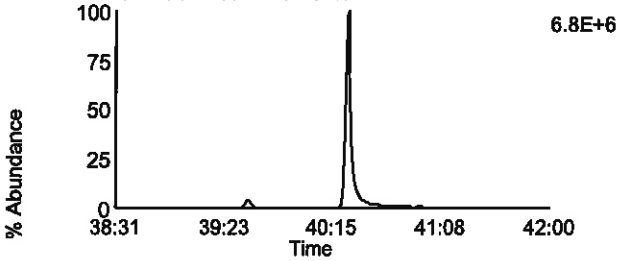
Data File: U130729B_10 G4 C11 - 435.8169
CAL CS2-7604-276 - SMT



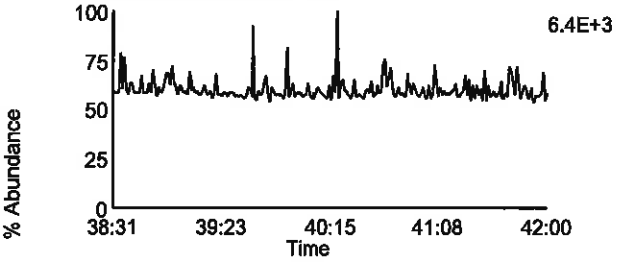
Data File: U130729B_10 G4 C7 - 419.822
CAL CS2-7604-276 - SMT



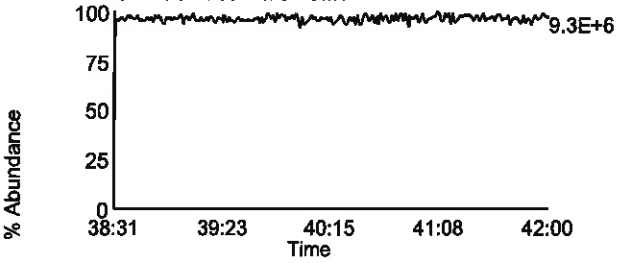
Data File: U130729B_10 G4 C12 - 437.814
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G4 C13 - 479.7165
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G4 C1 - 380.976
CAL CS2-7604-276 - SMT

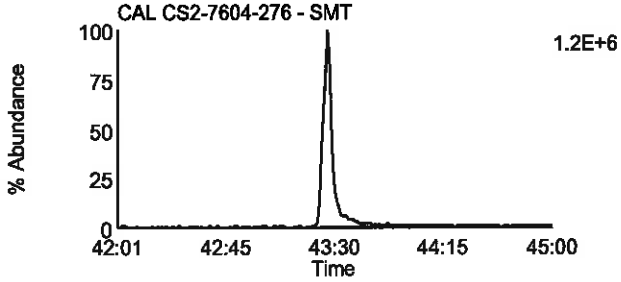


Homologue Group: Octas

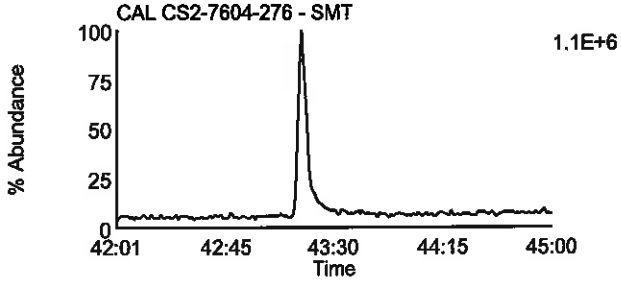
Data File Name: U130729B_10
Date Acquired: 7/29/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR06 (U)

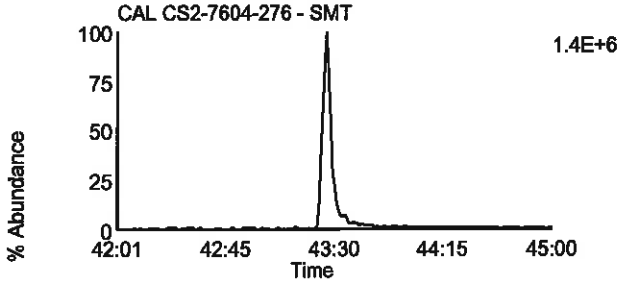
Data File: U130729B_10 G5 C4 - 441.7428
CAL CS2-7604-276 - SMT



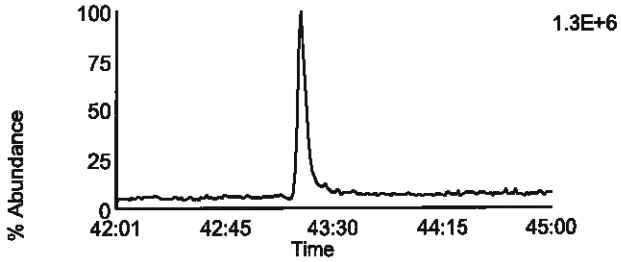
Data File: U130729B_10 G5 C8 - 457.7377
CAL CS2-7604-276 - SMT



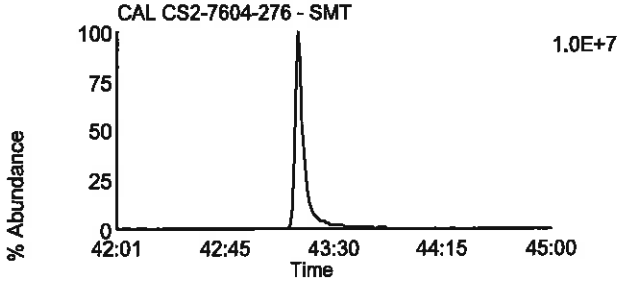
Data File: U130729B_10 G5 C5 - 443.7398
CAL CS2-7604-276 - SMT



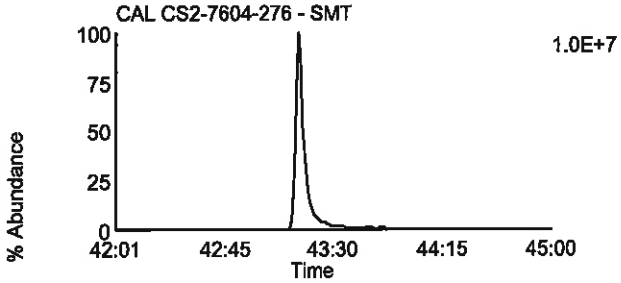
Data File: U130729B_10 G5 C9 - 459.7347
CAL CS2-7604-276 - SMT



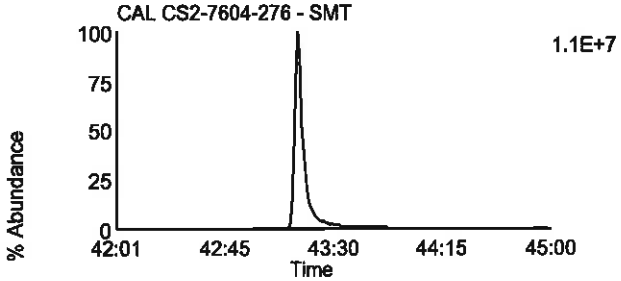
Data File: U130729B_10 G5 C11 - 469.7779
CAL CS2-7604-276 - SMT



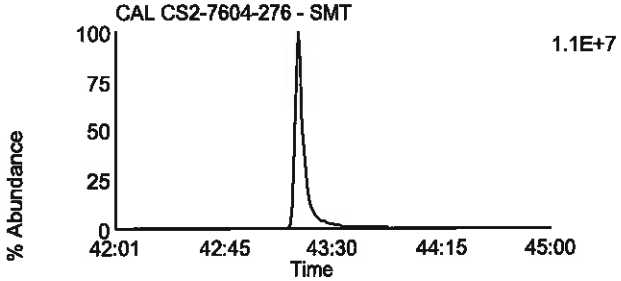
Data File: U130729B_10 G5 C11 - 469.7779
CAL CS2-7604-276 - SMT



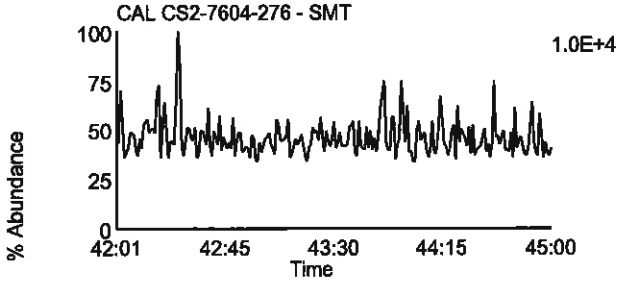
Data File: U130729B_10 G5 C12 - 471.7749
CAL CS2-7604-276 - SMT



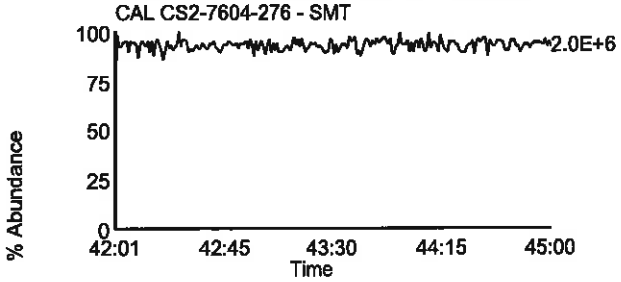
Data File: U130729B_10 G5 C12 - 471.7749
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G5 C13 - 513.6775
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G5 C2 - 430.9728
CAL CS2-7604-276 - SMT

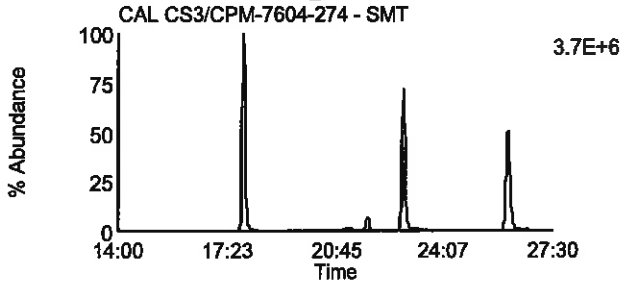


Homologue Group: Tetras

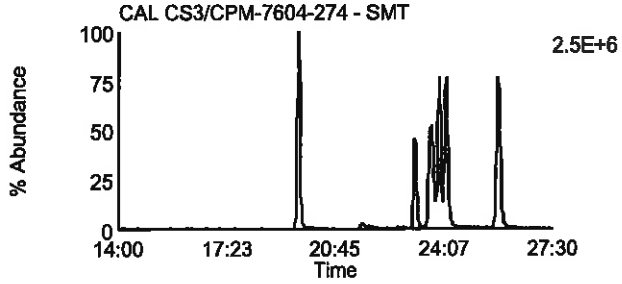
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID:
Instrument: 10MSHR06 (U)

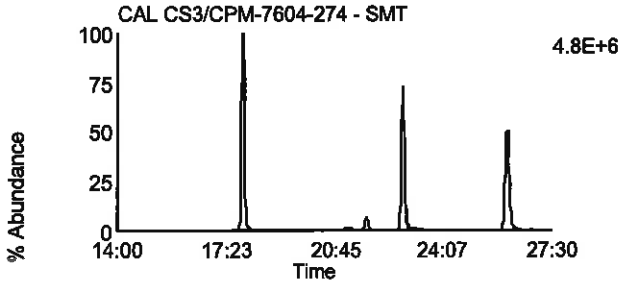
Data File: U130729B_09 G1 C1 - 303.9016
CAL CS3/CPM-7604-274 - SMT



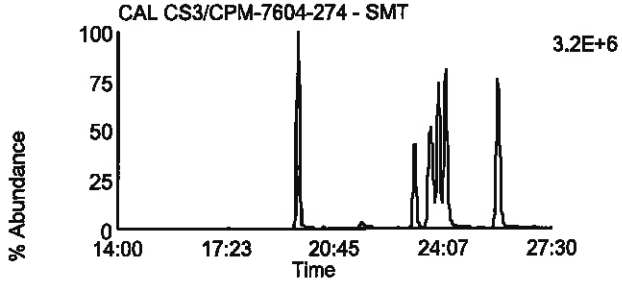
Data File: U130729B_09 G1 C7 - 319.8965
CAL CS3/CPM-7604-274 - SMT



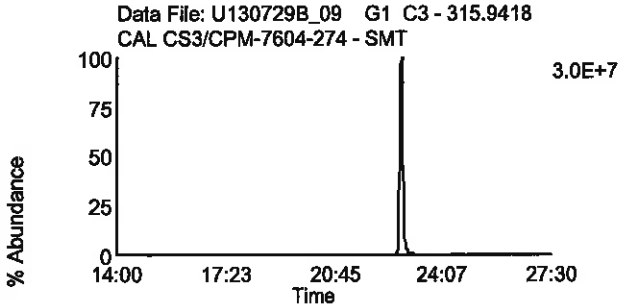
Data File: U130729B_09 G1 C2 - 305.8987
CAL CS3/CPM-7604-274 - SMT



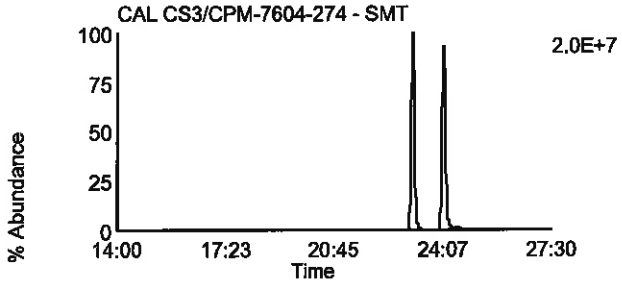
Data File: U130729B_09 G1 C8 - 321.8936
CAL CS3/CPM-7604-274 - SMT



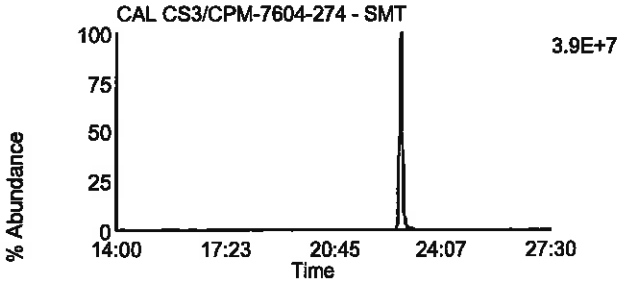
Data File: U130729B_09 G1 C3 - 315.9418
CAL CS3/CPM-7604-274 - SMT



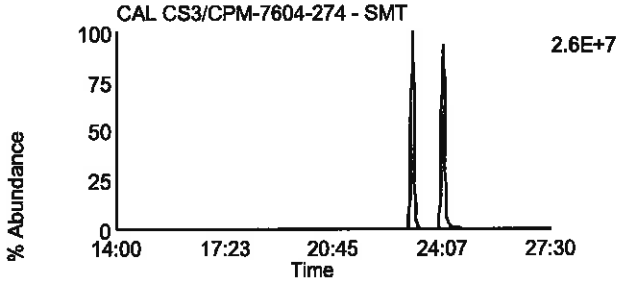
Data File: U130729B_09 G1 C10 - 331.9367
CAL CS3/CPM-7604-274 - SMT



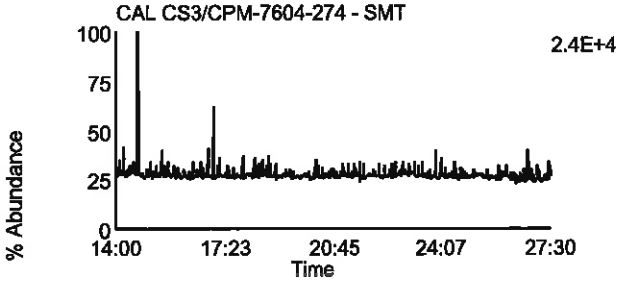
Data File: U130729B_09 G1 C4 - 317.9389
CAL CS3/CPM-7604-274 - SMT



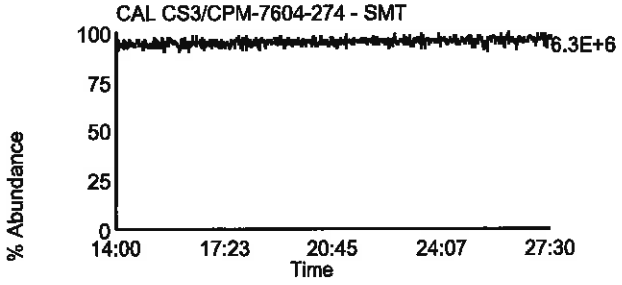
Data File: U130729B_09 G1 C11 - 333.9338
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C14 - 375.8364
CAL CS3/CPM-7604-274 - SMT



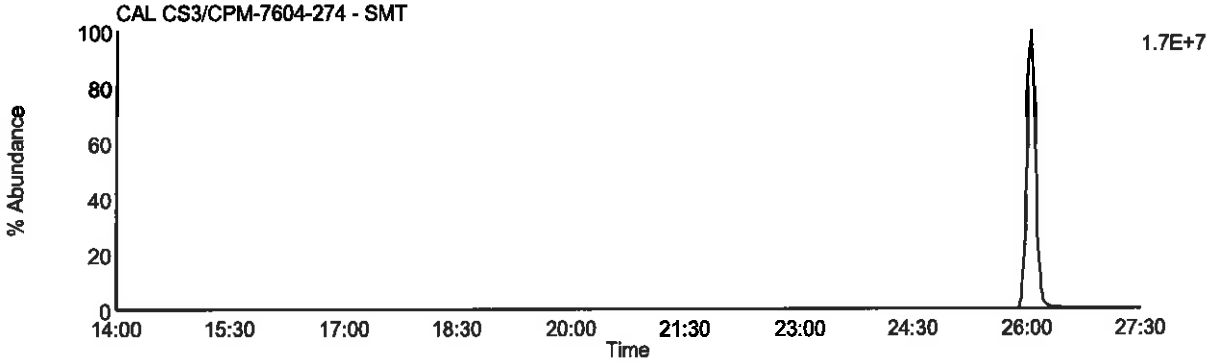
Data File: U130729B_09 G1 C5 - 318.9792
CAL CS3/CPM-7604-274 - SMT



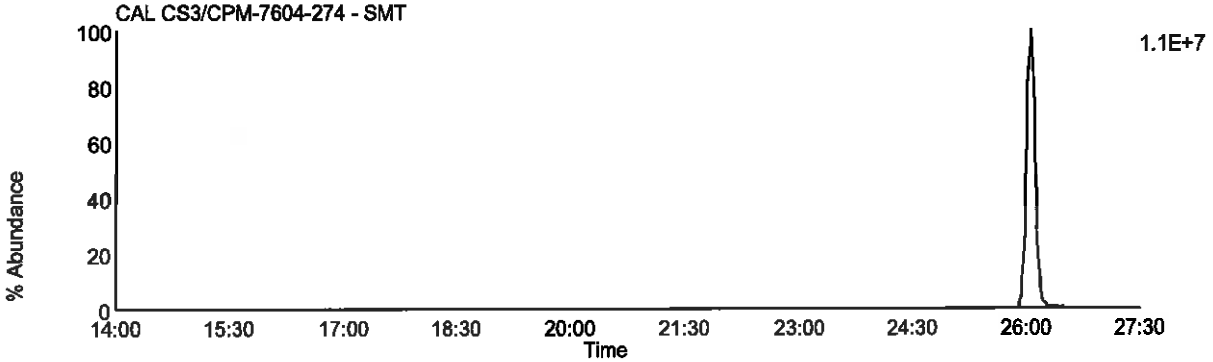
Homologue Group: Penta & Cleanup

Data File Name: U130729B_09	Lab Sample ID: CS3/CPM-7604-274
Date Acquired: 7/29/2013	Client Sample ID:
Sample Description: CAL CS3/CPM-7604-274 - SMT	Instrument: 10MSHR06 (U)

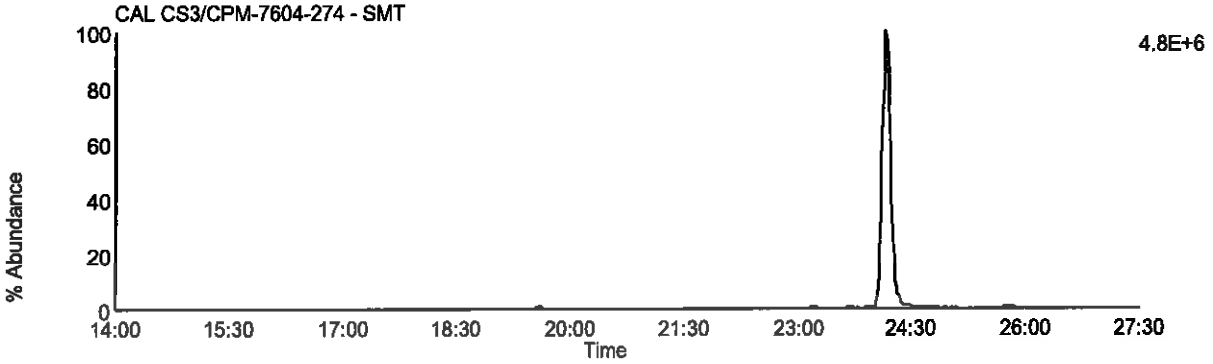
Data File: U130729B_09 G1 C12 - 339.8597
CAL CS3/CPM-7604-274 - SMT



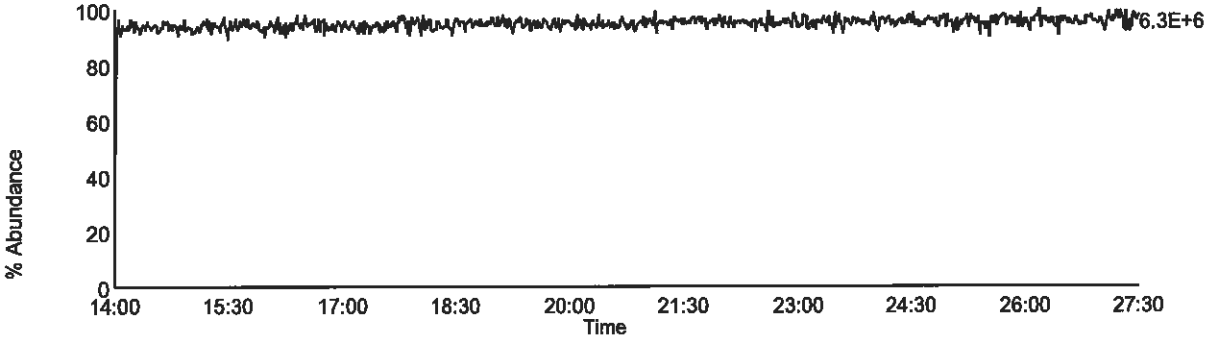
Data File: U130729B_09 G1 C13 - 341.8567
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C9 - 327.8847
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C5 - 318.9792
CAL CS3/CPM-7604-274 - SMT

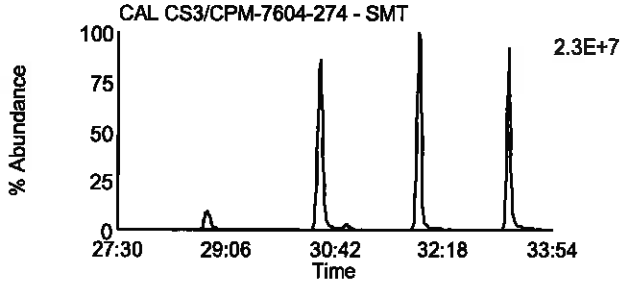


Homologue Group: Pentas

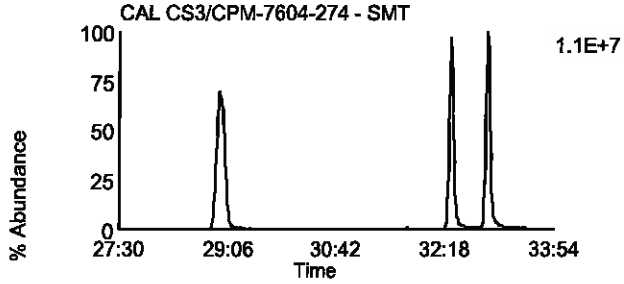
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID:
Instrument: 10MSHR06 (U)

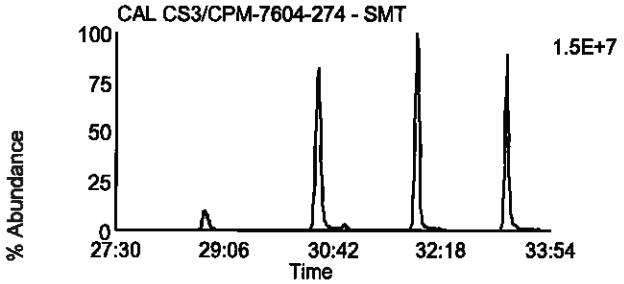
Data File: U130729B_09 G2 C1 - 339.8597
CAL CS3/CPM-7604-274 - SMT



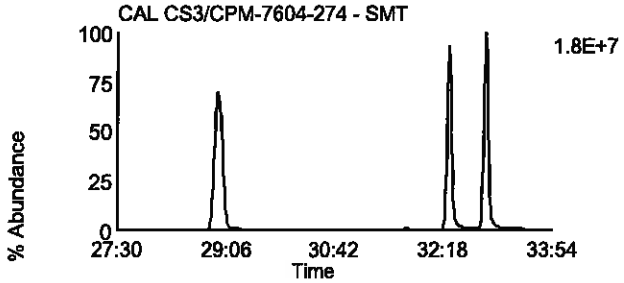
Data File: U130729B_09 G2 C4 - 353.8576
CAL CS3/CPM-7604-274 - SMT



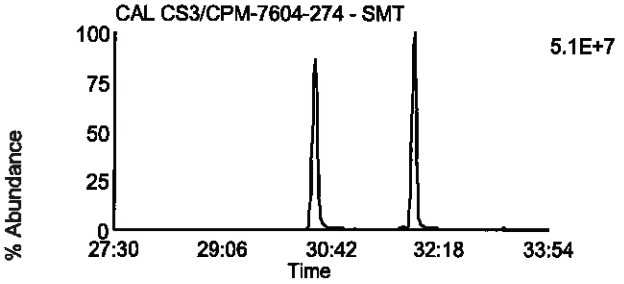
Data File: U130729B_09 G2 C2 - 341.8567
CAL CS3/CPM-7604-274 - SMT



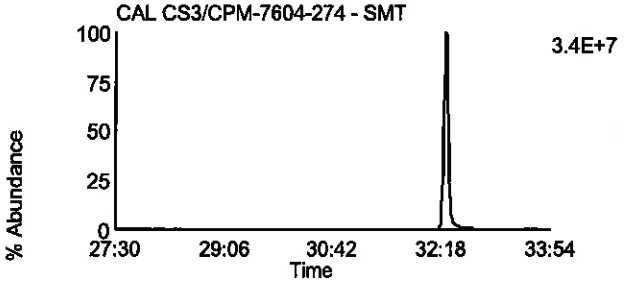
Data File: U130729B_09 G2 C8 - 355.8546
CAL CS3/CPM-7604-274 - SMT



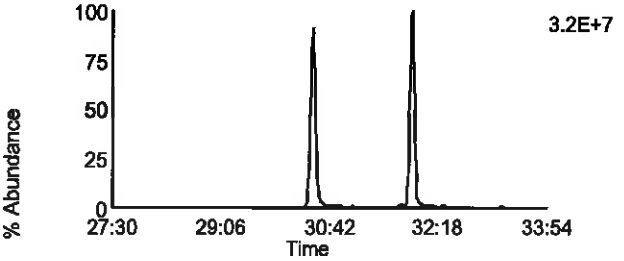
Data File: U130729B_09 G2 C3 - 351.8999
CAL CS3/CPM-7604-274 - SMT



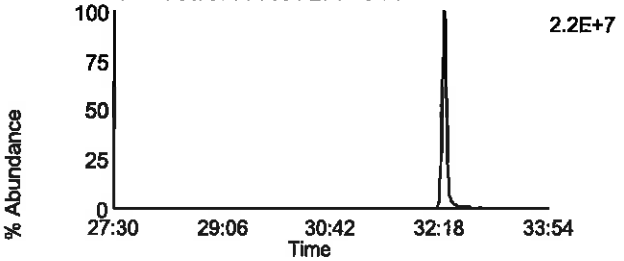
Data File: U130729B_09 G2 C10 - 367.8948
CAL CS3/CPM-7604-274 - SMT



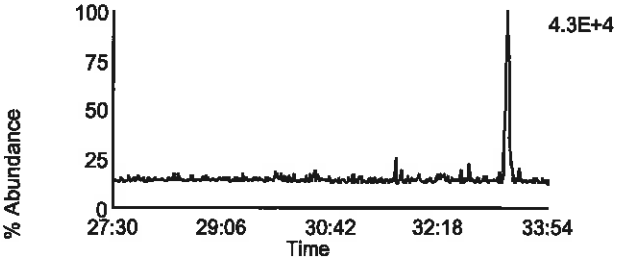
Data File: U130729B_09 G2 C5 - 353.8969
CAL CS3/CPM-7604-274 - SMT



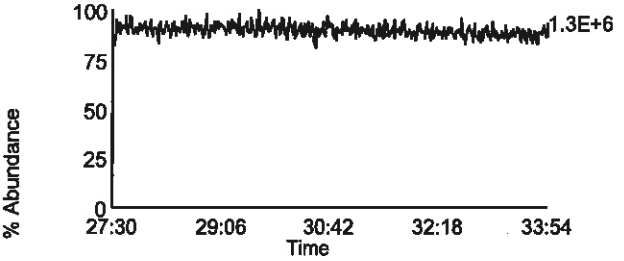
Data File: U130729B_09 G2 C11 - 369.8918
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G2 C12 - 409.7974
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G2 C6 - 354.9792
CAL CS3/CPM-7604-274 - SMT

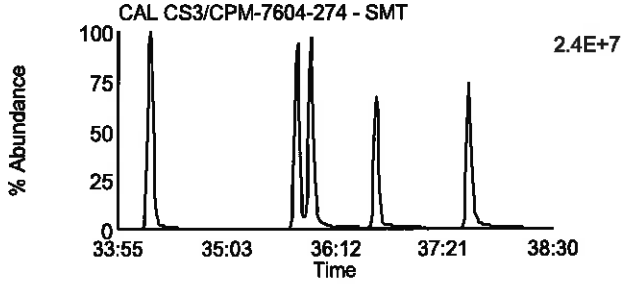


Homologue Group: Hexas

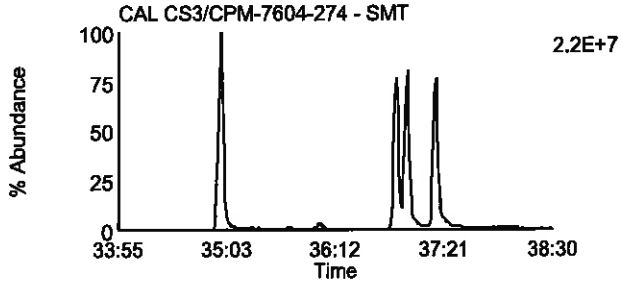
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID:
Instrument: 10MSHR06 (U)

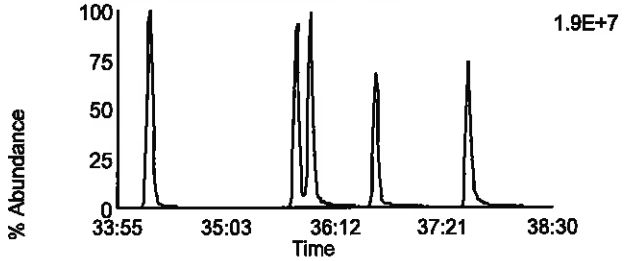
Data File: U130729B_09 G3 C1 - 373.8207
CAL CS3/CPM-7604-274 - SMT



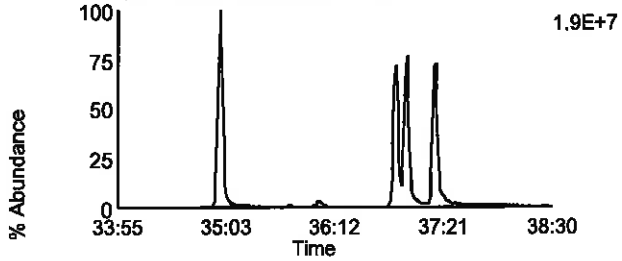
Data File: U130729B_09 G3 C7 - 389.8156
CAL CS3/CPM-7604-274 - SMT



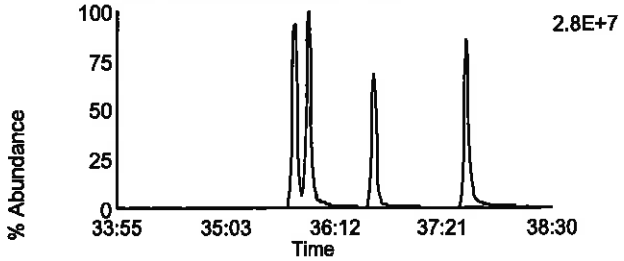
Data File: U130729B_09 G3 C2 - 375.8178
CAL CS3/CPM-7604-274 - SMT



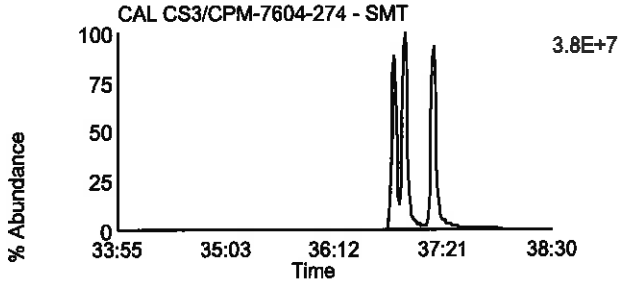
Data File: U130729B_09 G3 C8 - 391.8127
CAL CS3/CPM-7604-274 - SMT



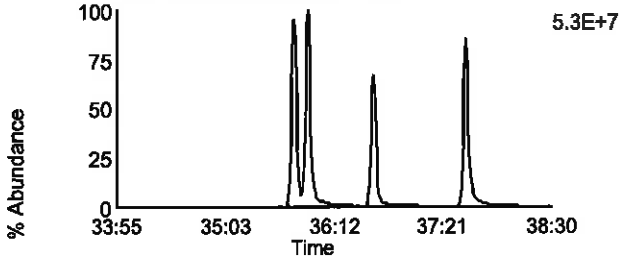
Data File: U130729B_09 G3 C5 - 383.8639
CAL CS3/CPM-7604-274 - SMT



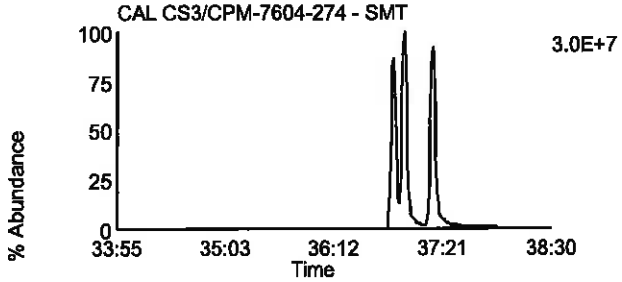
Data File: U130729B_09 G3 C9 - 401.8559
CAL CS3/CPM-7604-274 - SMT



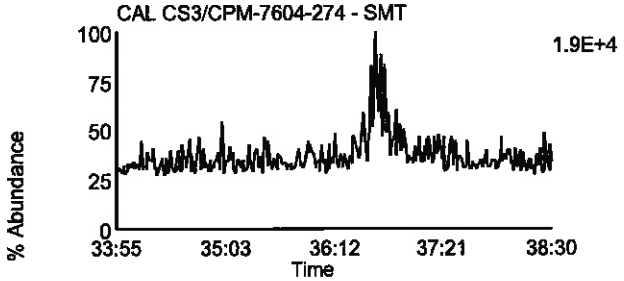
Data File: U130729B_09 G3 C6 - 385.861
CAL CS3/CPM-7604-274 - SMT



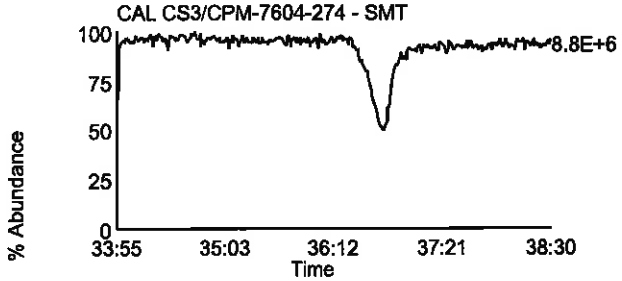
Data File: U130729B_09 G3 C10 - 403.8529
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G3 C11 - 445.7555
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G3 C3 - 380.976
CAL CS3/CPM-7604-274 - SMT

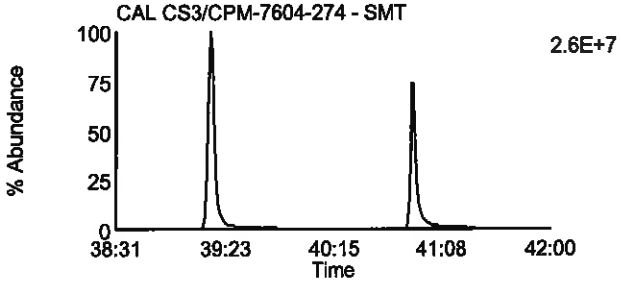


Homologue Group: Heptas

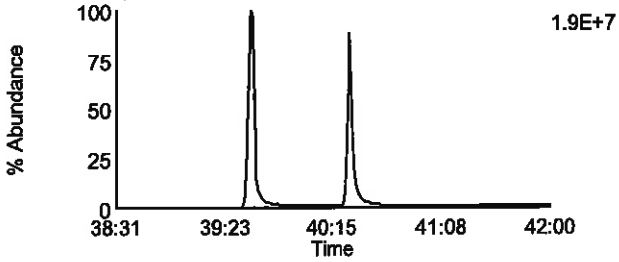
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID:
Instrument: 10MSHR06 (U)

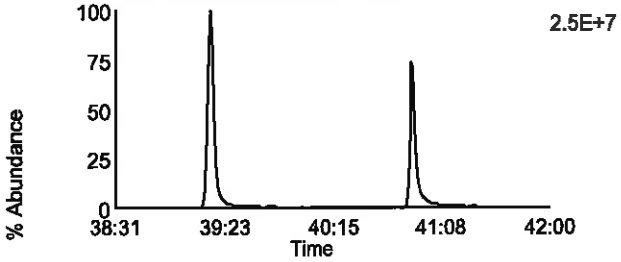
Data File: U130729B_09 G4 C3 - 407.7818
CAL CS3/CPM-7604-274 - SMT



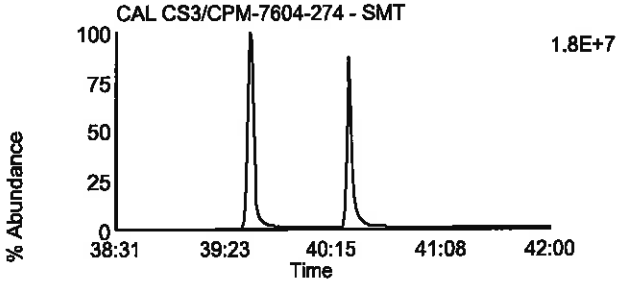
Data File: U130729B_09 G4 C8 - 423.7767
CAL CS3/CPM-7604-274 - SMT



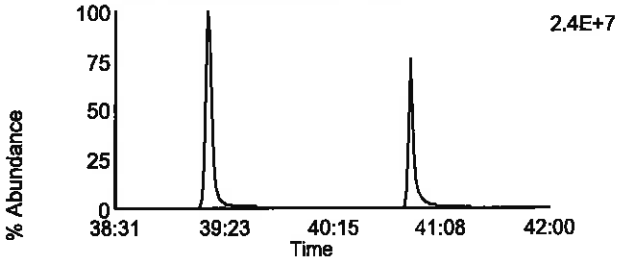
Data File: U130729B_09 G4 C4 - 409.7788
CAL CS3/CPM-7604-274 - SMT



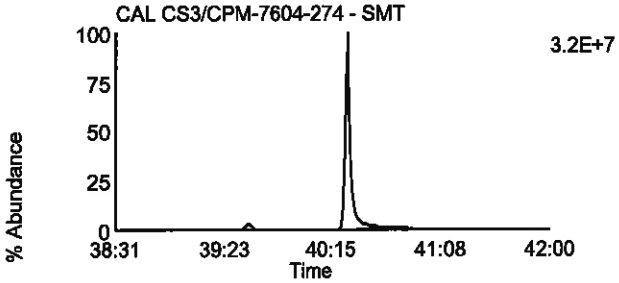
Data File: U130729B_09 G4 C9 - 425.7737
CAL CS3/CPM-7604-274 - SMT



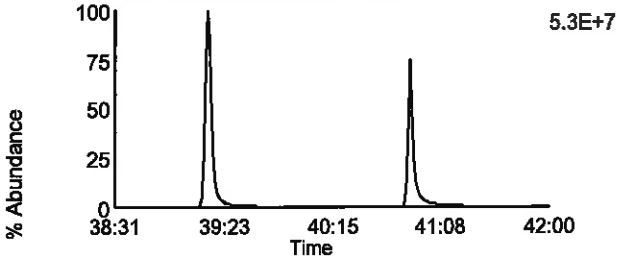
Data File: U130729B_09 G4 C6 - 417.825
CAL CS3/CPM-7604-274 - SMT



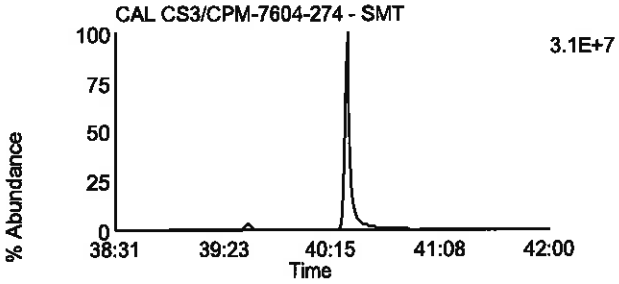
Data File: U130729B_09 G4 C11 - 435.8169
CAL CS3/CPM-7604-274 - SMT



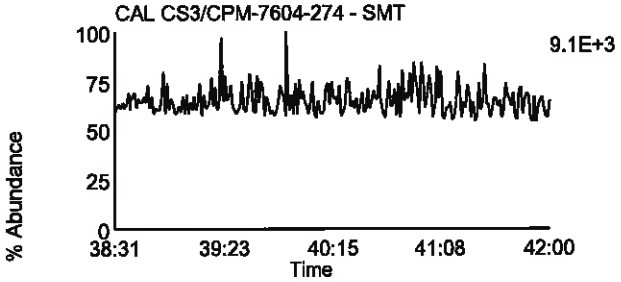
Data File: U130729B_09 G4 C7 - 419.822
CAL CS3/CPM-7604-274 - SMT



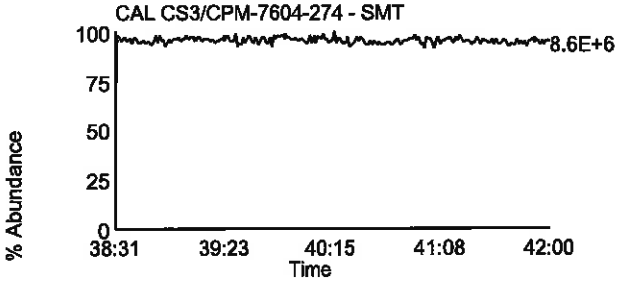
Data File: U130729B_09 G4 C12 - 437.814
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G4 C13 - 479.7165
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G4 C1 - 380.976
CAL CS3/CPM-7604-274 - SMT

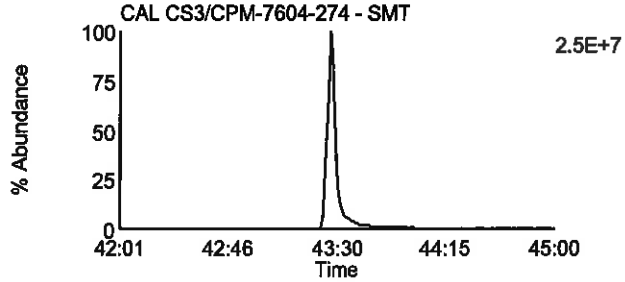


Homologue Group: Octas

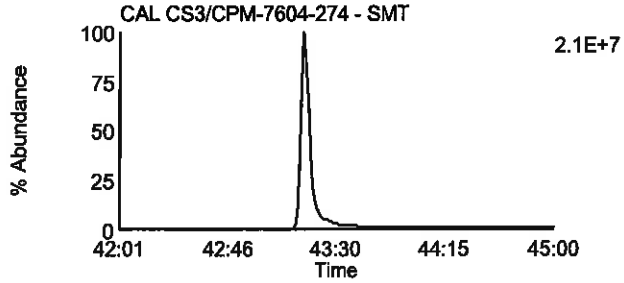
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID:
Instrument: 10MSHR06 (U)

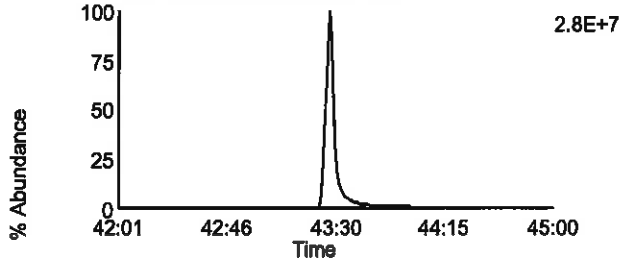
Data File: U130729B_09 G5 C4 - 441.7428
CAL CS3/CPM-7604-274 - SMT



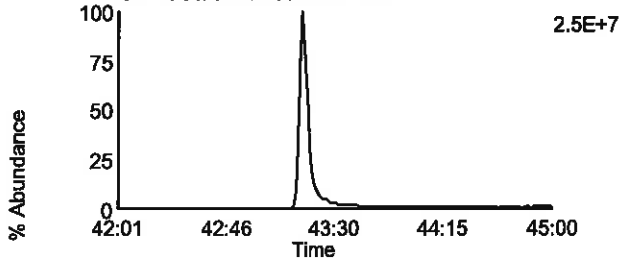
Data File: U130729B_09 G5 C8 - 457.7377
CAL CS3/CPM-7604-274 - SMT



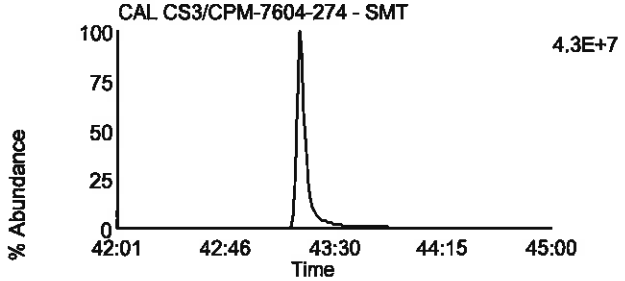
Data File: U130729B_09 G5 C5 - 443.7398
CAL CS3/CPM-7604-274 - SMT



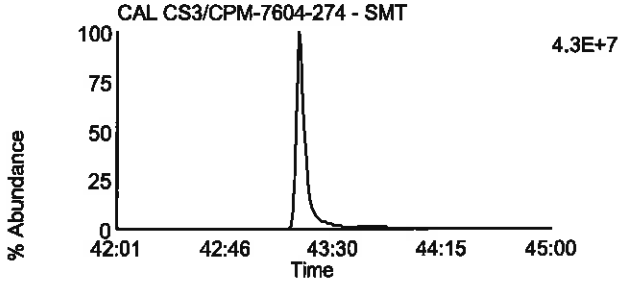
Data File: U130729B_09 G5 C9 - 459.7347
CAL CS3/CPM-7604-274 - SMT



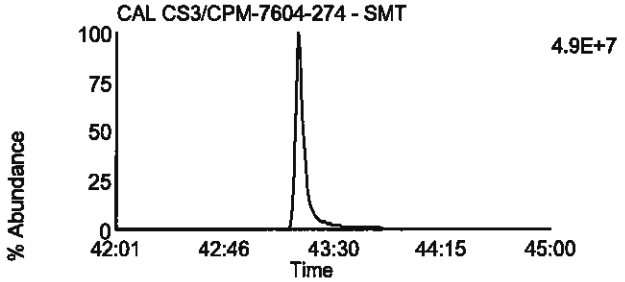
Data File: U130729B_09 G5 C11 - 469.7779
CAL CS3/CPM-7604-274 - SMT



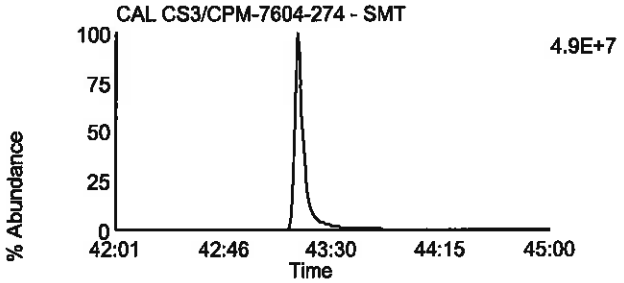
Data File: U130729B_09 G5 C11 - 469.7779
CAL CS3/CPM-7604-274 - SMT



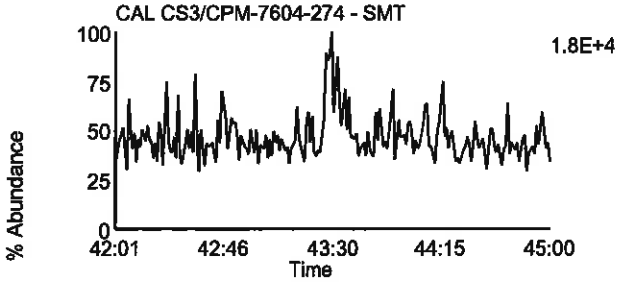
Data File: U130729B_09 G5 C12 - 471.7749
CAL CS3/CPM-7604-274 - SMT



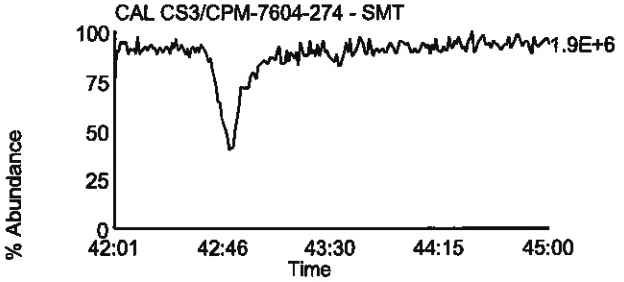
Data File: U130729B_09 G5 C12 - 471.7749
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G5 C13 - 513.6775
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G5 C2 - 430.9728
CAL CS3/CPM-7604-274 - SMT

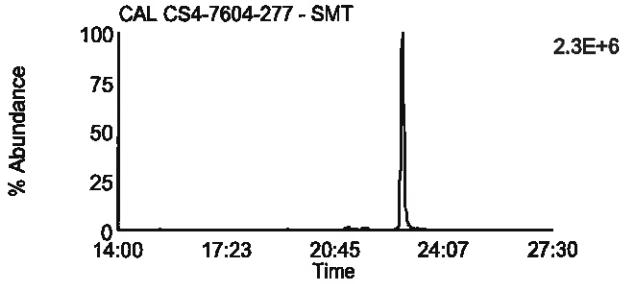


Homologue Group: Tetras

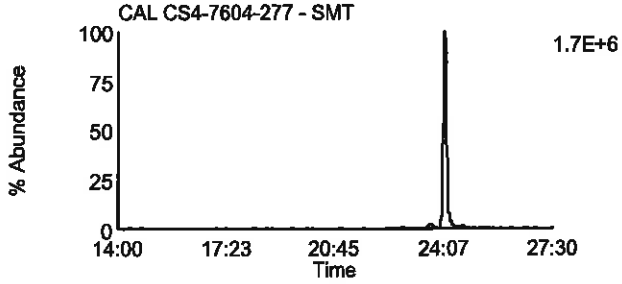
Data File Name: U130729B_13
Date Acquired: 7/30/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR06 (U)

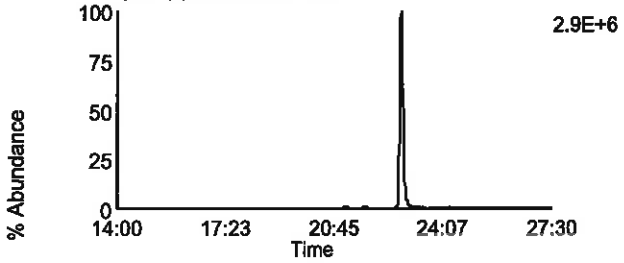
Data File: U130729B_13 G1 C1 - 303.9016
CAL CS4-7604-277 - SMT



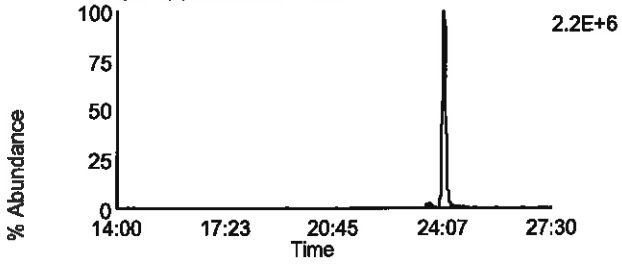
Data File: U130729B_13 G1 C7 - 319.8965
CAL CS4-7604-277 - SMT



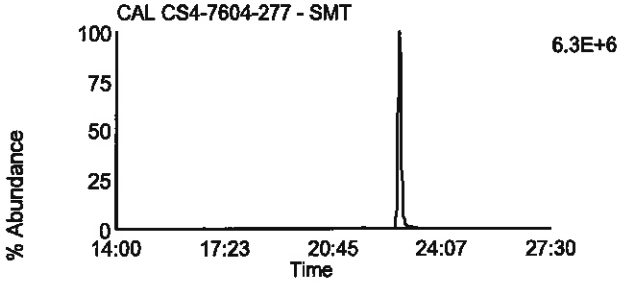
Data File: U130729B_13 G1 C2 - 305.8987
CAL CS4-7604-277 - SMT



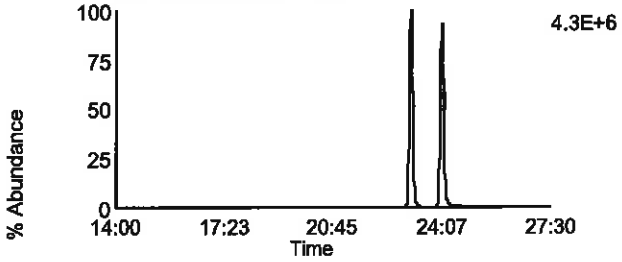
Data File: U130729B_13 G1 C8 - 321.8936
CAL CS4-7604-277 - SMT



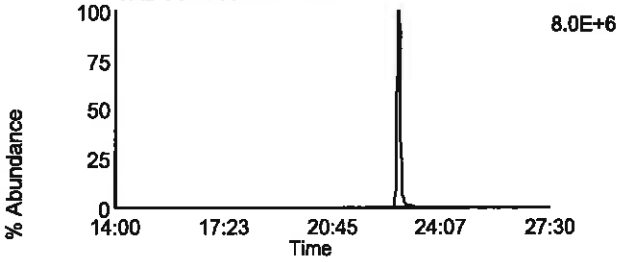
Data File: U130729B_13 G1 C3 - 315.9418
CAL CS4-7604-277 - SMT



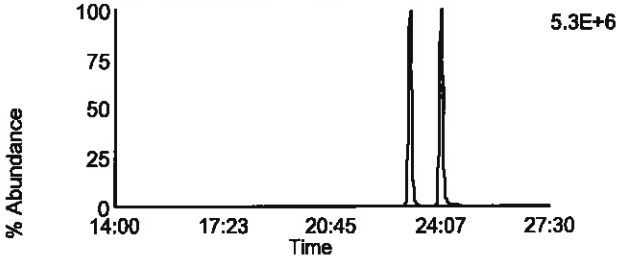
Data File: U130729B_13 G1 C10 - 331.9367
CAL CS4-7604-277 - SMT



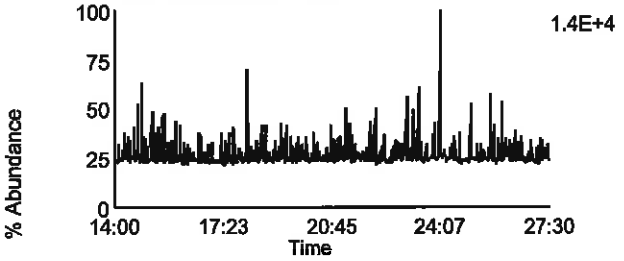
Data File: U130729B_13 G1 C4 - 317.9389
CAL CS4-7604-277 - SMT



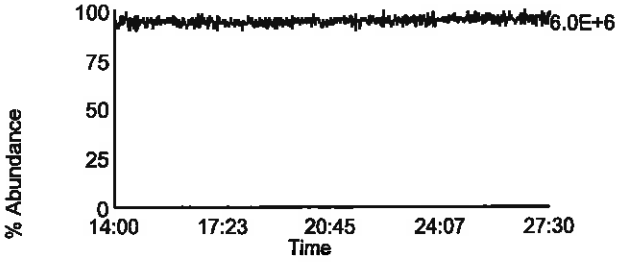
Data File: U130729B_13 G1 C11 - 333.9338
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G1 C14 - 375.8364
CAL CS4-7604-277 - SMT



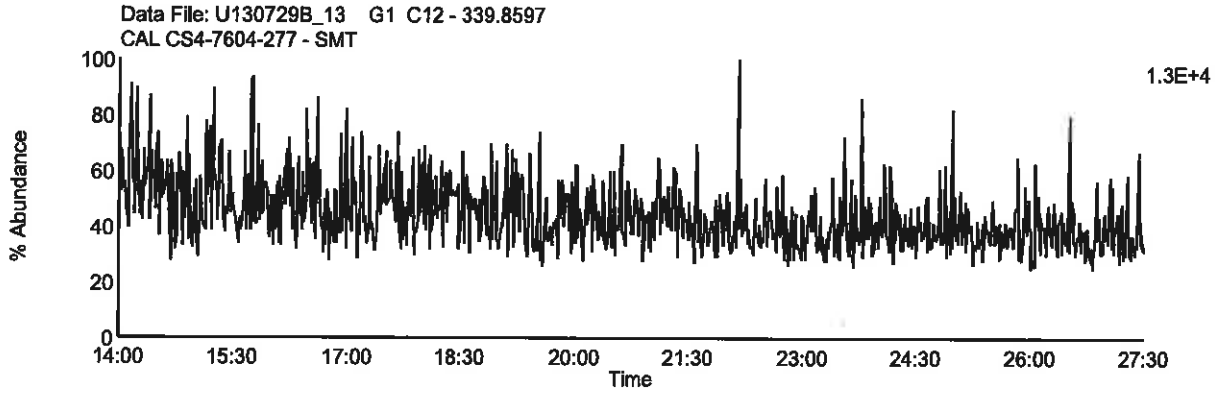
Data File: U130729B_13 G1 C5 - 318.9792
CAL CS4-7604-277 - SMT

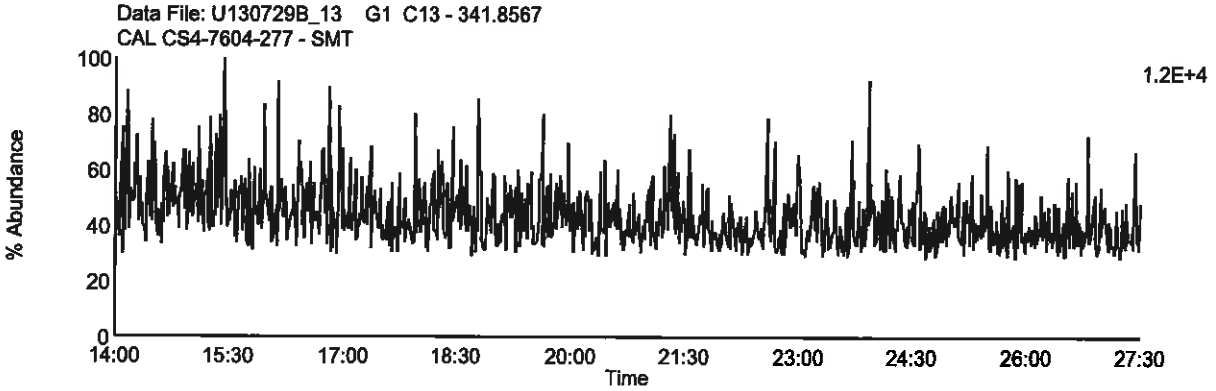


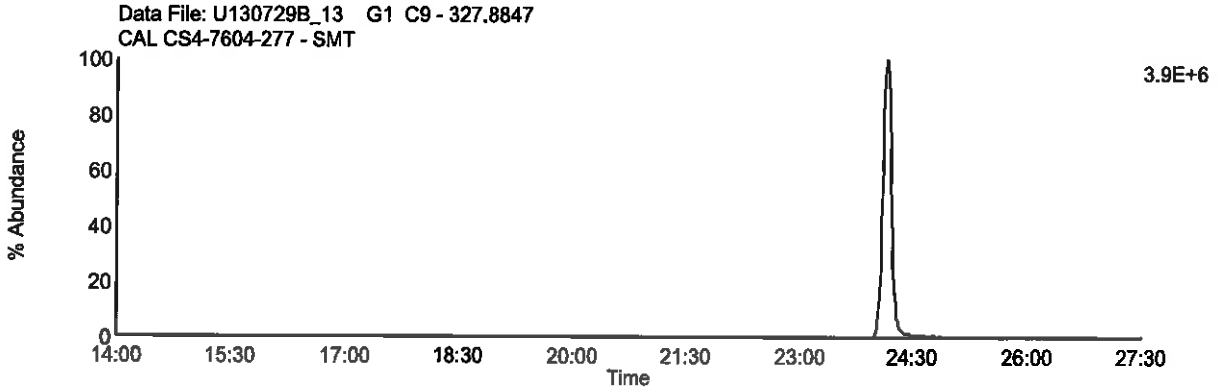
Homologue Group: Penta & Cleanup

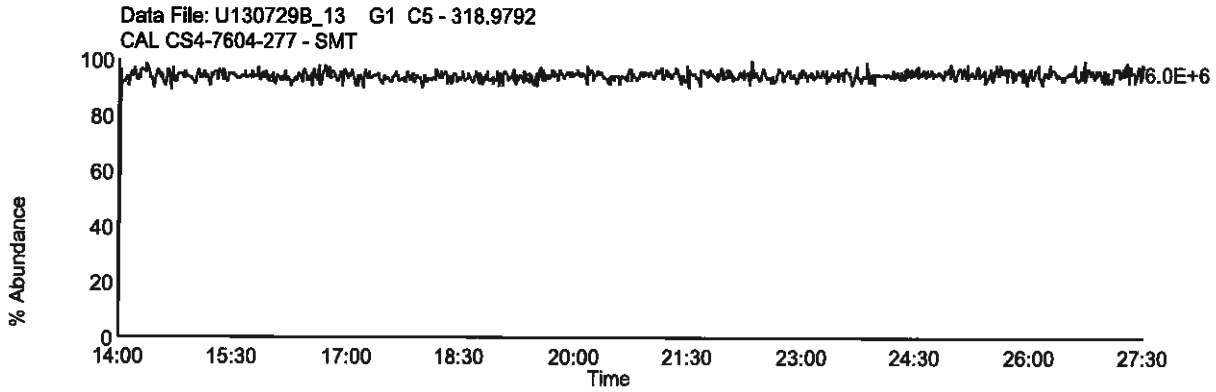
Data File Name: U130729B_13
Date Acquired: 7/30/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR06 (U)







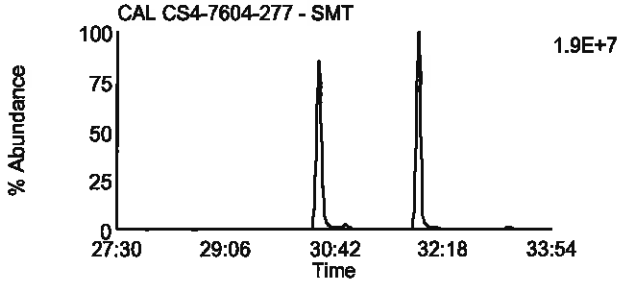


Homologue Group: Pentas

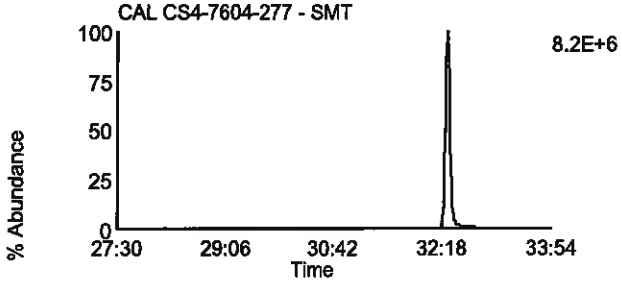
Data File Name: U130729B_13
Date Acquired: 7/30/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR06 (U)

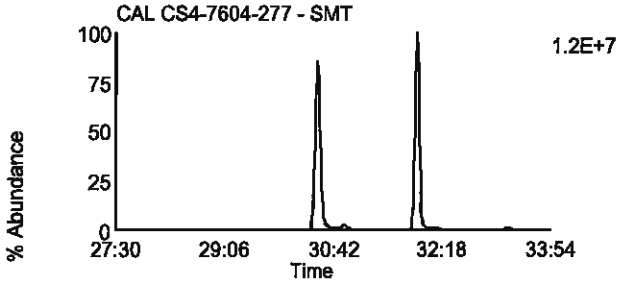
Data File: U130729B_13 G2 C1 - 339.8597
CAL CS4-7604-277 - SMT



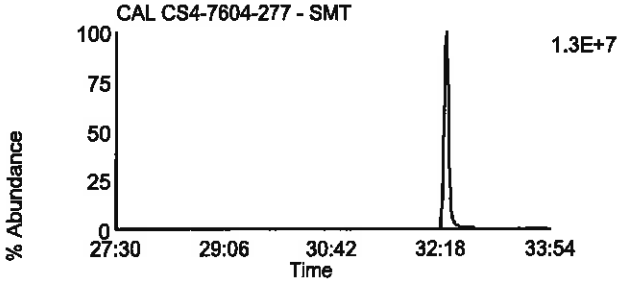
Data File: U130729B_13 G2 C4 - 353.8576
CAL CS4-7604-277 - SMT



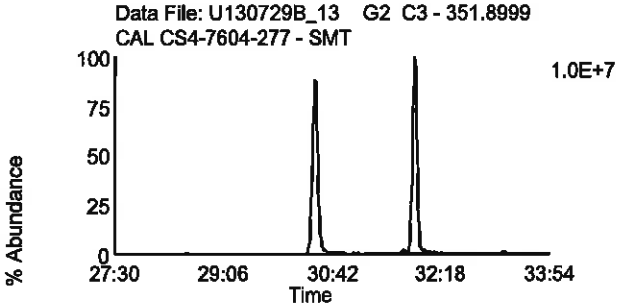
Data File: U130729B_13 G2 C2 - 341.8567
CAL CS4-7604-277 - SMT



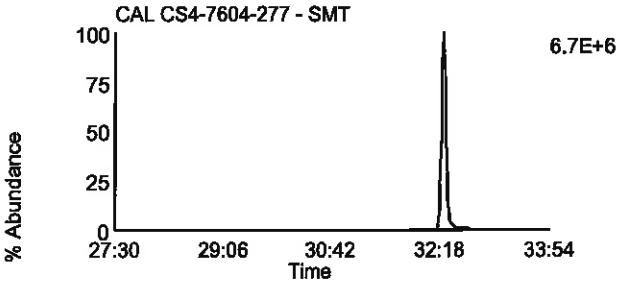
Data File: U130729B_13 G2 C8 - 355.8546
CAL CS4-7604-277 - SMT



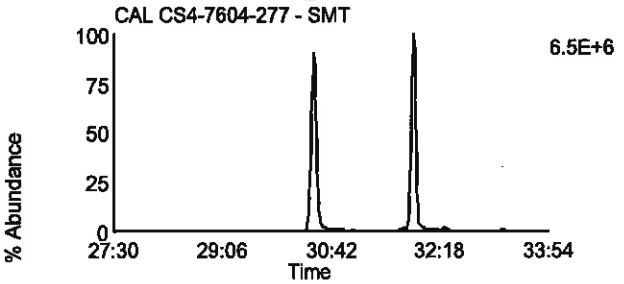
Data File: U130729B_13 G2 C3 - 351.8999
CAL CS4-7604-277 - SMT



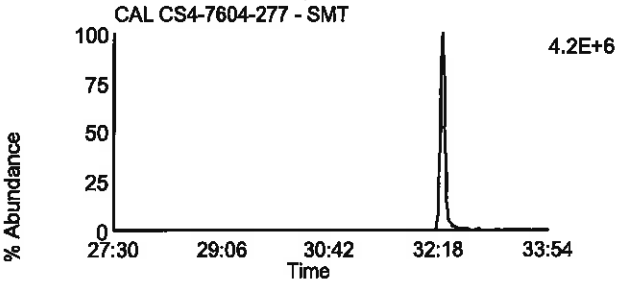
Data File: U130729B_13 G2 C10 - 367.8948
CAL CS4-7604-277 - SMT



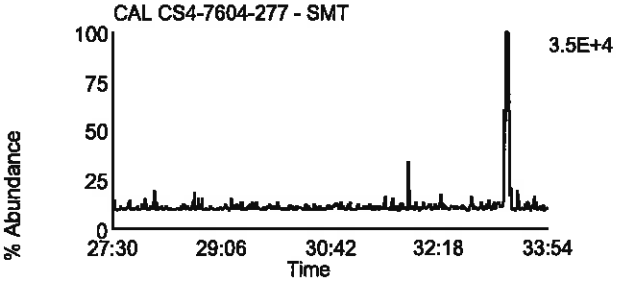
Data File: U130729B_13 G2 C5 - 353.8969
CAL CS4-7604-277 - SMT



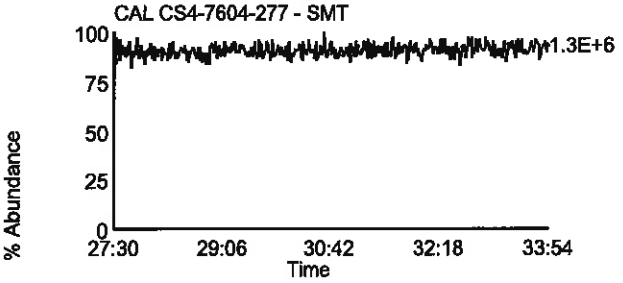
Data File: U130729B_13 G2 C11 - 369.8918
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G2 C12 - 409.7974
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G2 C6 - 354.9792
CAL CS4-7604-277 - SMT

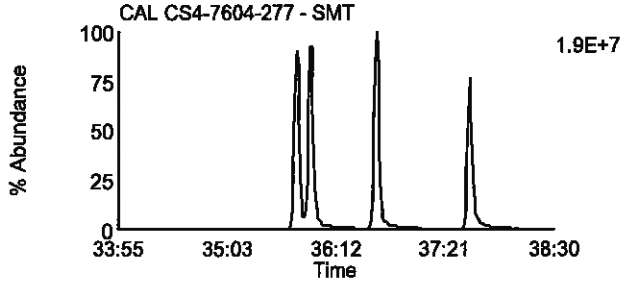


Homologue Group: Hexas

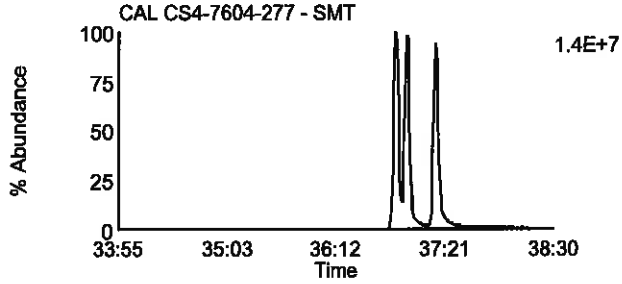
Data File Name: U130729B_13
Date Acquired: 7/30/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR06 (U)

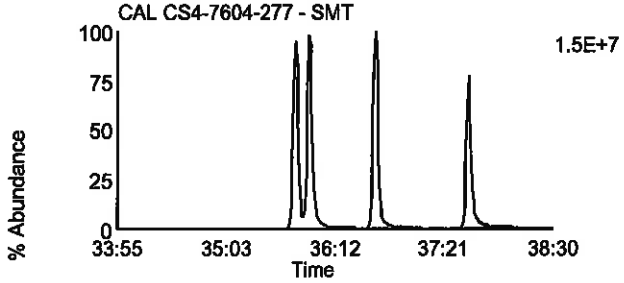
Data File: U130729B_13 G3 C1 - 373.8207
CAL CS4-7604-277 - SMT



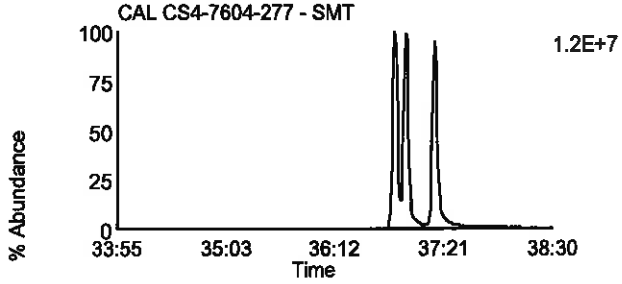
Data File: U130729B_13 G3 C7 - 389.8156
CAL CS4-7604-277 - SMT



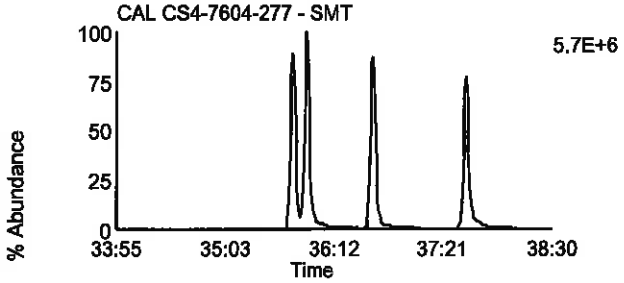
Data File: U130729B_13 G3 C2 - 375.8178
CAL CS4-7604-277 - SMT



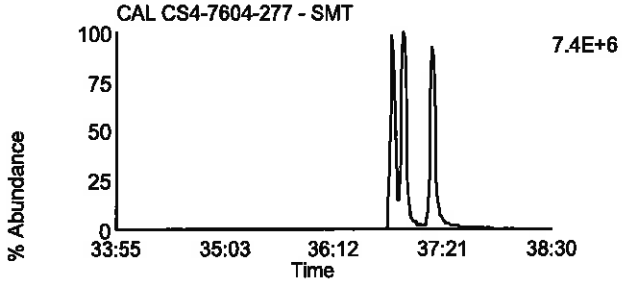
Data File: U130729B_13 G3 C8 - 391.8127
CAL CS4-7604-277 - SMT



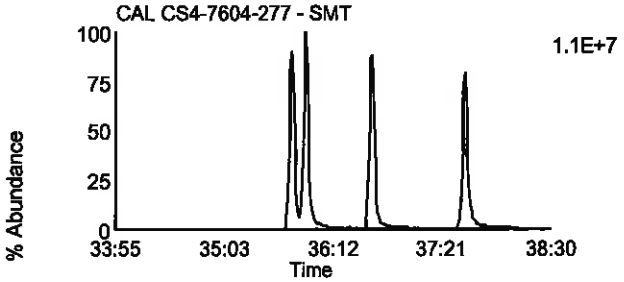
Data File: U130729B_13 G3 C5 - 383.8639
CAL CS4-7604-277 - SMT



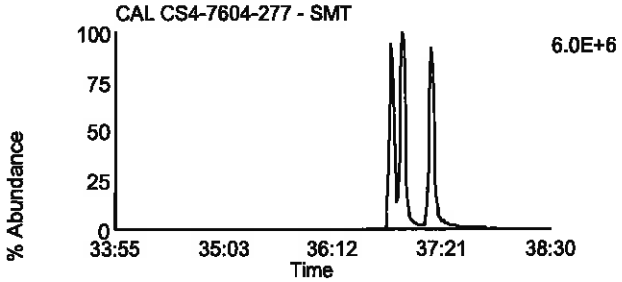
Data File: U130729B_13 G3 C9 - 401.8559
CAL CS4-7604-277 - SMT



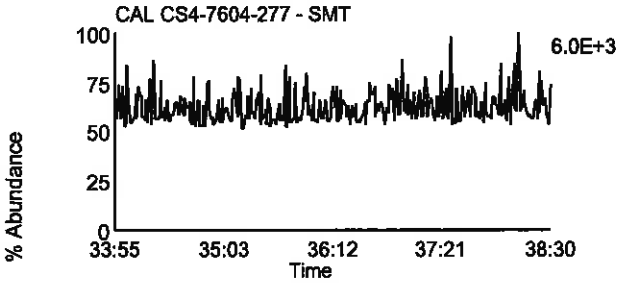
Data File: U130729B_13 G3 C6 - 385.861
CAL CS4-7604-277 - SMT



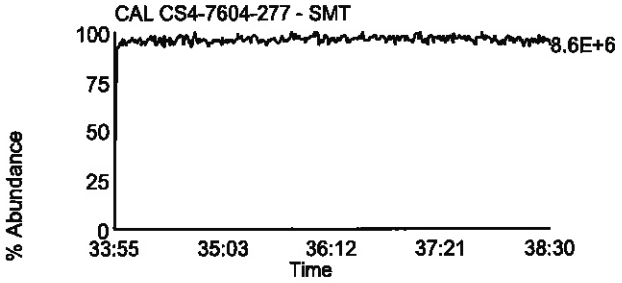
Data File: U130729B_13 G3 C10 - 403.8529
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G3 C11 - 445.7555
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G3 C3 - 380.976
CAL CS4-7604-277 - SMT

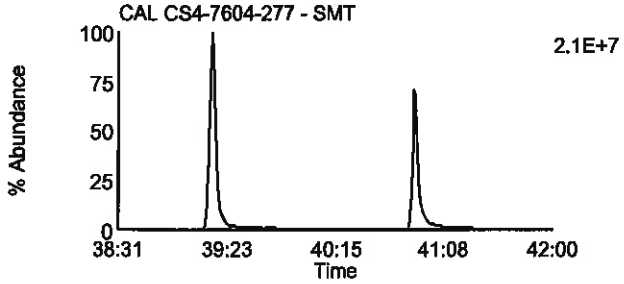


Homologue Group: Heptas

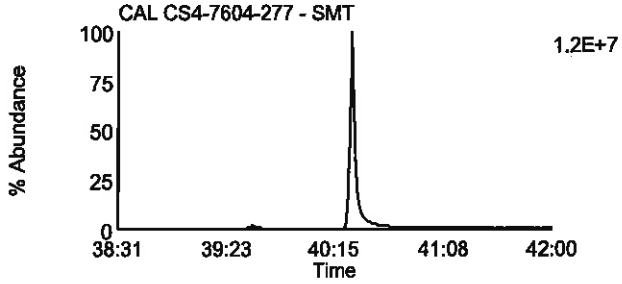
Data File Name: U130729B_13
Date Acquired: 7/30/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR06 (U)

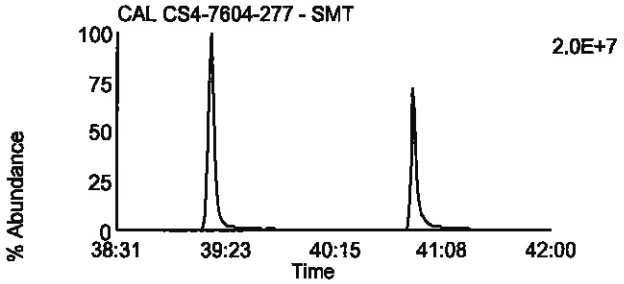
Data File: U130729B_13 G4 C3 - 407.7818
CAL CS4-7604-277 - SMT



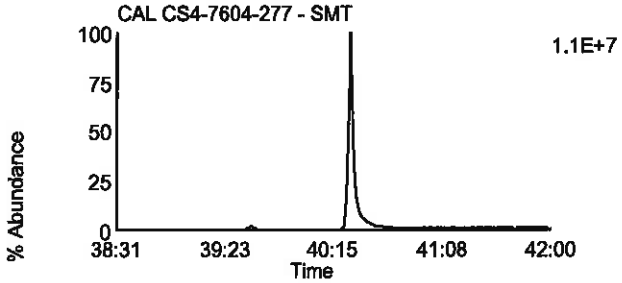
Data File: U130729B_13 G4 C8 - 423.7767
CAL CS4-7604-277 - SMT



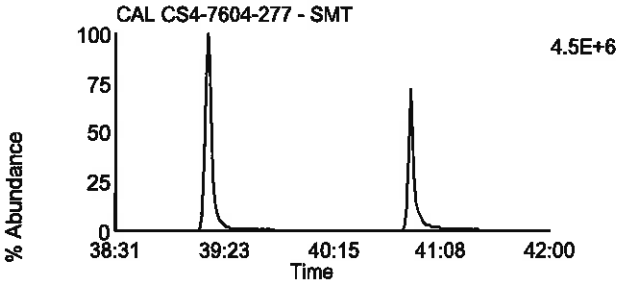
Data File: U130729B_13 G4 C4 - 409.7788
CAL CS4-7604-277 - SMT



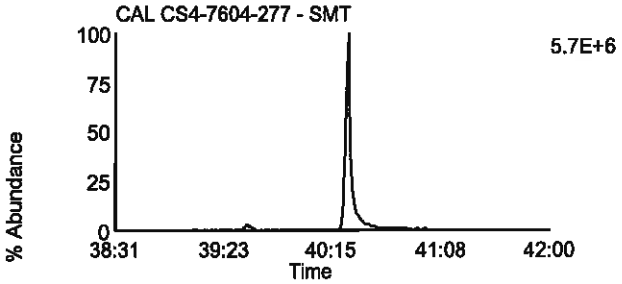
Data File: U130729B_13 G4 C9 - 425.7737
CAL CS4-7604-277 - SMT



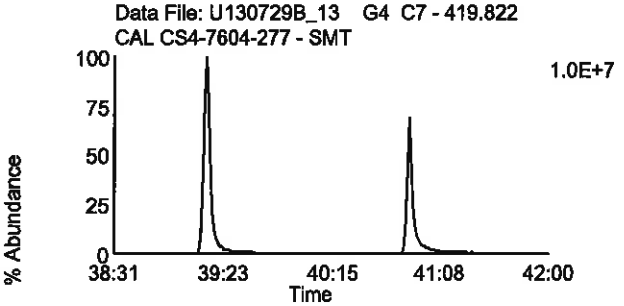
Data File: U130729B_13 G4 C6 - 417.825
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G4 C11 - 435.8169
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G4 C7 - 419.822
CAL CS4-7604-277 - SMT



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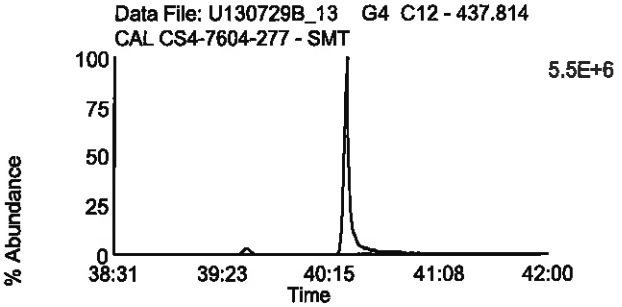
CAL CS4-7604-277 - SMT



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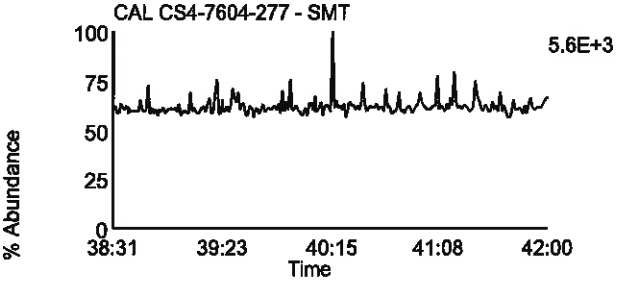
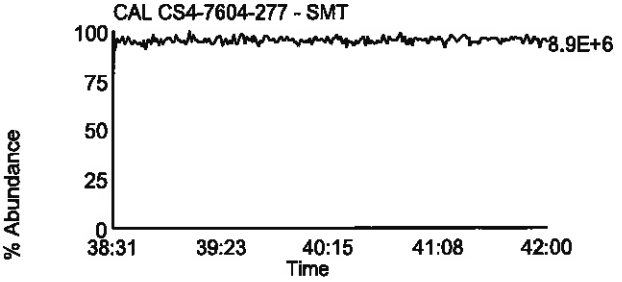
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G4 C1 - 380.976
CAL CS4-7604-277 - SMT

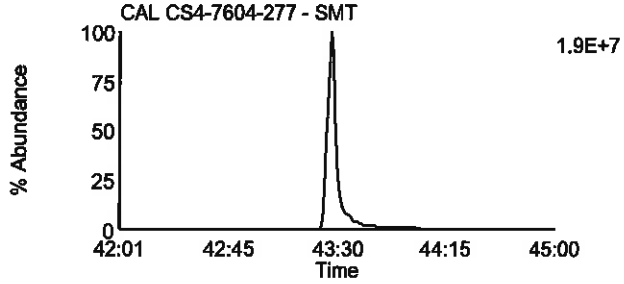


Homologue Group: Octas

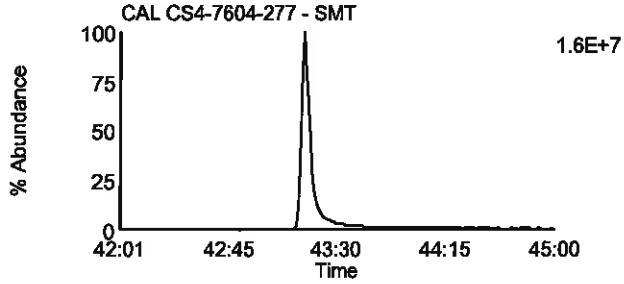
Data File Name: U130729B_13
Date Acquired: 7/30/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR06 (U)

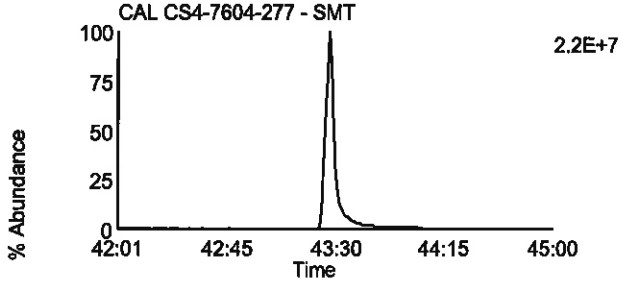
Data File: U130729B_13 G5 C4 - 441.7428
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G5 C8 - 457.7377
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G5 C5 - 443.7398
CAL CS4-7604-277 - SMT



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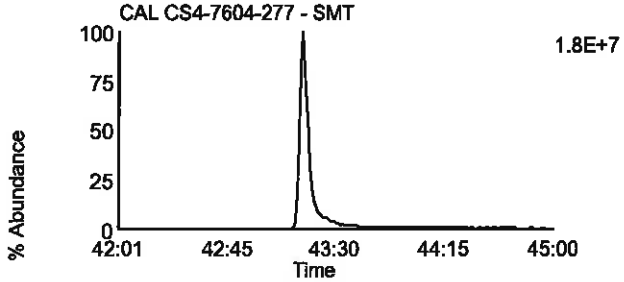
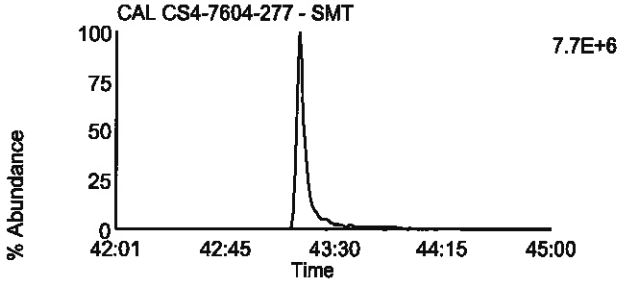
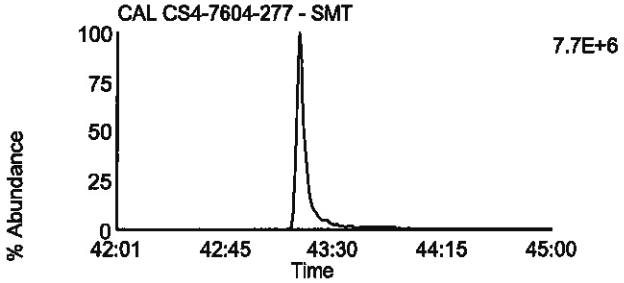
CAL CS4-7604-277 - SMT



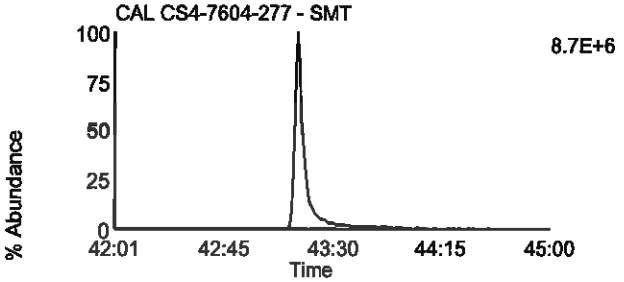
Data File: U130729B_13 G5 C11 - 469.7779
CAL CS4-7604-277 - SMT



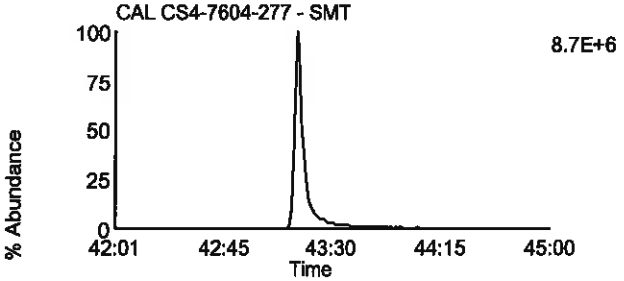
Data File: U130729B_13 G5 C11 - 469.7779
CAL CS4-7604-277 - SMT



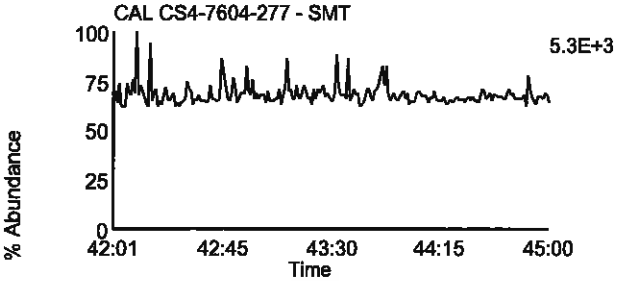
Data File: U130729B_13 G5 C12 - 471.7749
CAL CS4-7604-277 - SMT



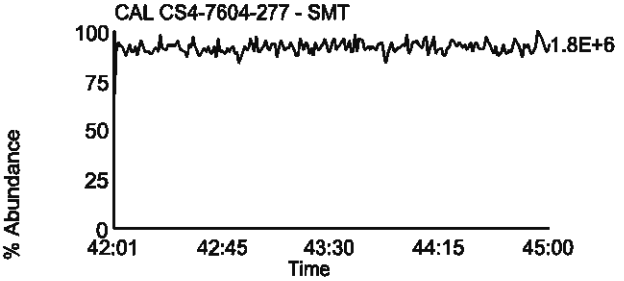
Data File: U130729B_13 G5 C12 - 471.7749
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G5 C13 - 513.6775
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G5 C2 - 430.9728
CAL CS4-7604-277 - SMT

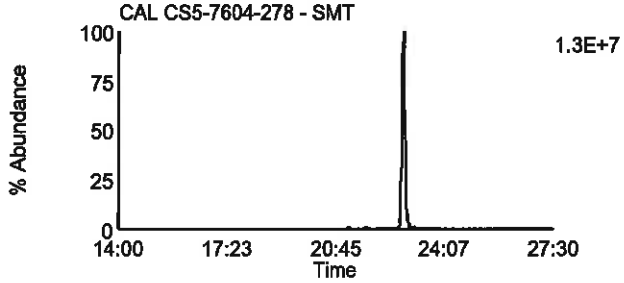


Homologue Group: Tetras

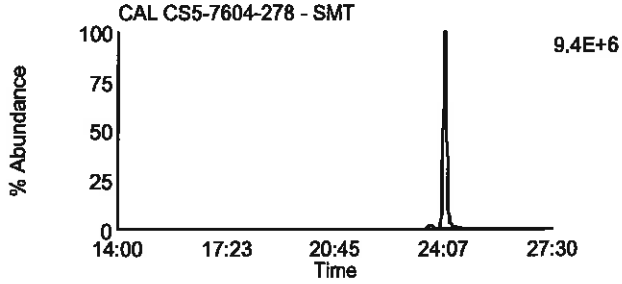
Data File Name: U130729B_12
Date Acquired: 7/30/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR06 (U)

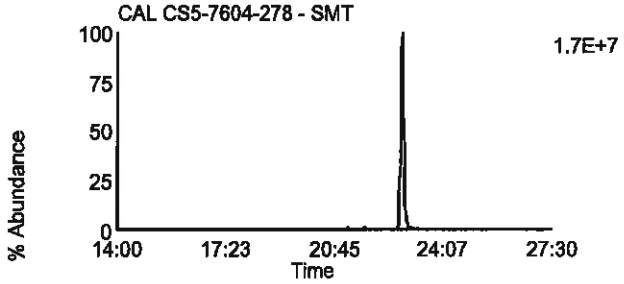
Data File: U130729B_12 G1 C1 - 303.9016
CAL CS5-7604-278 - SMT



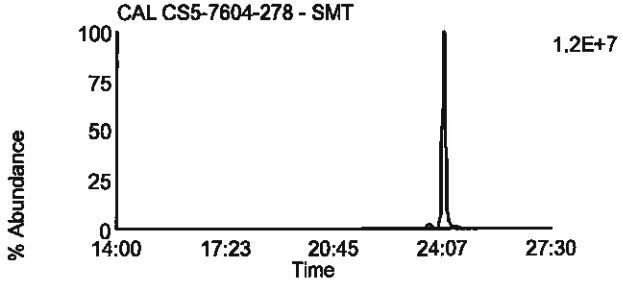
Data File: U130729B_12 G1 C7 - 319.8965
CAL CS5-7604-278 - SMT



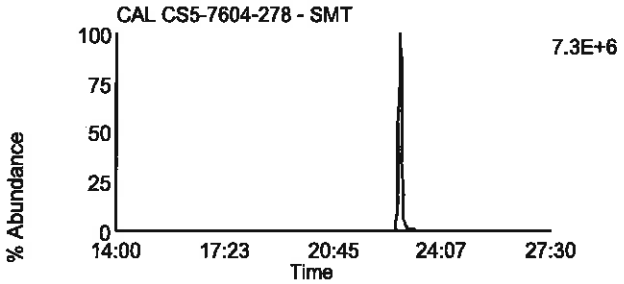
Data File: U130729B_12 G1 C2 - 305.8987
CAL CS5-7604-278 - SMT



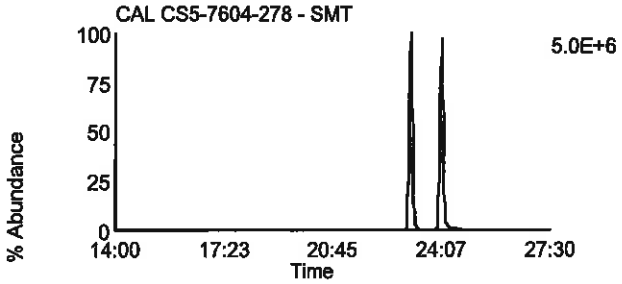
Data File: U130729B_12 G1 C8 - 321.8936
CAL CS5-7604-278 - SMT



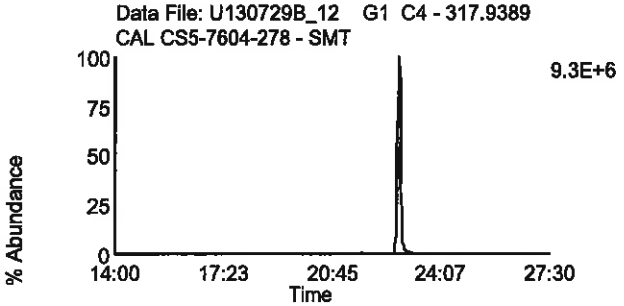
Data File: U130729B_12 G1 C3 - 315.9418
CAL CS5-7604-278 - SMT



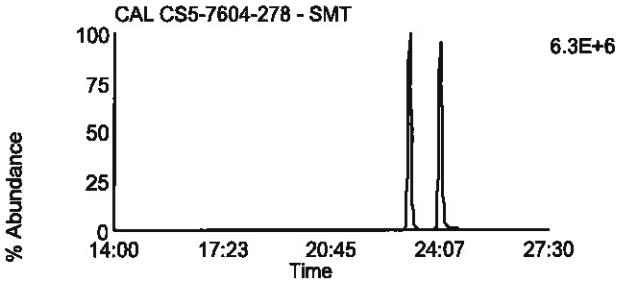
Data File: U130729B_12 G1 C10 - 331.9367
CAL CS5-7604-278 - SMT



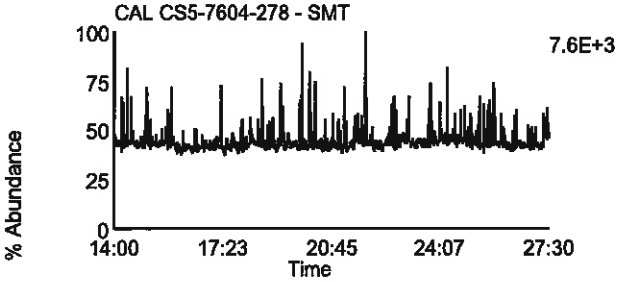
Data File: U130729B_12 G1 C4 - 317.9389
CAL CS5-7604-278 - SMT



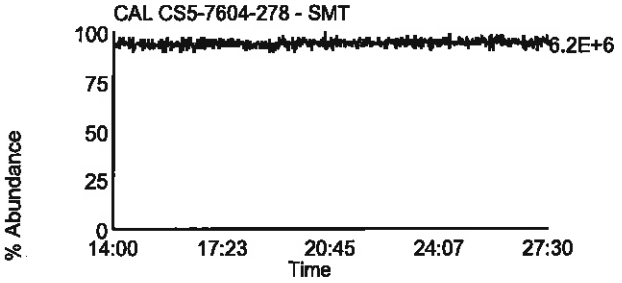
Data File: U130729B_12 G1 C11 - 333.9338
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G1 C14 - 375.8364
CAL CS5-7604-278 - SMT

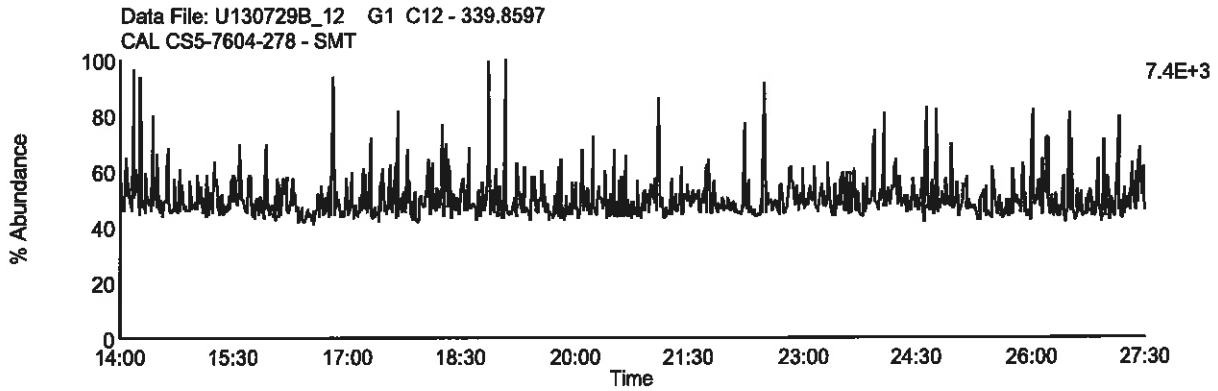


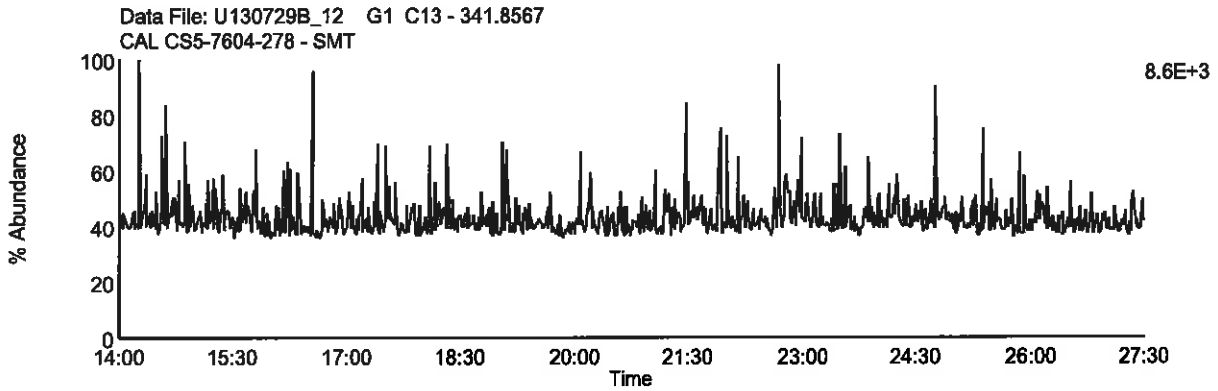
Data File: U130729B_12 G1 C5 - 318.9792
CAL CS5-7604-278 - SMT

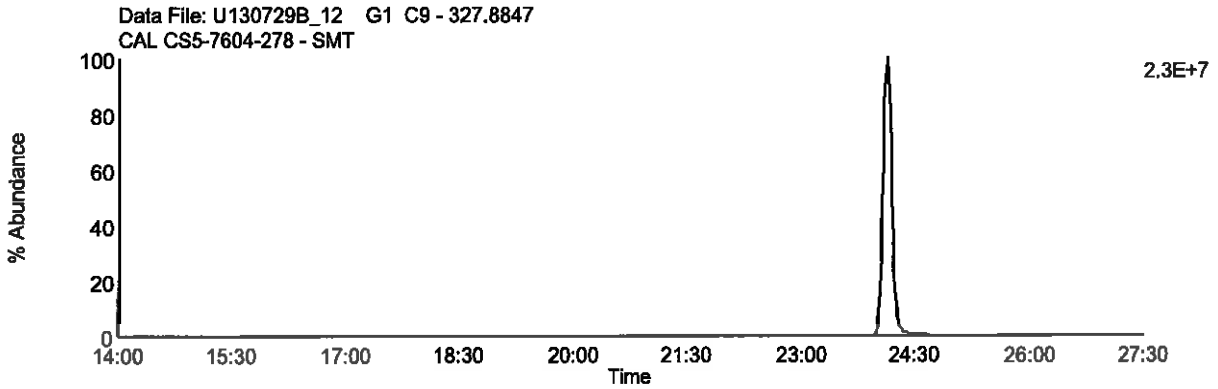


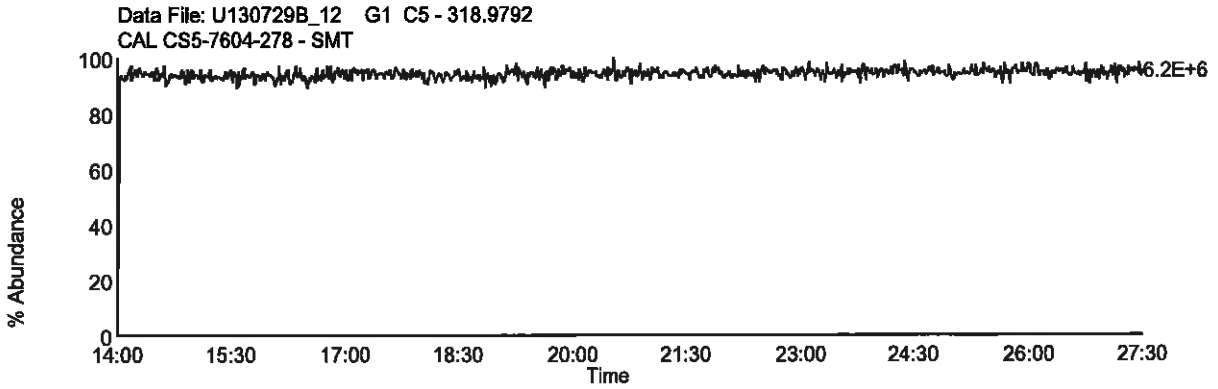
Homologue Group: Penta & Cleanup

Data File Name: U130729B_12	Lab Sample ID: CS5-7604-278
Date Acquired: 7/30/2013	Client Sample ID:
Sample Description: CAL CS5-7604-278 - SMT	Instrument: 10MSHR06 (U)







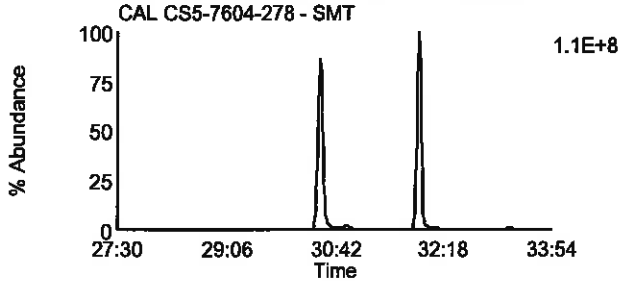


Homologue Group: Pentas

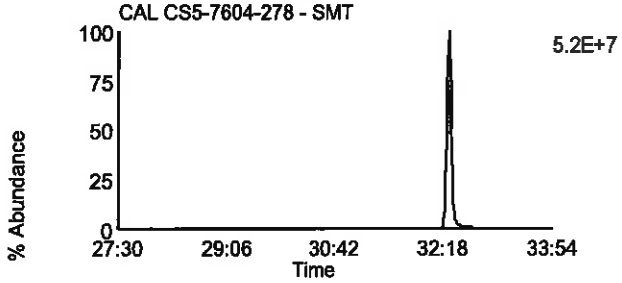
Data File Name: U130729B_12
Date Acquired: 7/30/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR06 (U)

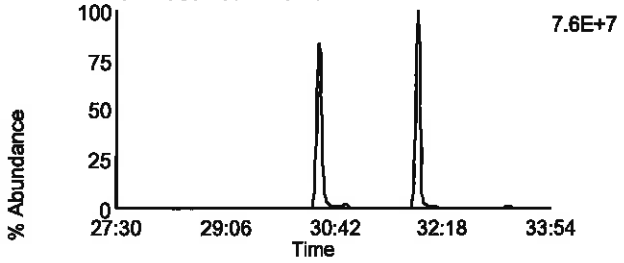
Data File: U130729B_12 G2 C1 - 339.8597
CAL CS5-7604-278 - SMT



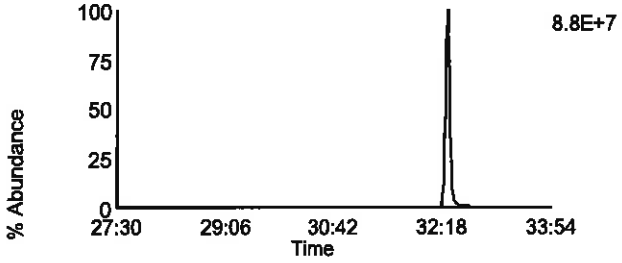
Data File: U130729B_12 G2 C4 - 353.8576
CAL CS5-7604-278 - SMT



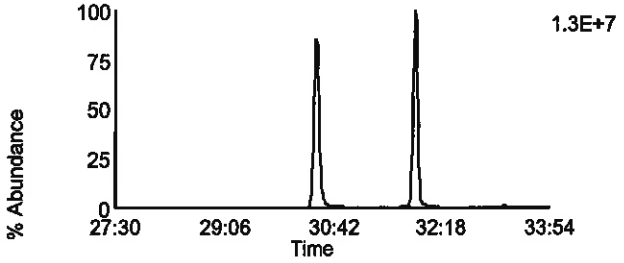
Data File: U130729B_12 G2 C2 - 341.8567
CAL CS5-7604-278 - SMT



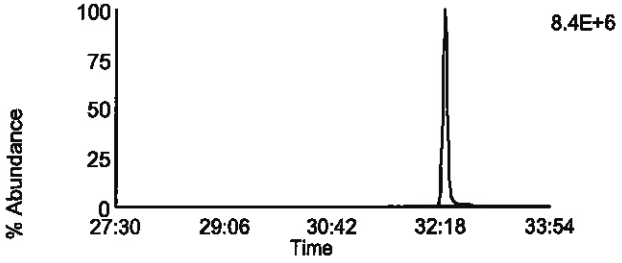
Data File: U130729B_12 G2 C8 - 355.8546
CAL CS5-7604-278 - SMT



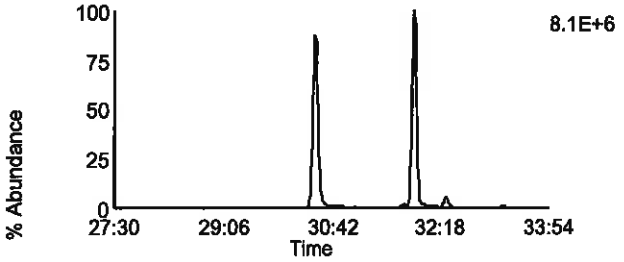
Data File: U130729B_12 G2 C3 - 351.8999
CAL CS5-7604-278 - SMT



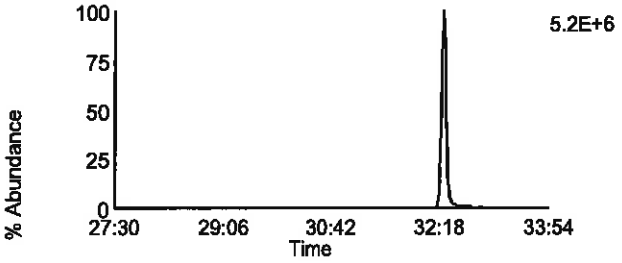
Data File: U130729B_12 G2 C10 - 367.8948
CAL CS5-7604-278 - SMT



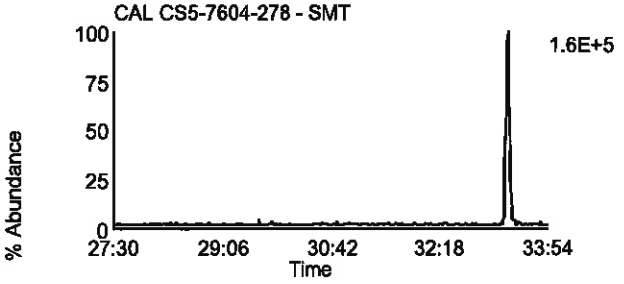
Data File: U130729B_12 G2 C5 - 353.8969
CAL CS5-7604-278 - SMT



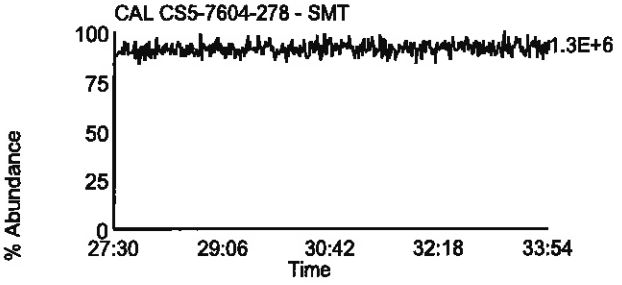
Data File: U130729B_12 G2 C11 - 369.8918
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G2 C12 - 409.7974
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G2 C6 - 354.9792
CAL CS5-7604-278 - SMT

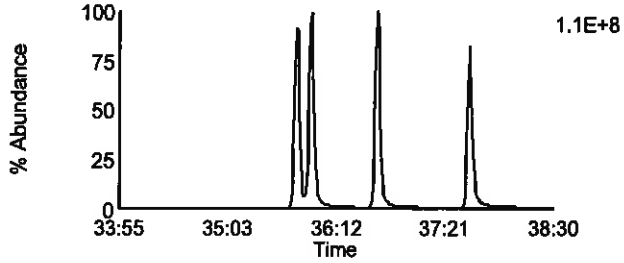


Homologue Group: Hexas

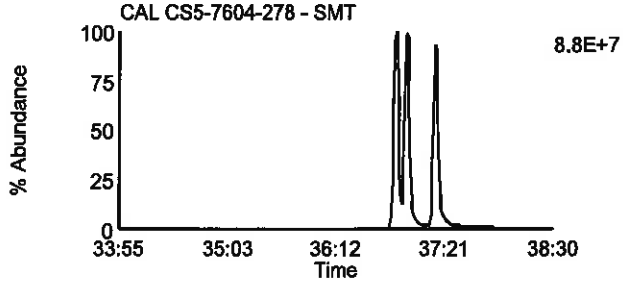
Data File Name: U130729B_12
Date Acquired: 7/30/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR06 (U)

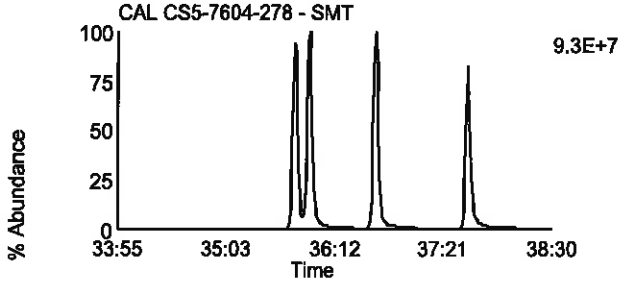
Data File: U130729B_12 G3 C1 - 373.8207
CAL CS5-7604-278 - SMT



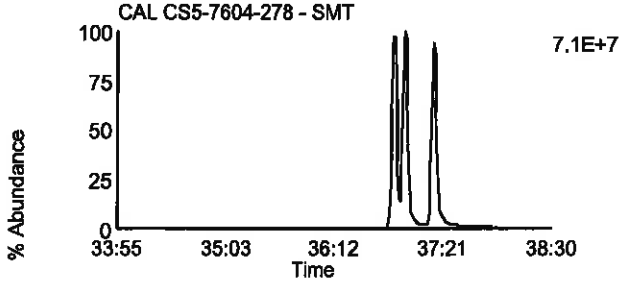
Data File: U130729B_12 G3 C7 - 389.8156
CAL CS5-7604-278 - SMT



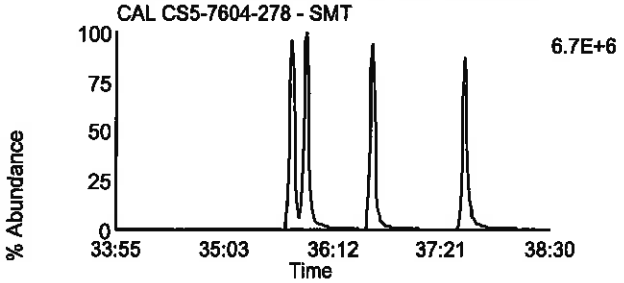
Data File: U130729B_12 G3 C2 - 375.8178
CAL CS5-7604-278 - SMT



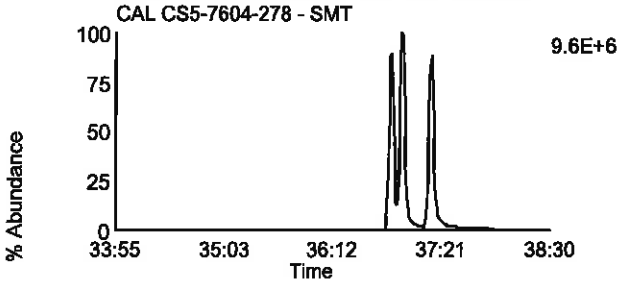
Data File: U130729B_12 G3 C8 - 391.8127
CAL CS5-7604-278 - SMT



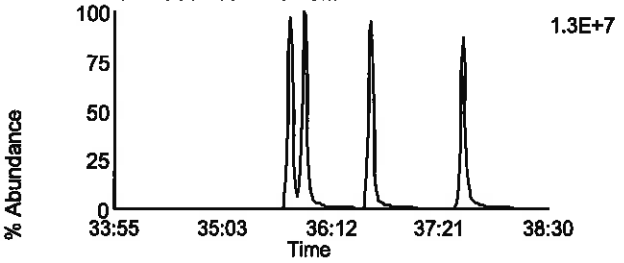
Data File: U130729B_12 G3 C5 - 383.8639
CAL CS5-7604-278 - SMT



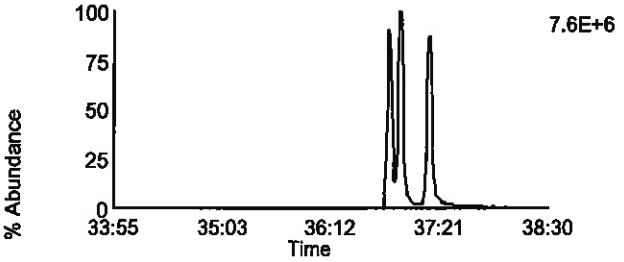
Data File: U130729B_12 G3 C9 - 401.8559
CAL CS5-7604-278 - SMT



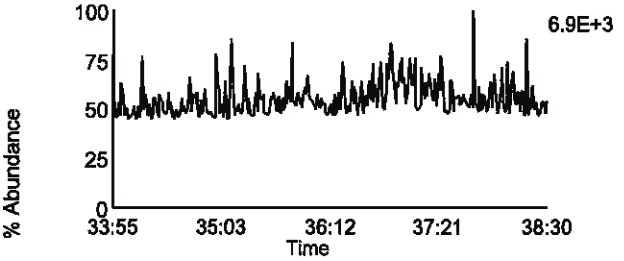
Data File: U130729B_12 G3 C6 - 385.861
CAL CS5-7604-278 - SMT



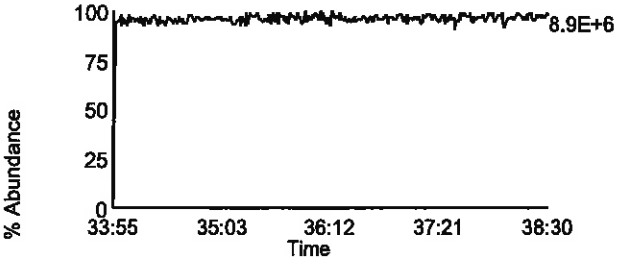
Data File: U130729B_12 G3 C10 - 403.8529
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G3 C11 - 445.7555
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G3 C3 - 380.976
CAL CS5-7604-278 - SMT

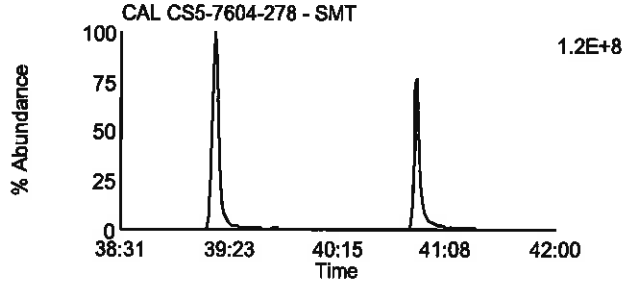


Homologue Group: Heptas

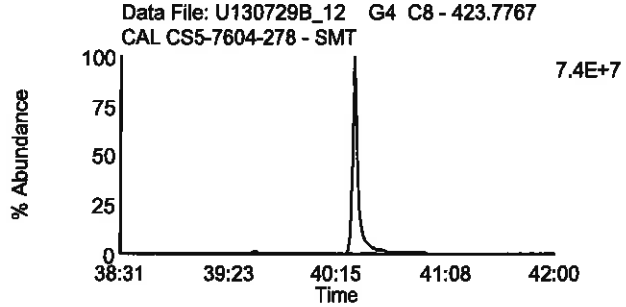
Data File Name: U130729B_12
Date Acquired: 7/30/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR06 (U)

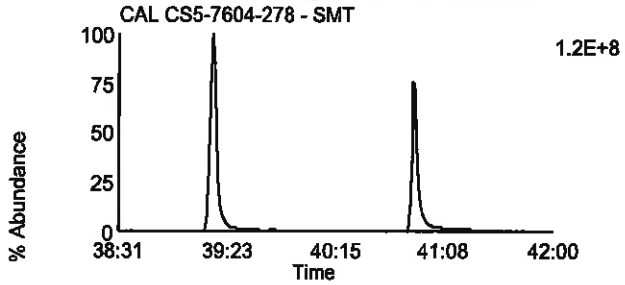
Data File: U130729B_12 G4 C3 - 407.7818
CAL CS5-7604-278 - SMT



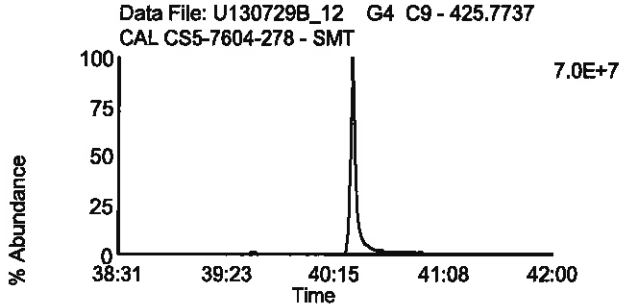
Data File: U130729B_12 G4 C8 - 423.7767
CAL CS5-7604-278 - SMT



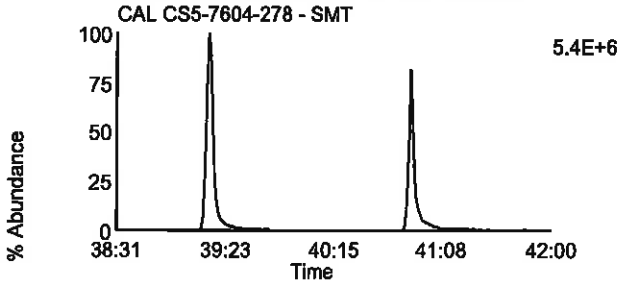
Data File: U130729B_12 G4 C4 - 409.7788
CAL CS5-7604-278 - SMT



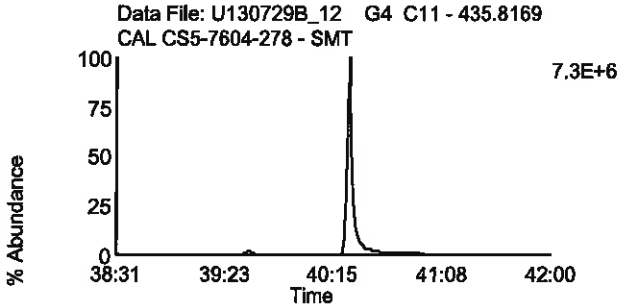
Data File: U130729B_12 G4 C9 - 425.7737
CAL CS5-7604-278 - SMT



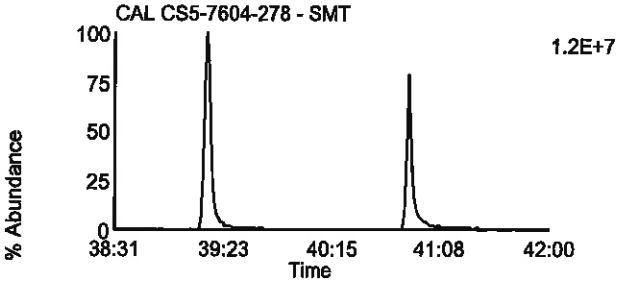
Data File: U130729B_12 G4 C6 - 417.825
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G4 C11 - 435.8169
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G4 C7 - 419.822
CAL CS5-7604-278 - SMT



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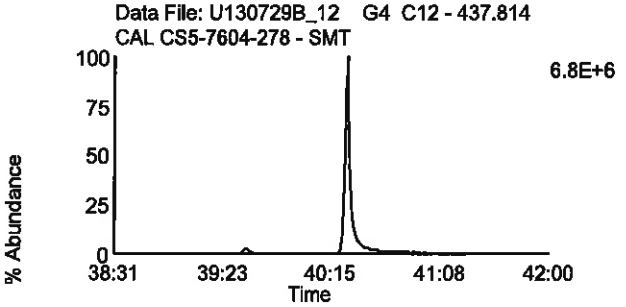
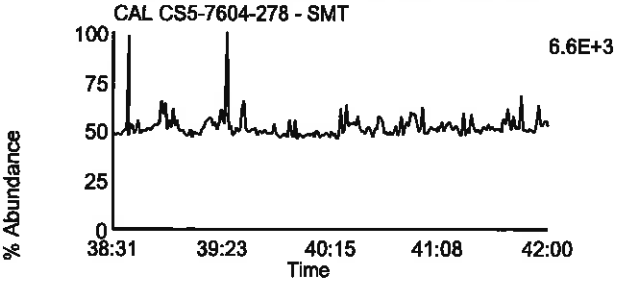
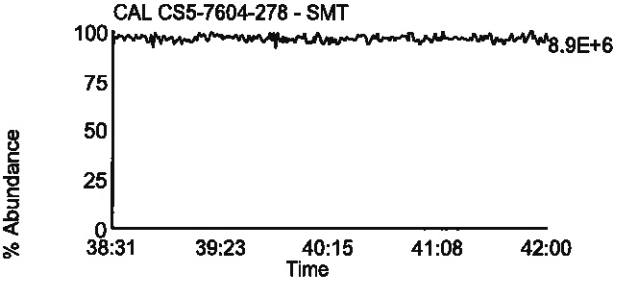
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G4 C13 - 479.7165
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G4 C1 - 380.976
CAL CS5-7604-278 - SMT

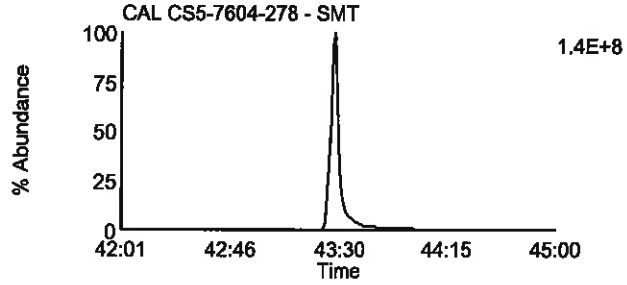


Homologue Group: Octas

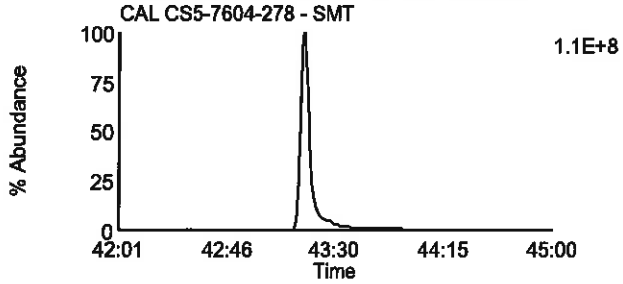
Data File Name: U130729B_12
Date Acquired: 7/30/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR06 (U)

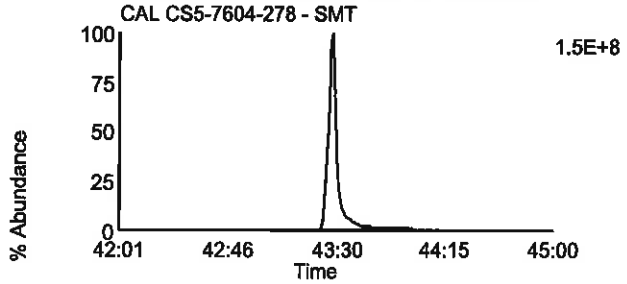
Data File: U130729B_12 G5 C4 - 441.7428
CAL CS5-7604-278 - SMT



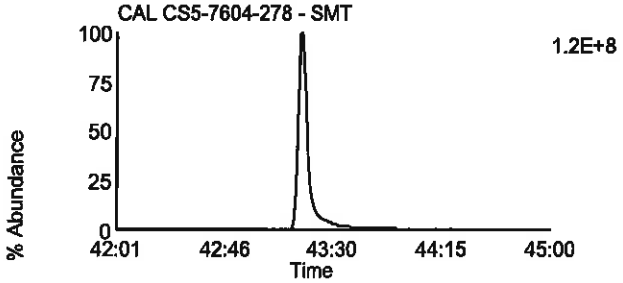
Data File: U130729B_12 G5 C8 - 457.7377
CAL CS5-7604-278 - SMT



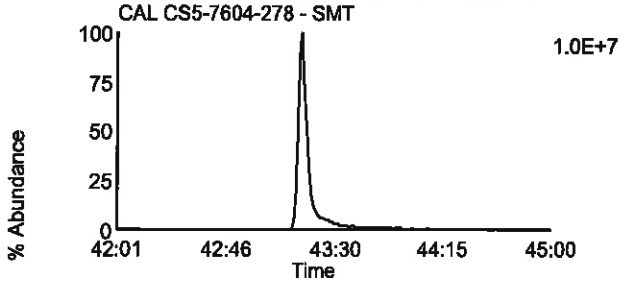
Data File: U130729B_12 G5 C5 - 443.7398
CAL CS5-7604-278 - SMT



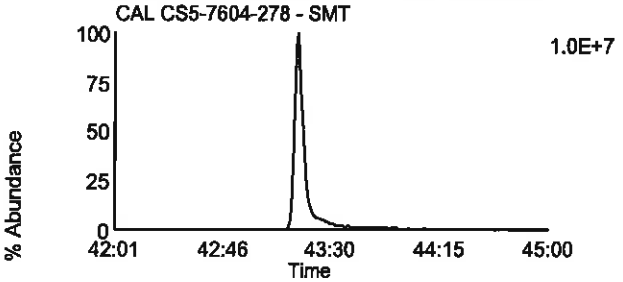
Data File: U130729B_12 G5 C9 - 459.7347
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G5 C11 - 469.7779
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G5 C11 - 469.7779
CAL CS5-7604-278 - SMT



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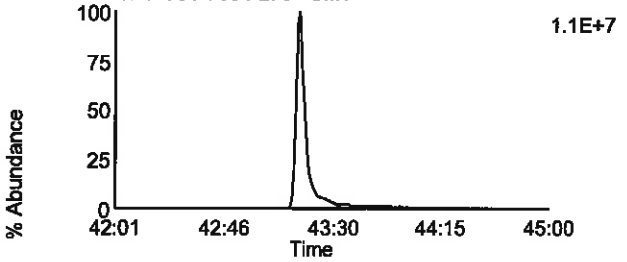
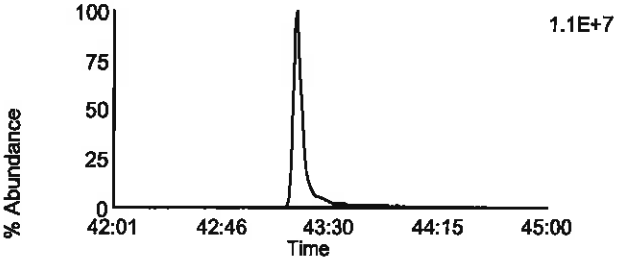
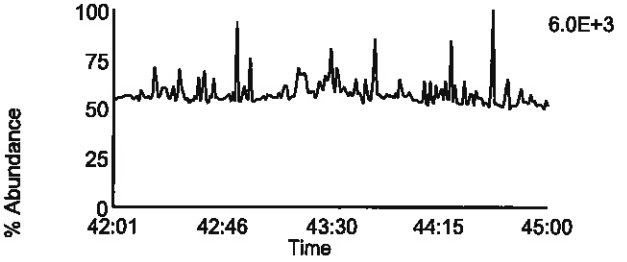
CAL CS5-7604-278 - SMT



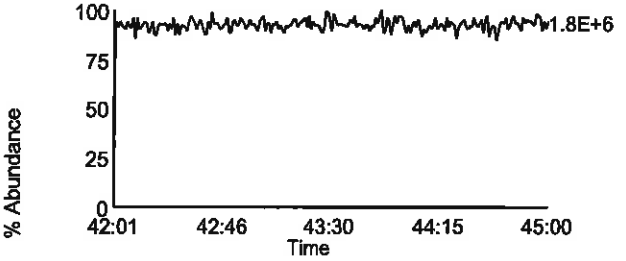
Data File: U130729B_12 G5 C12 - 471.7749
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G5 C13 - 513.6775
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G5 C2 - 430.9728
CAL CS5-7604-278 - SMT

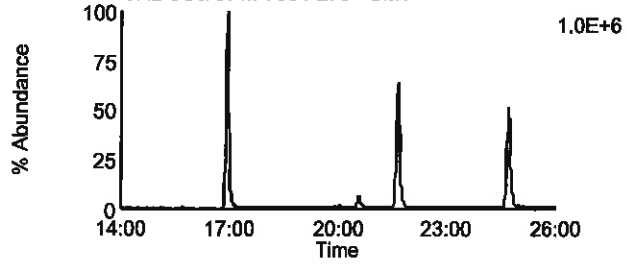


Homologue Group: Tetras

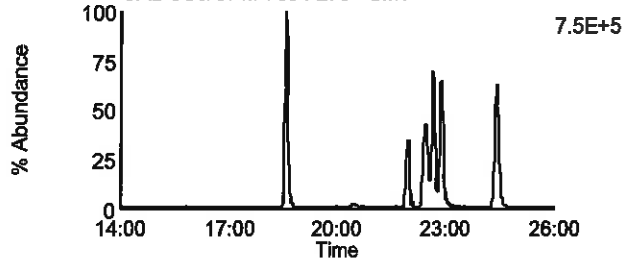
Data File Name: U130917A_06
Date Acquired: 9/17/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

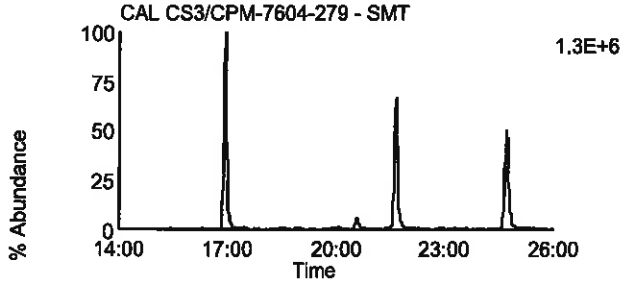
Data File: U130917A_06 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - SMT



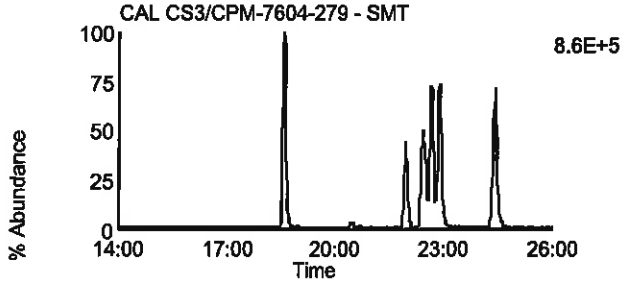
Data File: U130917A_06 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - SMT



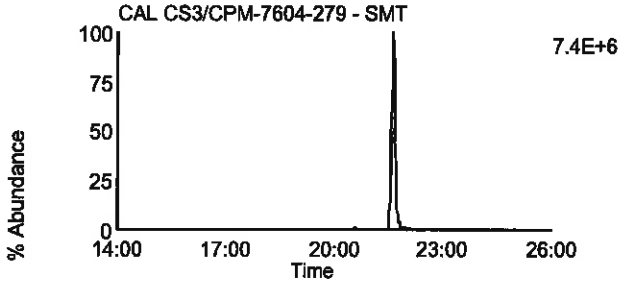
Data File: U130917A_06 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - SMT



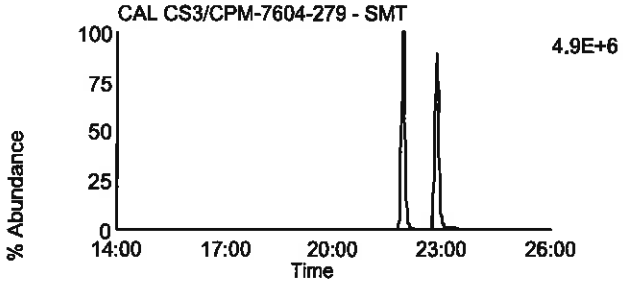
Data File: U130917A_06 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - SMT



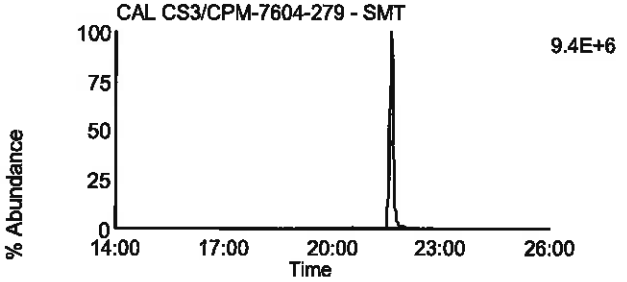
Data File: U130917A_06 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - SMT



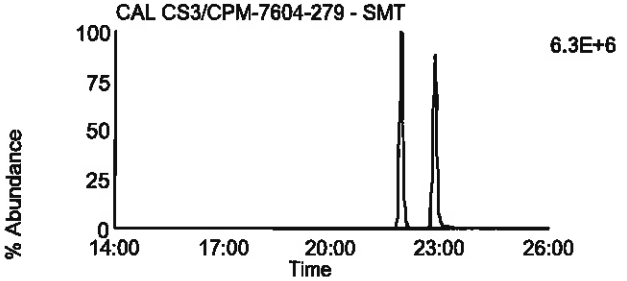
Data File: U130917A_06 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - SMT



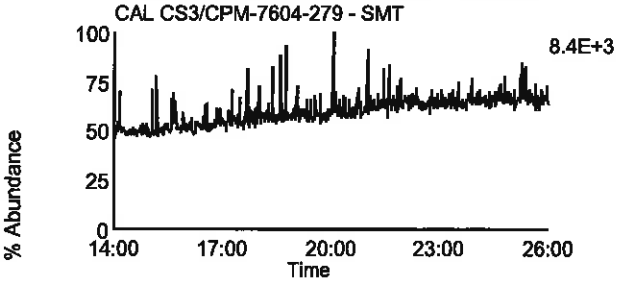
Data File: U130917A_06 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - SMT



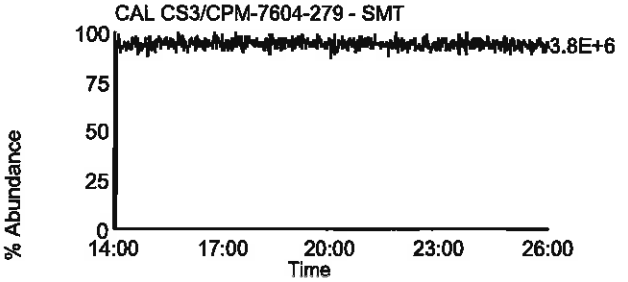
Data File: U130917A_06 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - SMT



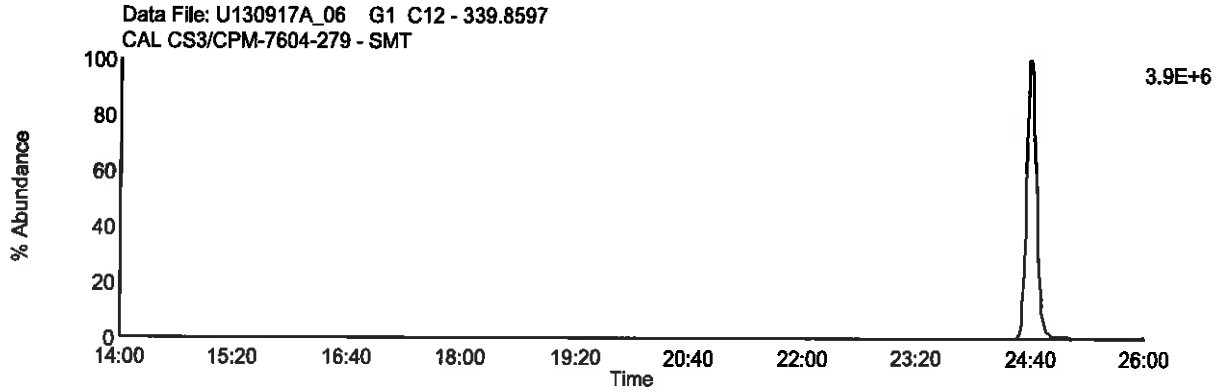
Data File: U130917A_06 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT

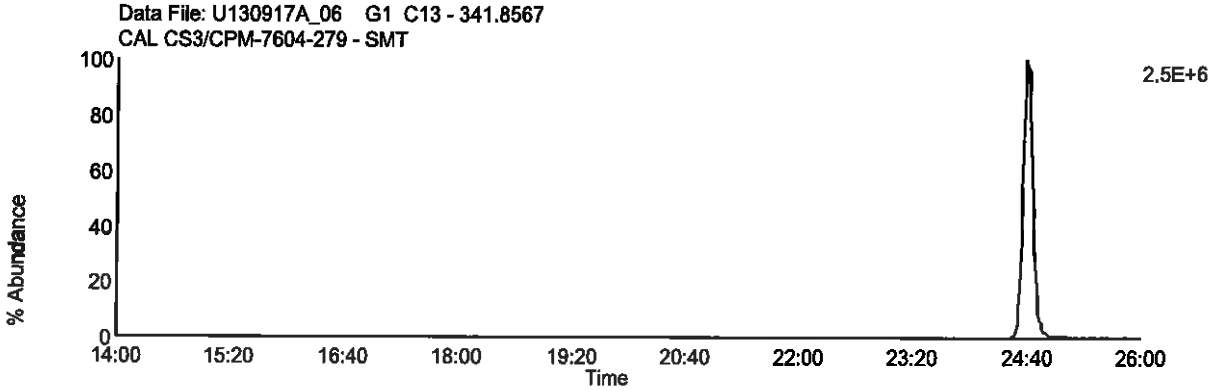


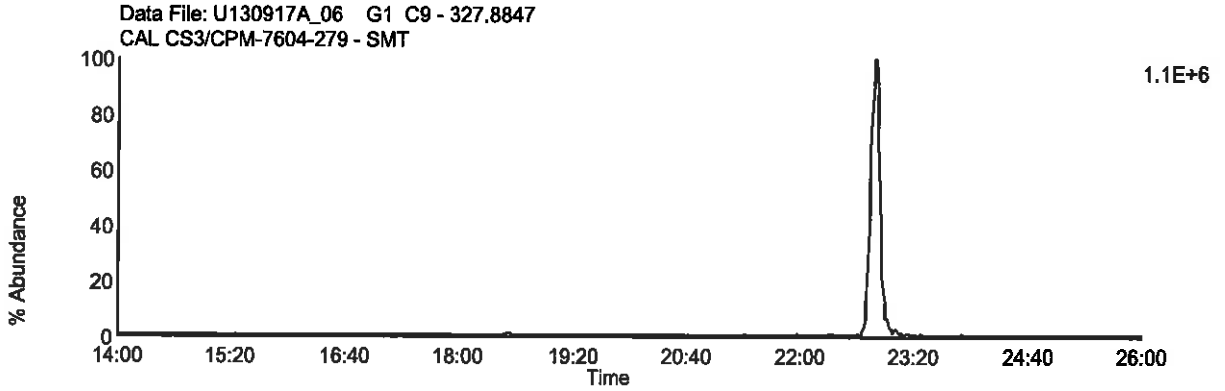
Homologue Group: Penta & Cleanup

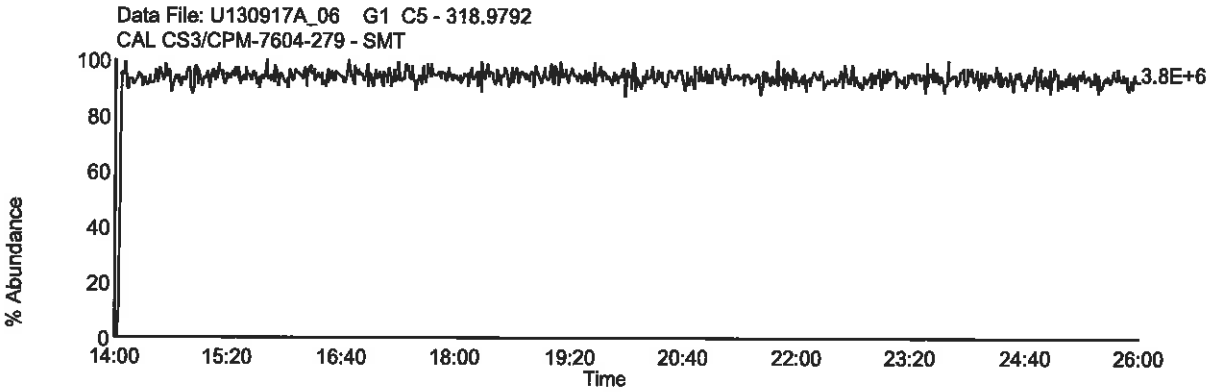
Data File Name: U130917A_06
Date Acquired: 9/17/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)







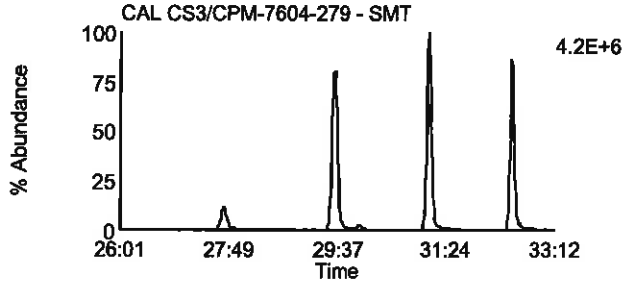


Homologue Group: Pentas

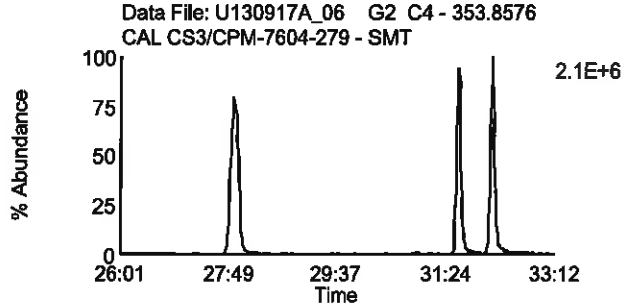
Data File Name: U130917A_06
Date Acquired: 9/17/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

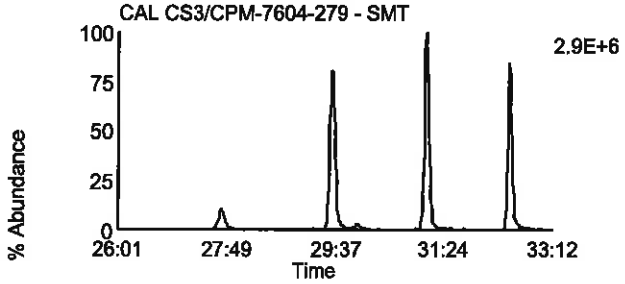
Data File: U130917A_06 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - SMT



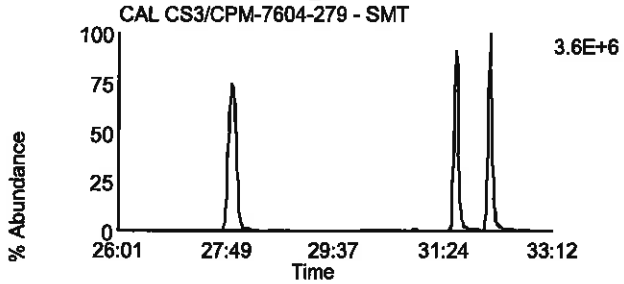
Data File: U130917A_06 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - SMT



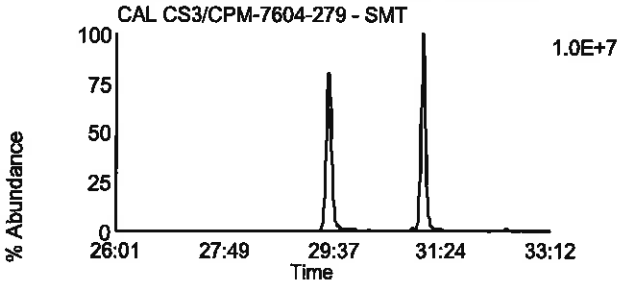
Data File: U130917A_06 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - SMT



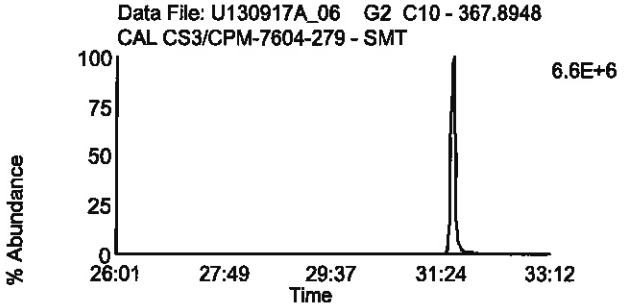
Data File: U130917A_06 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - SMT



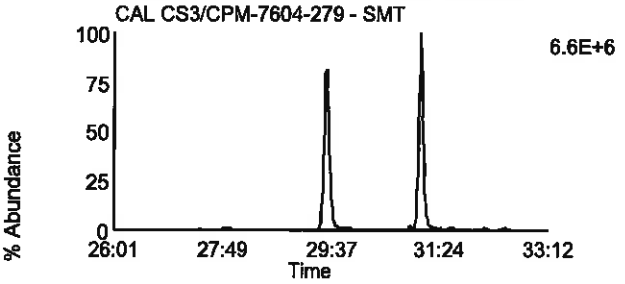
Data File: U130917A_06 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - SMT



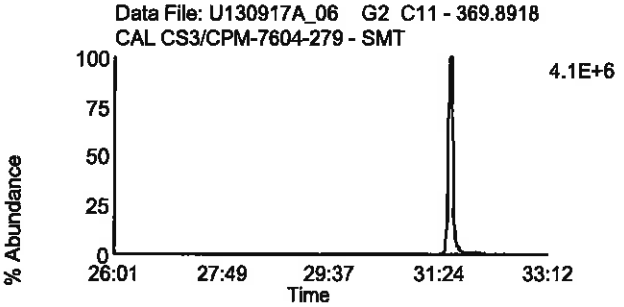
Data File: U130917A_06 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - SMT



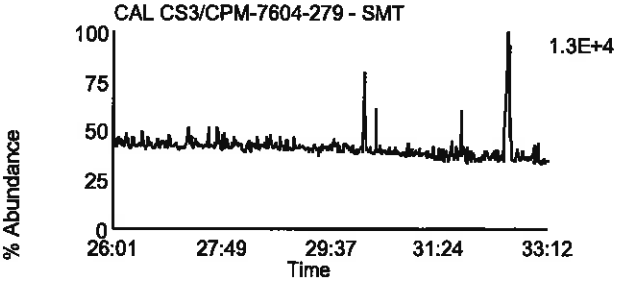
Data File: U130917A_06 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - SMT



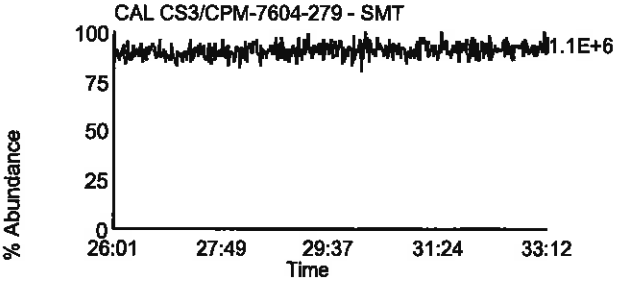
Data File: U130917A_06 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - SMT

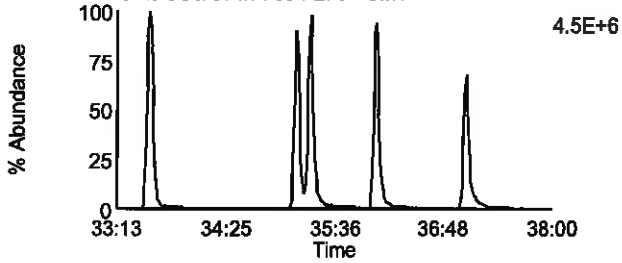


Homologue Group: Hexas

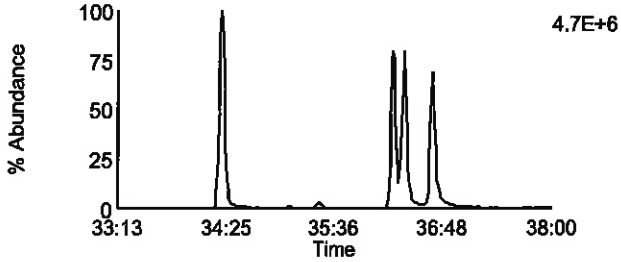
Data File Name: U130917A_06
Date Acquired: 9/17/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

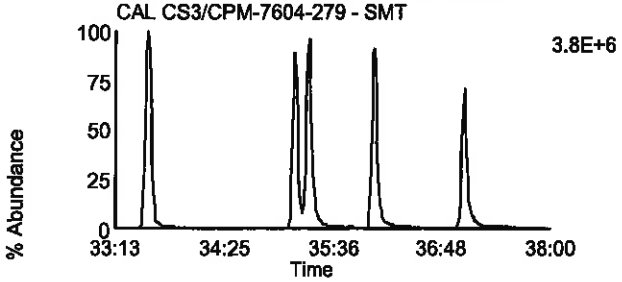
Data File: U130917A_06 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - SMT



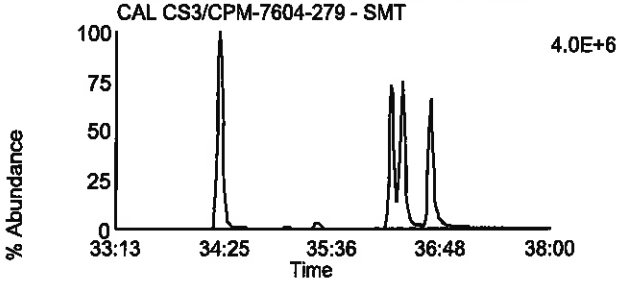
Data File: U130917A_06 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - SMT



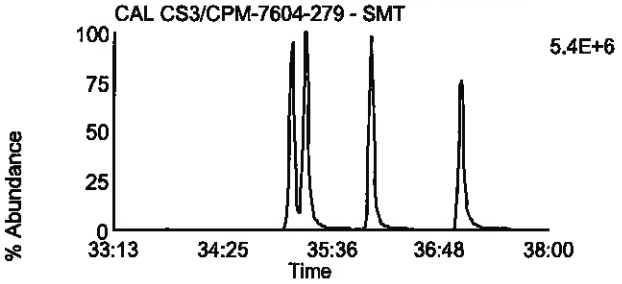
Data File: U130917A_06 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - SMT



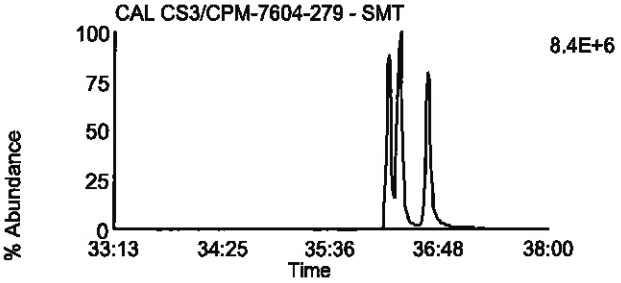
Data File: U130917A_06 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - SMT



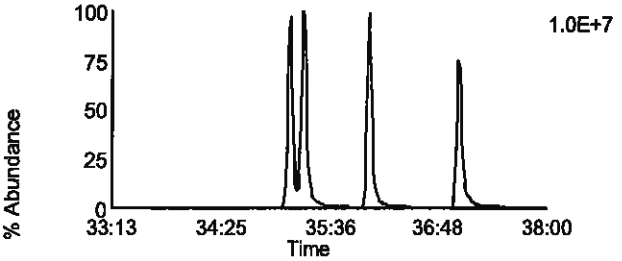
Data File: U130917A_06 G3 C5 - 383.8639
CAL CS3/CPM-7604-279 - SMT



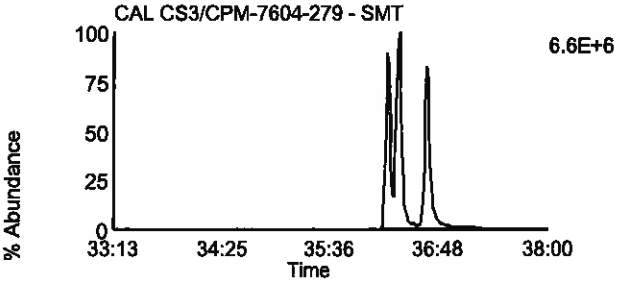
Data File: U130917A_06 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - SMT



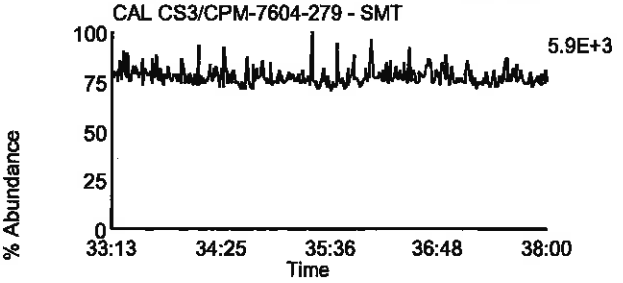
Data File: U130917A_06 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - SMT



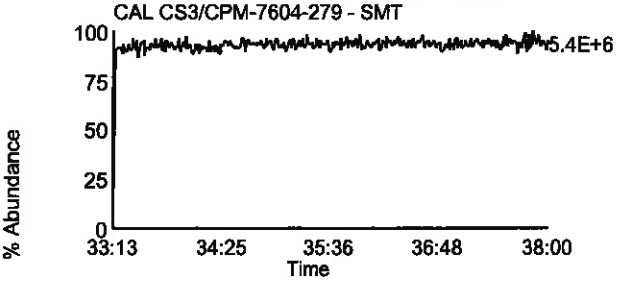
Data File: U130917A_06 G3 C10 - 403.8529
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - SMT

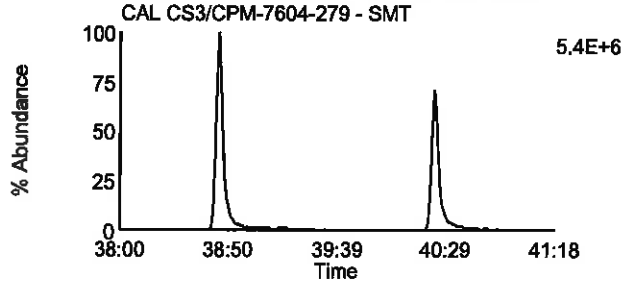


Homologue Group: Heptas

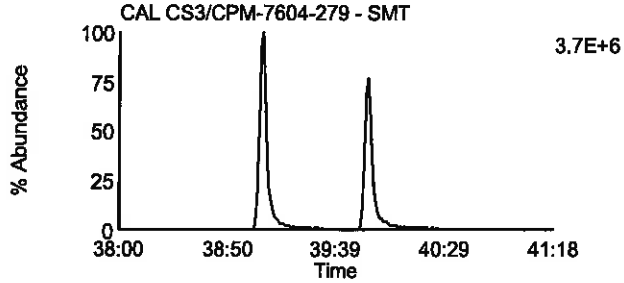
Data File Name: U130917A_06
Date Acquired: 9/17/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

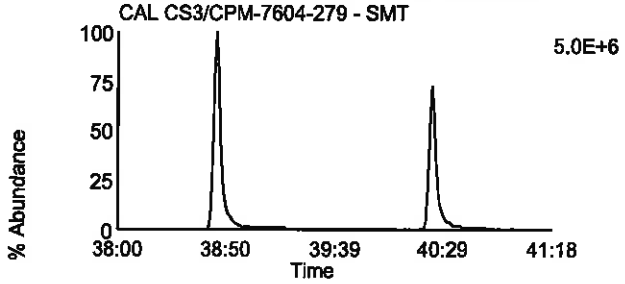
Data File: U130917A_06 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - SMT



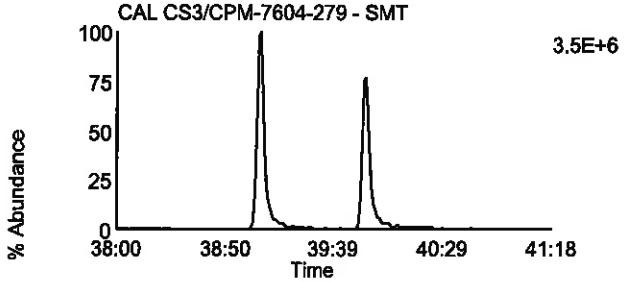
Data File: U130917A_06 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - SMT



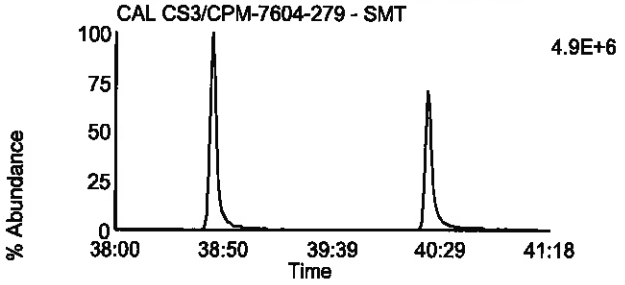
Data File: U130917A_06 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - SMT



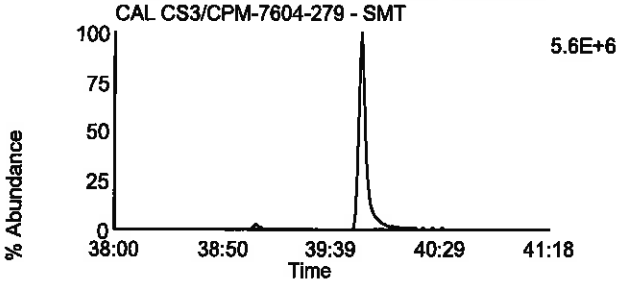
Data File: U130917A_06 G4 C9 - 425.7737
CAL CS3/CPM-7604-279 - SMT



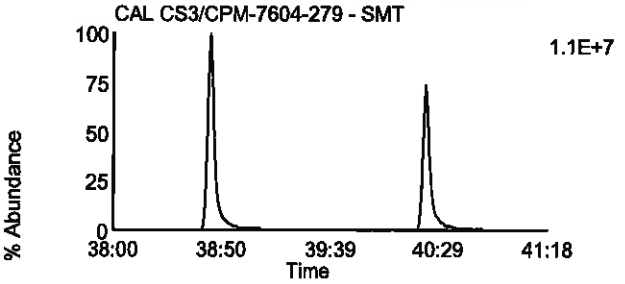
Data File: U130917A_06 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - SMT



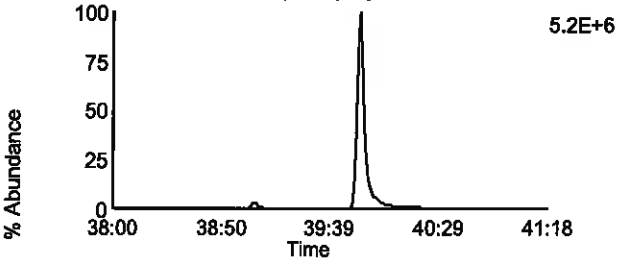
Data File: U130917A_06 G4 C11 - 435.8169
CAL CS3/CPM-7604-279 - SMT



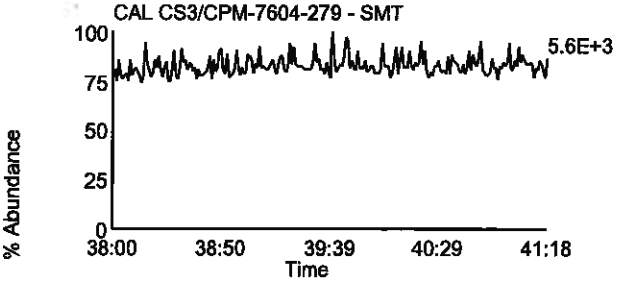
Data File: U130917A_06 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - SMT



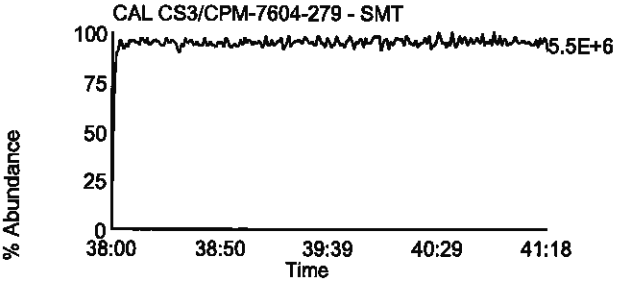
Data File: U130917A_06 G4 C12 - 437.814
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G4 C13 - 479.7165
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - SMT

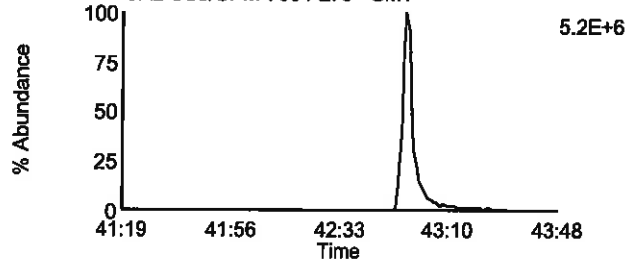


Homologue Group: Octas

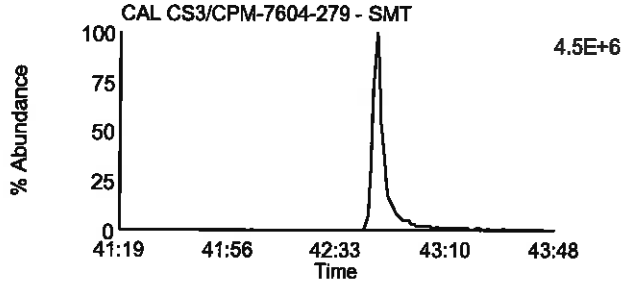
Data File Name: U130917A_06
Date Acquired: 9/17/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

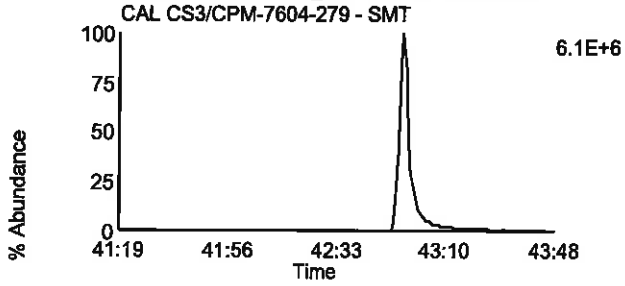
Data File: U130917A_06 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - SMT



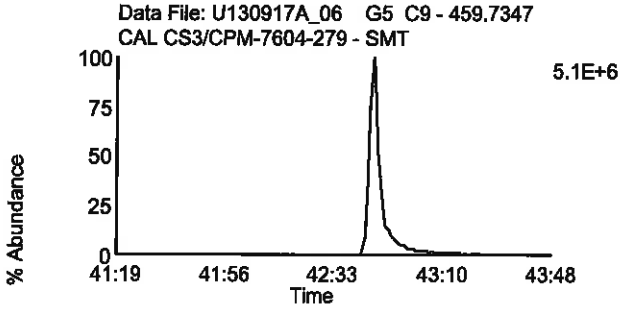
Data File: U130917A_06 G5 C8 - 457.7377
CAL CS3/CPM-7604-279 - SMT



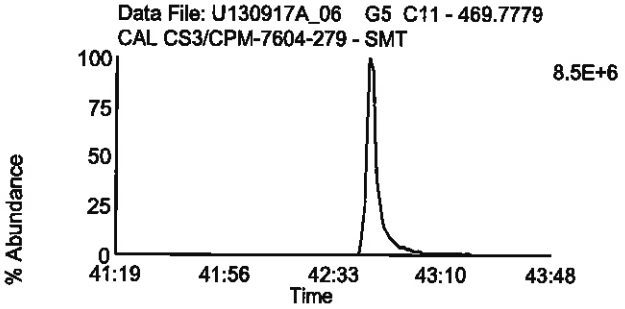
Data File: U130917A_06 G5 C5 - 443.7398
CAL CS3/CPM-7604-279 - SMT



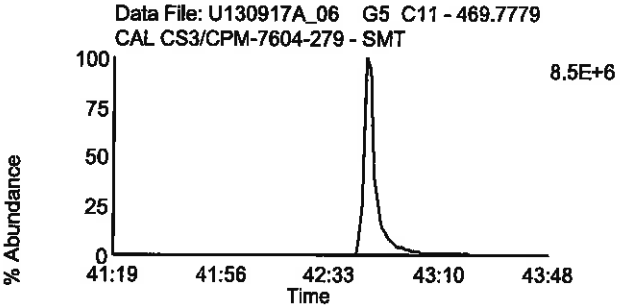
Data File: U130917A_06 G5 C9 - 459.7347
CAL CS3/CPM-7604-279 - SMT



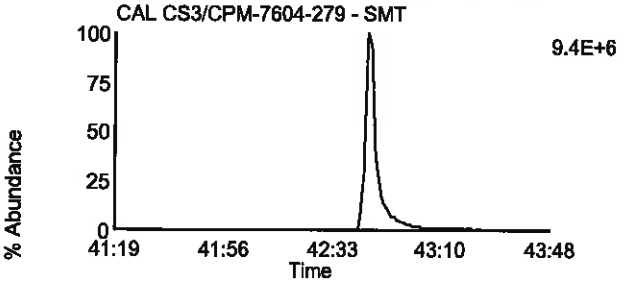
Data File: U130917A_06 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT



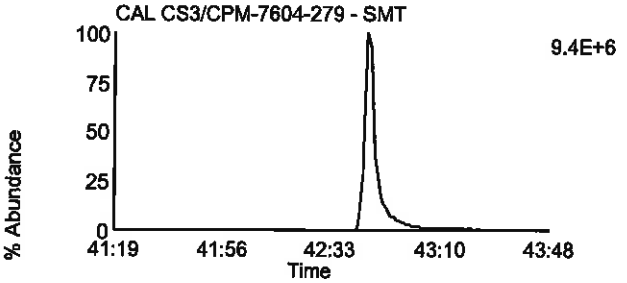
Data File: U130917A_06 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT



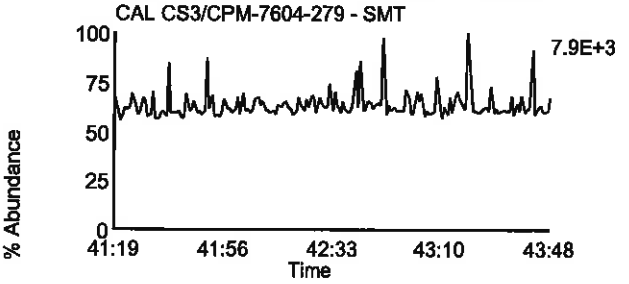
Data File: U130917A_06 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT



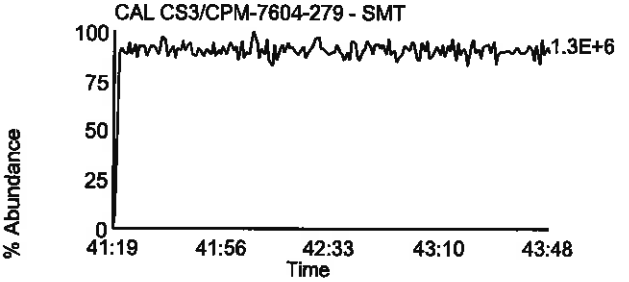
Data File: U130917A_06 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G5 C2 - 430.9728
CAL CS3/CPM-7604-279 - SMT

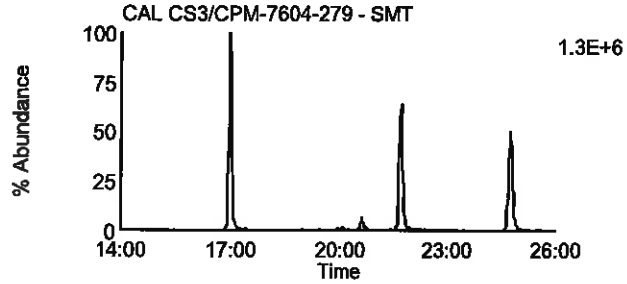


Homologue Group: Tetras

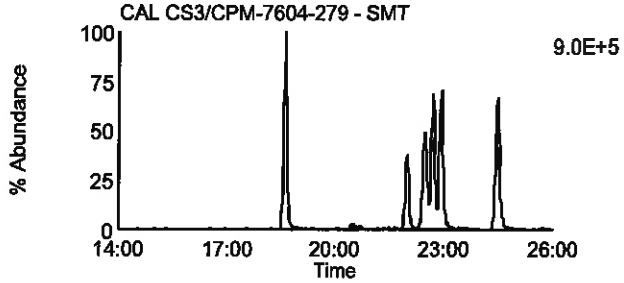
Data File Name: U130917A_22
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

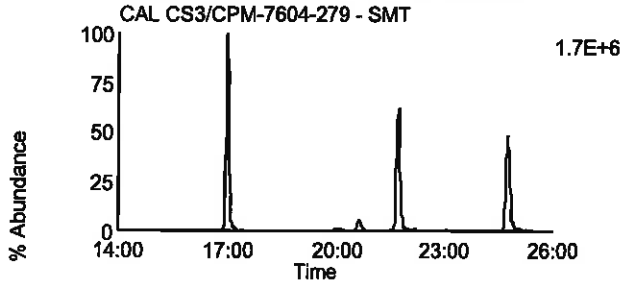
Data File: U130917A_22 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - SMT



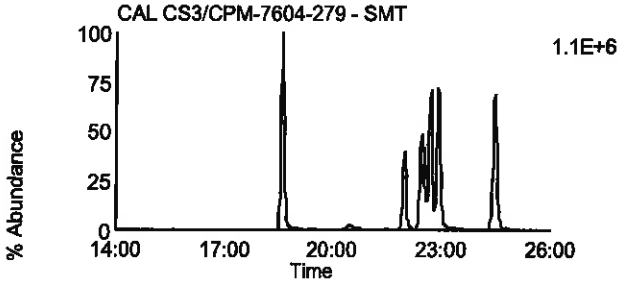
Data File: U130917A_22 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - SMT



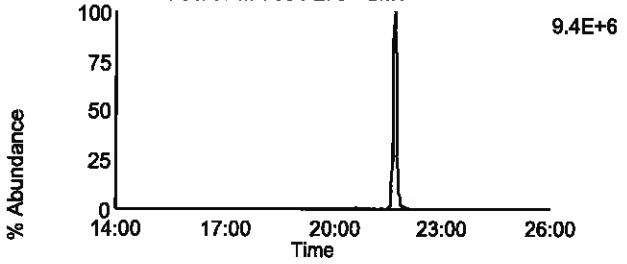
Data File: U130917A_22 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - SMT



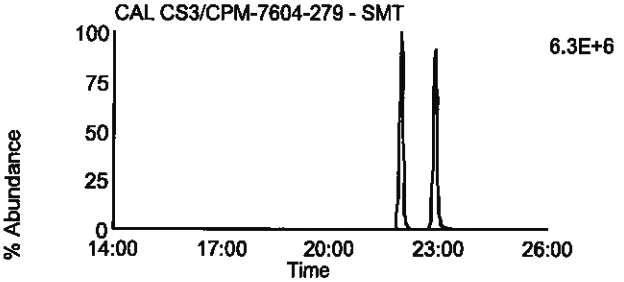
Data File: U130917A_22 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - SMT



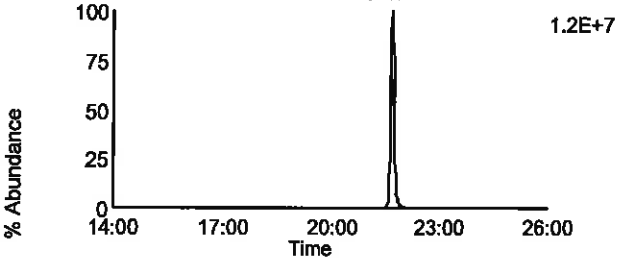
Data File: U130917A_22 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - SMT



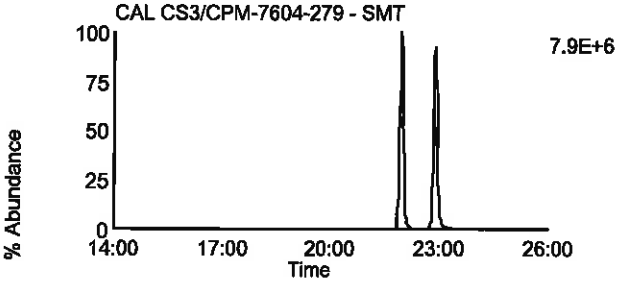
Data File: U130917A_22 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - SMT



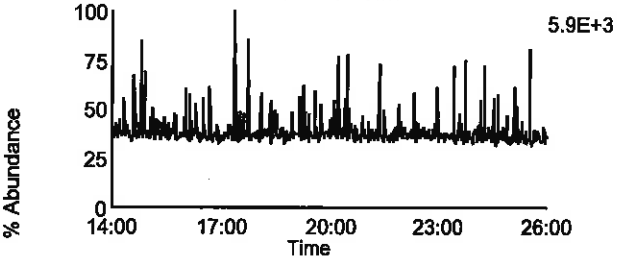
Data File: U130917A_22 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - SMT



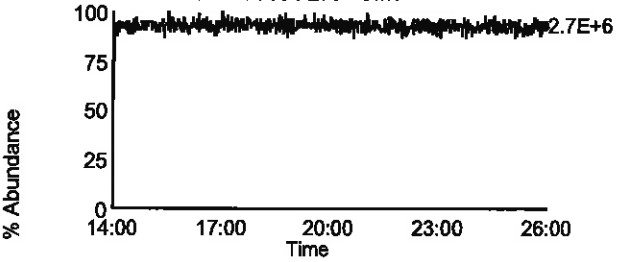
Data File: U130917A_22 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT

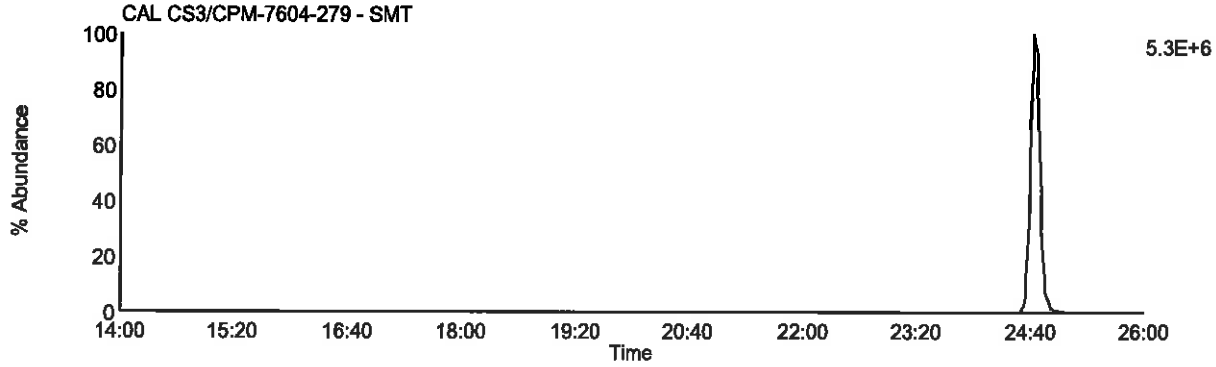


Homologue Group: Penta & Cleanup

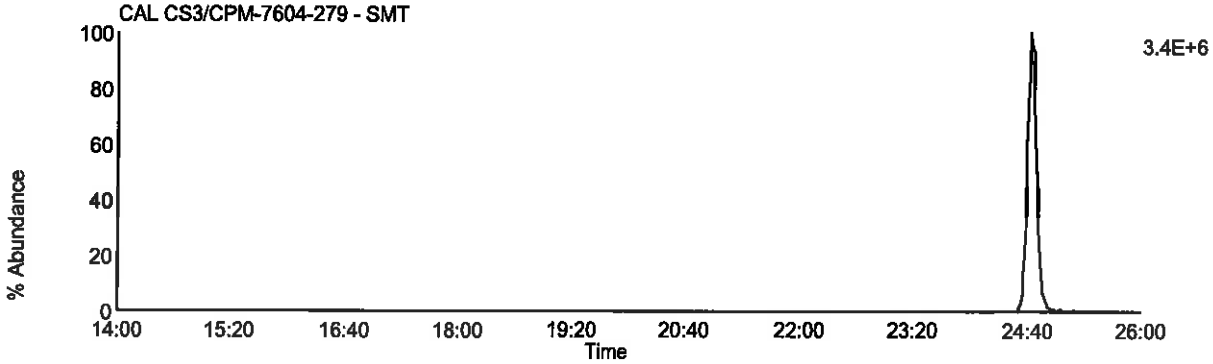
Data File Name: U130917A_22
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

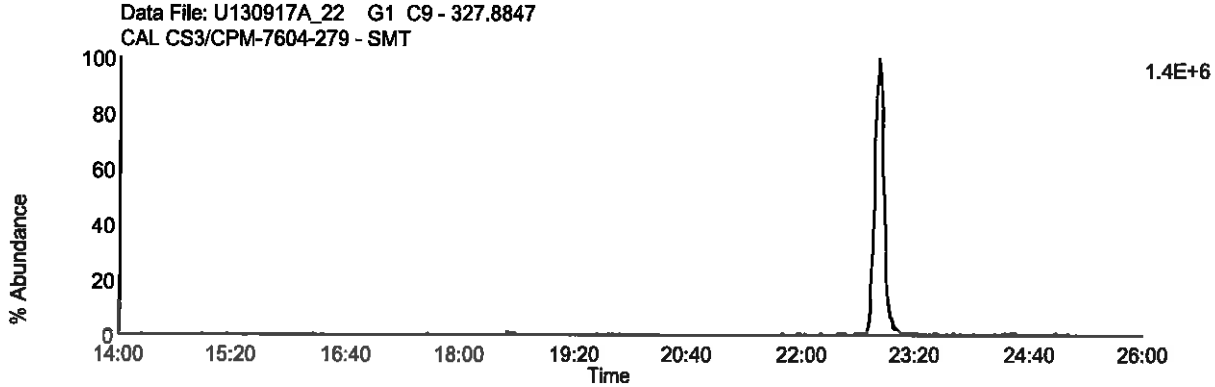
Data File: U130917A_22 G1 C12 - 339.8597
CAL CS3/CPM-7604-279 - SMT



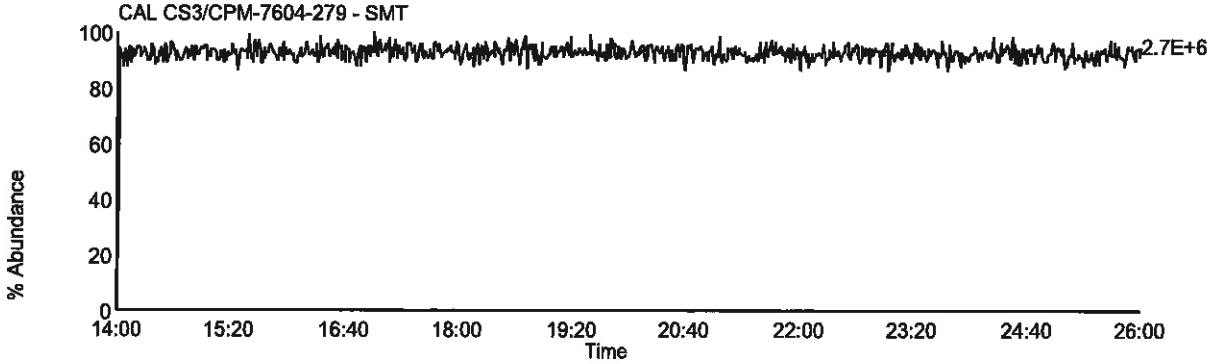
Data File: U130917A_22 G1 C13 - 341.8567
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G1 C9 - 327.8847
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT

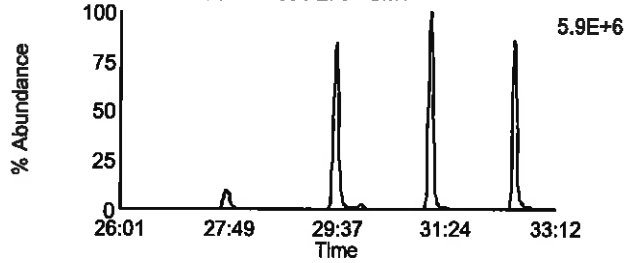


Homologue Group: Pentas

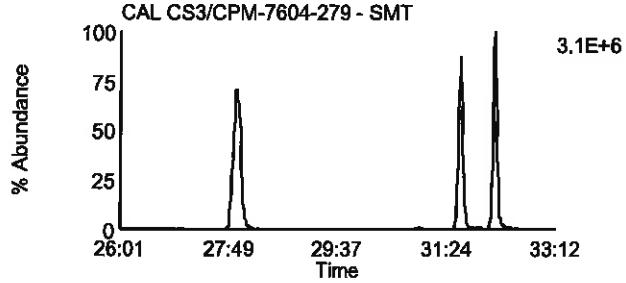
Data File Name: U130917A_22
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

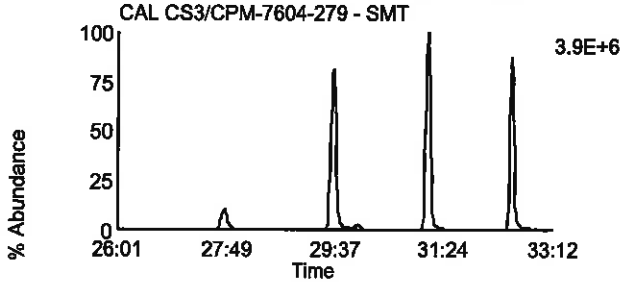
Data File: U130917A_22 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - SMT



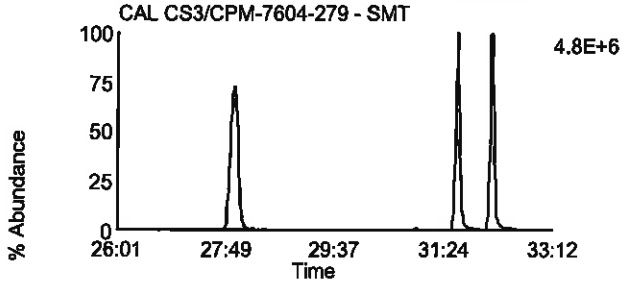
Data File: U130917A_22 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - SMT



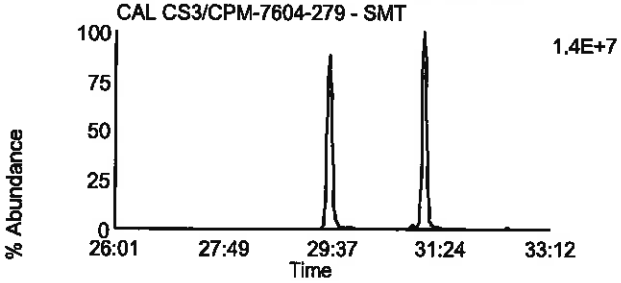
Data File: U130917A_22 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - SMT



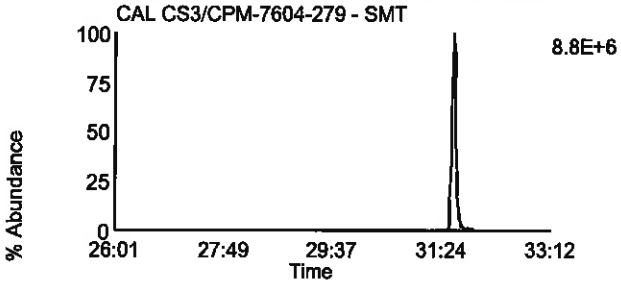
Data File: U130917A_22 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - SMT



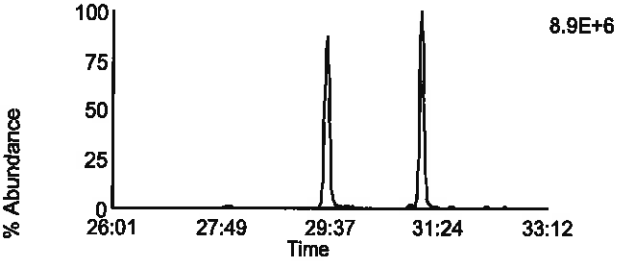
Data File: U130917A_22 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - SMT



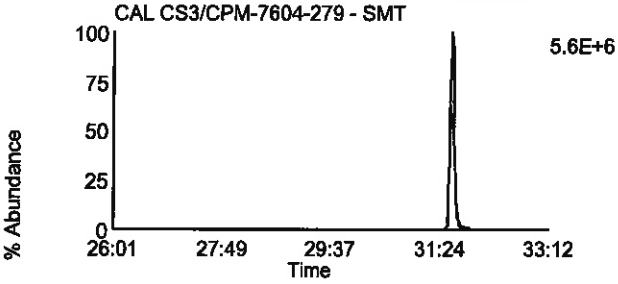
Data File: U130917A_22 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - SMT



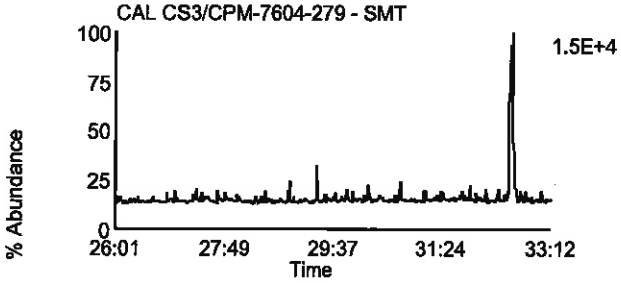
Data File: U130917A_22 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - SMT



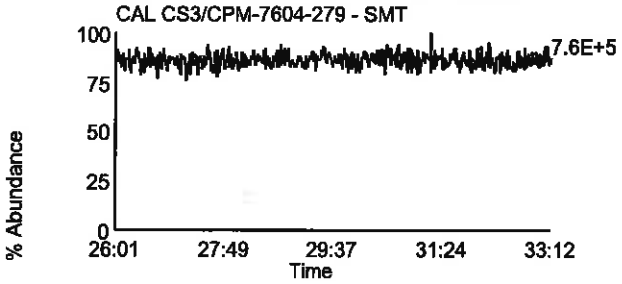
Data File: U130917A_22 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - SMT

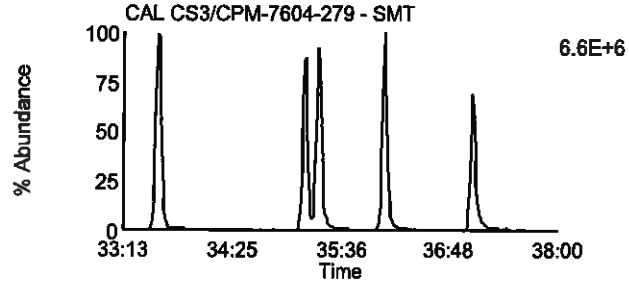


Homologue Group: Hexas

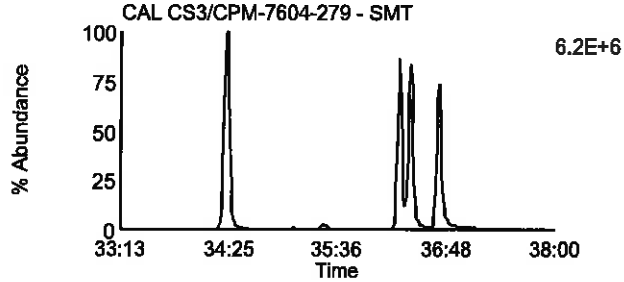
Data File Name: U130917A_22
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

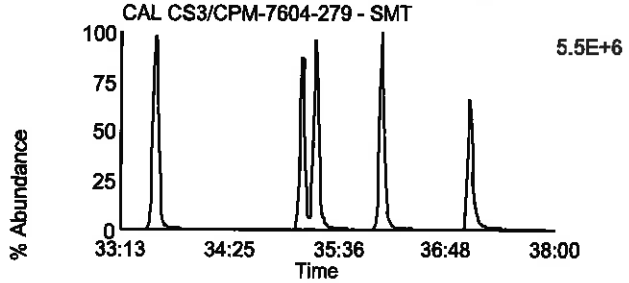
Data File: U130917A_22 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - SMT



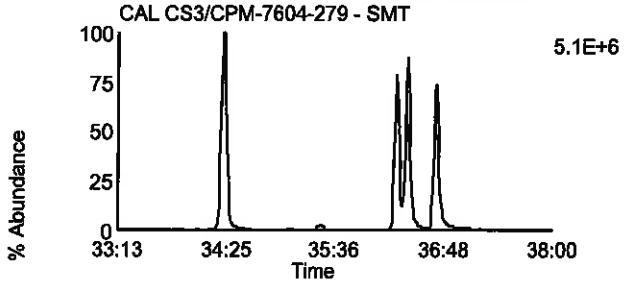
Data File: U130917A_22 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - SMT



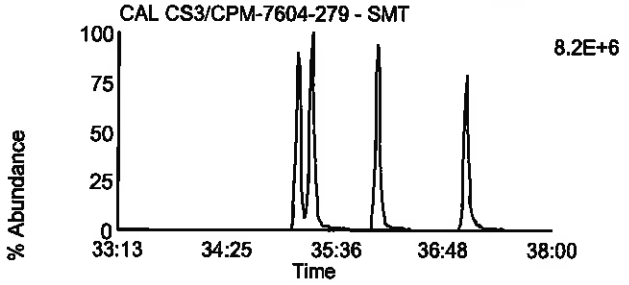
Data File: U130917A_22 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - SMT



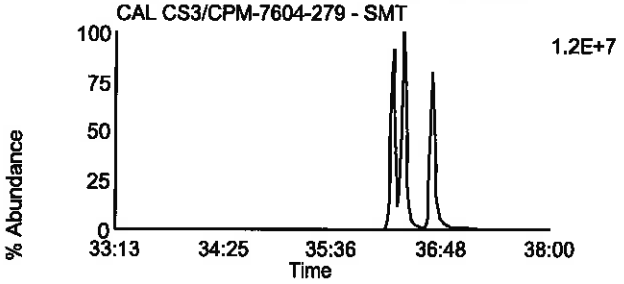
Data File: U130917A_22 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - SMT



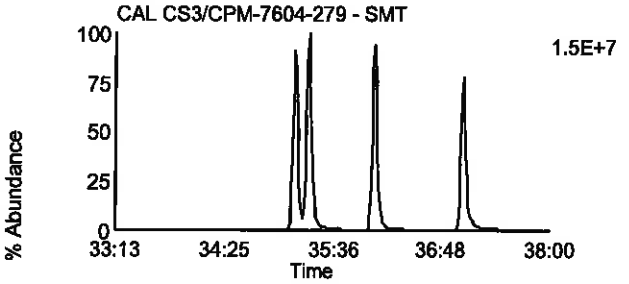
Data File: U130917A_22 G3 C5 - 383.8639
CAL CS3/CPM-7604-279 - SMT



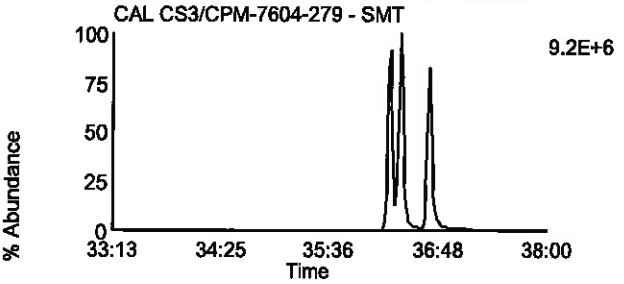
Data File: U130917A_22 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - SMT



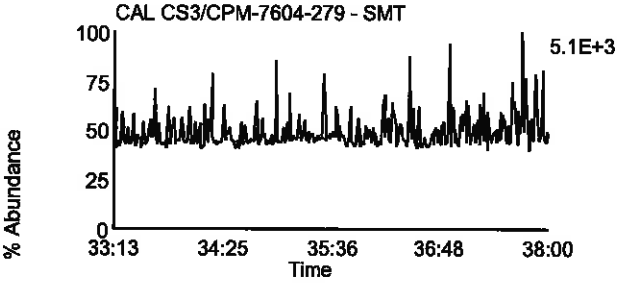
Data File: U130917A_22 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - SMT



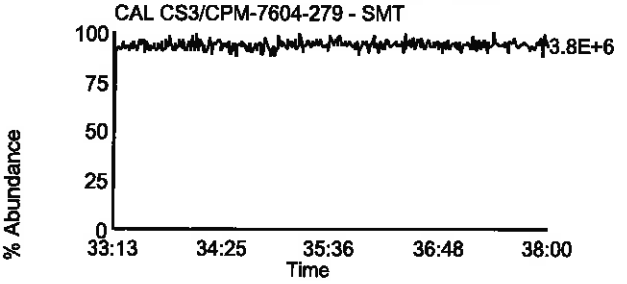
Data File: U130917A_22 G3 C10 - 403.8529
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - SMT

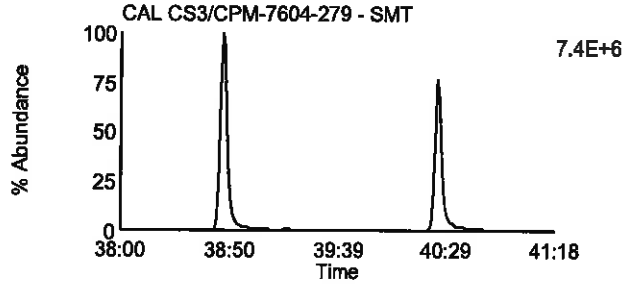


Homologue Group: Heptas

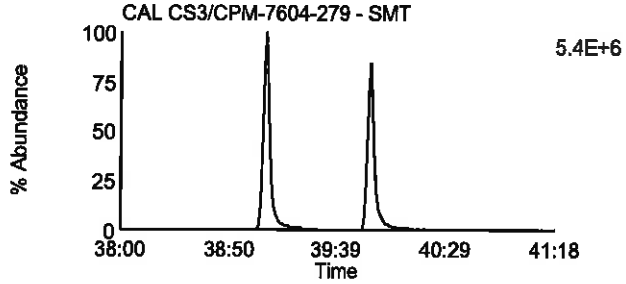
Data File Name: U130917A_22
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

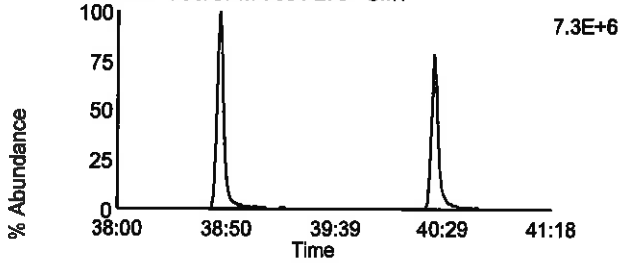
Data File: U130917A_22 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - SMT



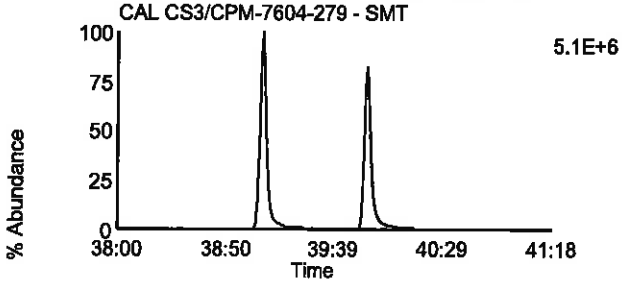
Data File: U130917A_22 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - SMT



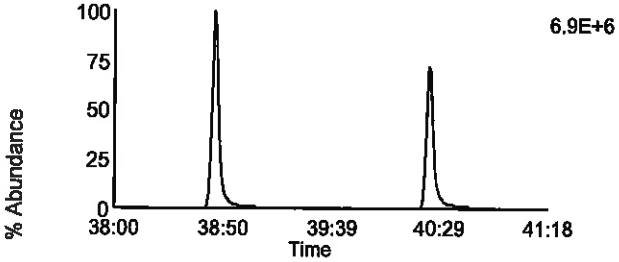
Data File: U130917A_22 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - SMT



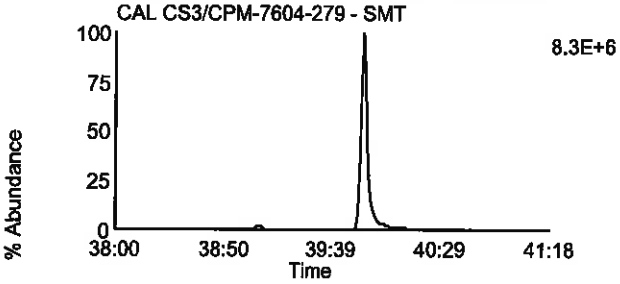
Data File: U130917A_22 G4 C9 - 425.7737
CAL CS3/CPM-7604-279 - SMT



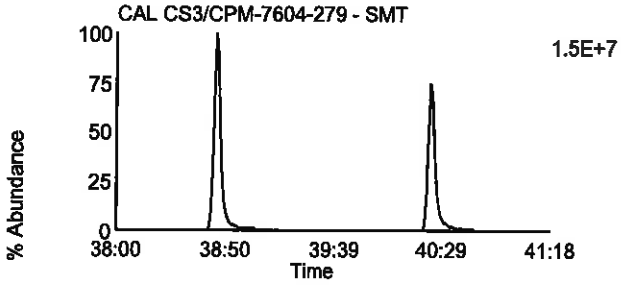
Data File: U130917A_22 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - SMT



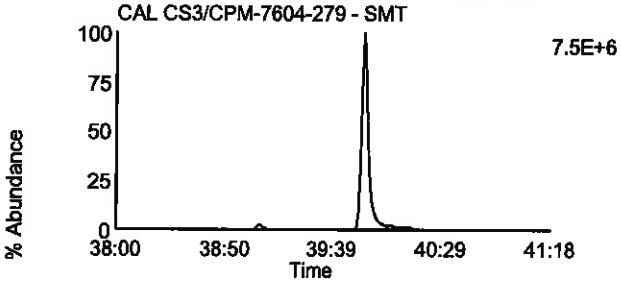
Data File: U130917A_22 G4 C11 - 435.8169
CAL CS3/CPM-7604-279 - SMT



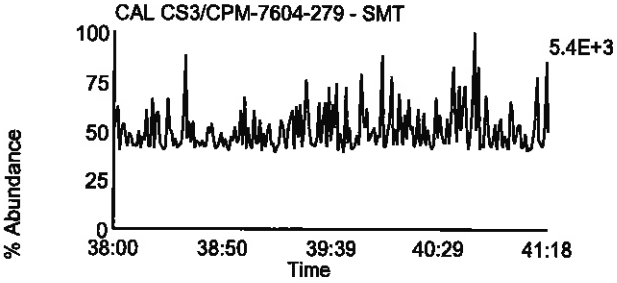
Data File: U130917A_22 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - SMT



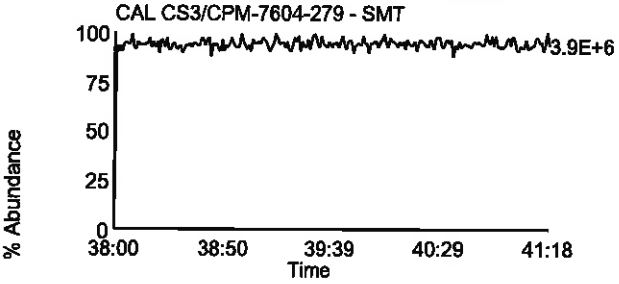
Data File: U130917A_22 G4 C12 - 437.814
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G4 C13 - 479.7165
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - SMT

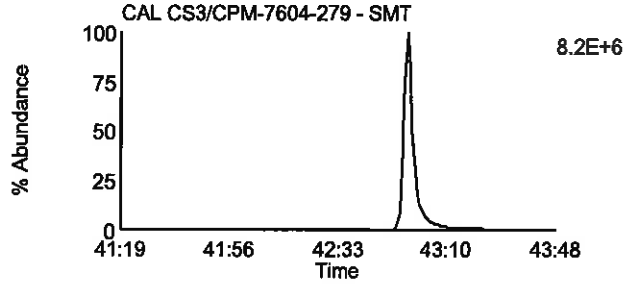


Homologue Group: Octas

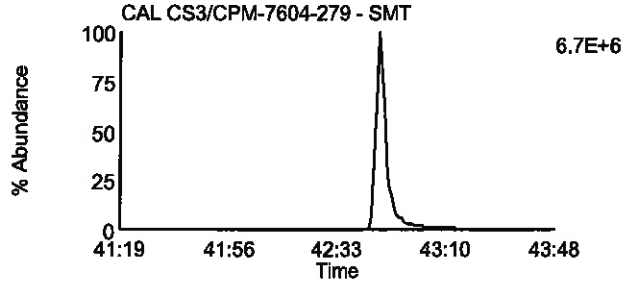
Data File Name: U130917A_22
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

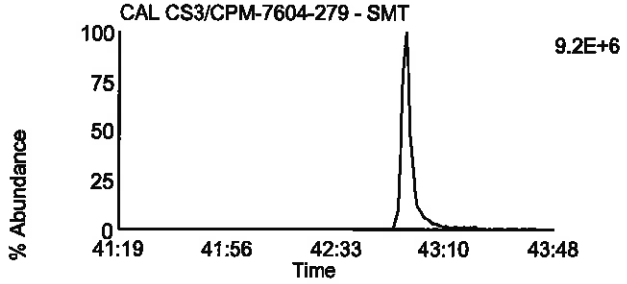
Data File: U130917A_22 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - SMT



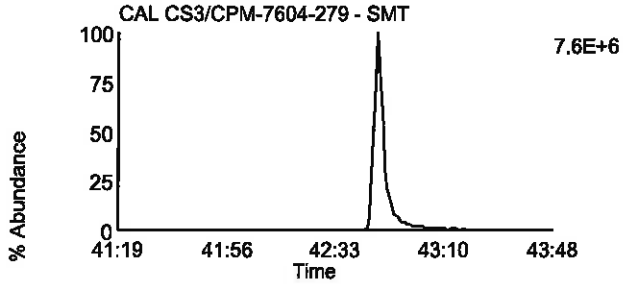
Data File: U130917A_22 G5 C8 - 457.7377
CAL CS3/CPM-7604-279 - SMT



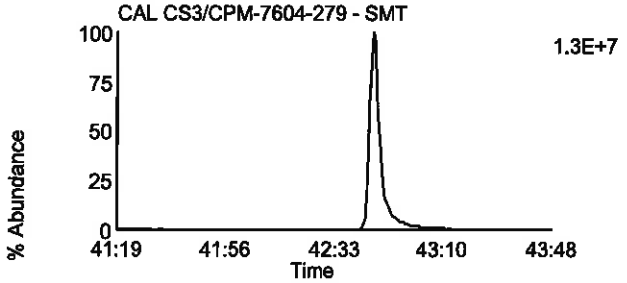
Data File: U130917A_22 G5 C5 - 443.7398
CAL CS3/CPM-7604-279 - SMT



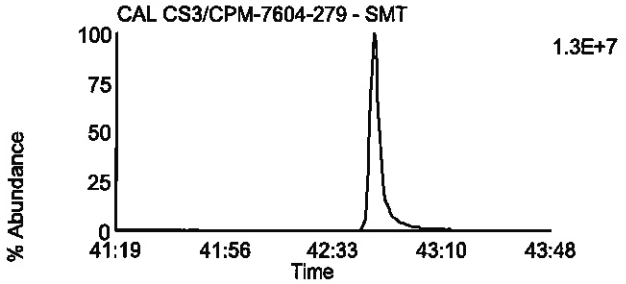
Data File: U130917A_22 G5 C9 - 459.7347
CAL CS3/CPM-7604-279 - SMT



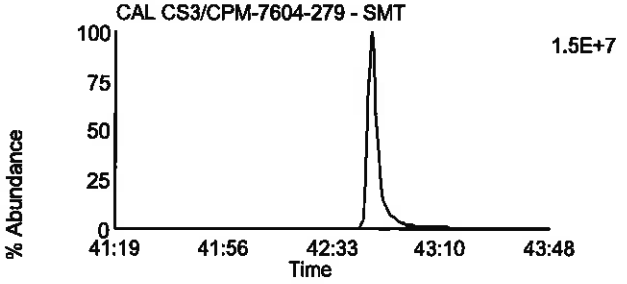
Data File: U130917A_22 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT



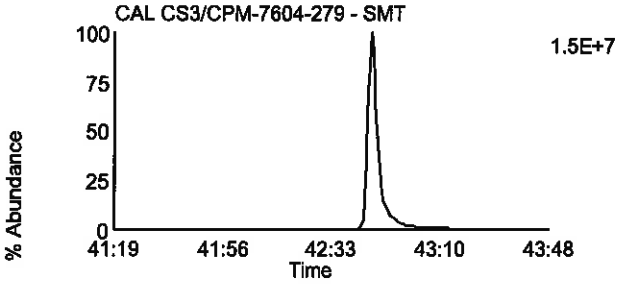
Data File: U130917A_22 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT



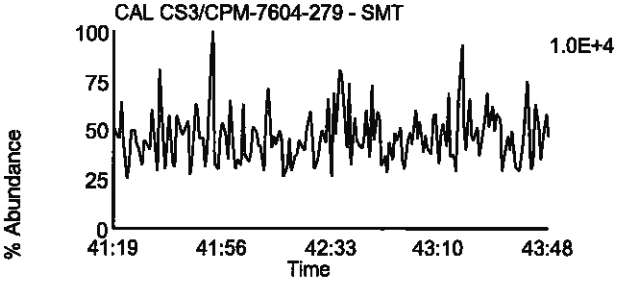
Data File: U130917A_22 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT



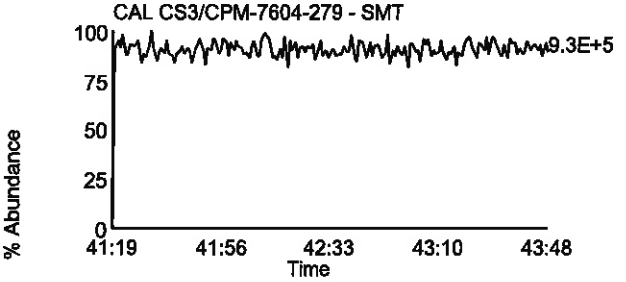
Data File: U130917A_22 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G5 C2 - 430.9728
CAL CS3/CPM-7604-279 - SMT

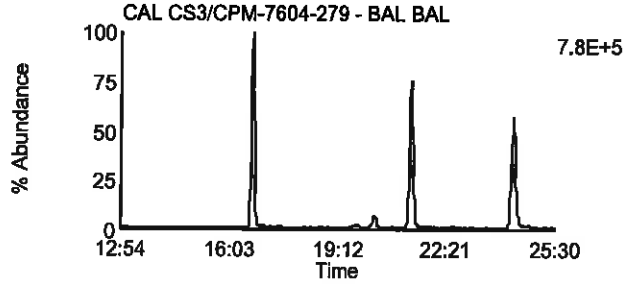


Homologue Group: Tetras

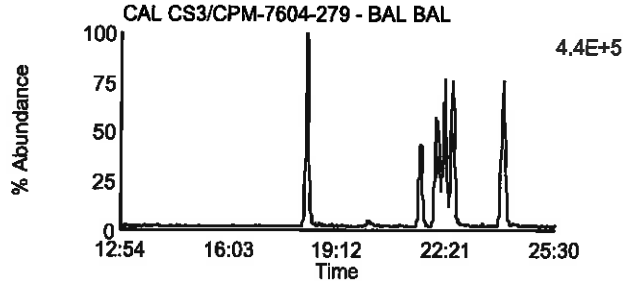
Data File Name: F130921A_16
Date Acquired: 9/21/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

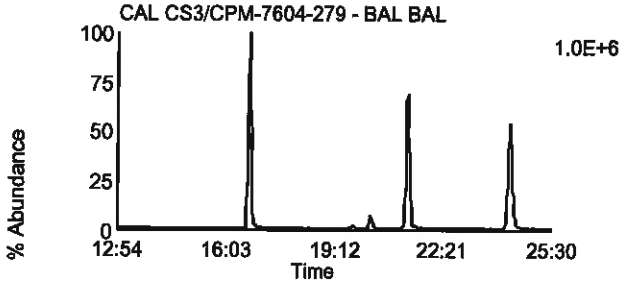
Data File: F130921A_16 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - BAL BAL



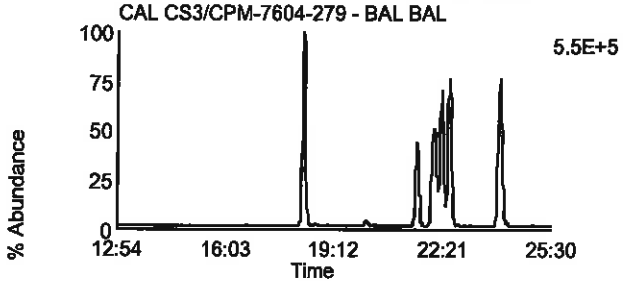
Data File: F130921A_16 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - BAL BAL



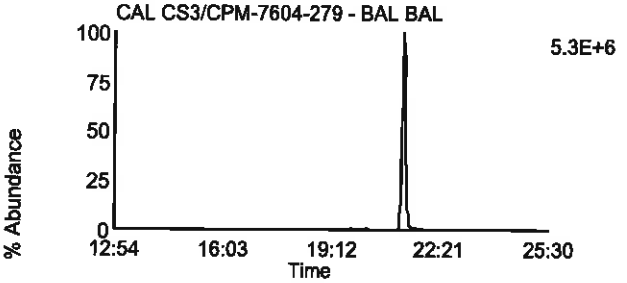
Data File: F130921A_16 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - BAL BAL



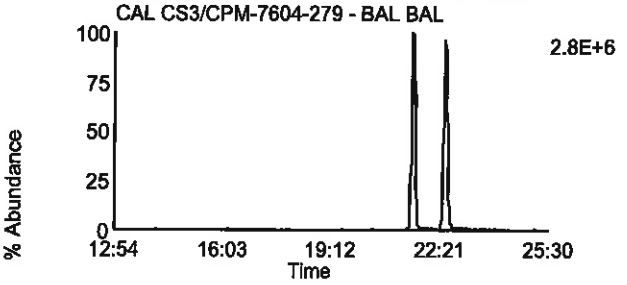
Data File: F130921A_16 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - BAL BAL



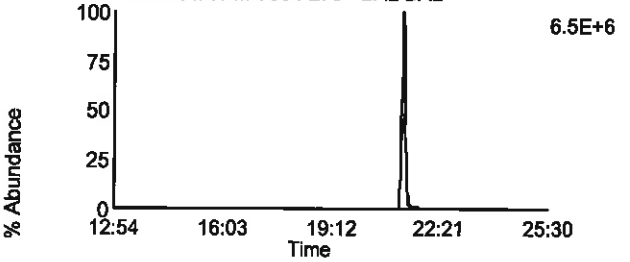
Data File: F130921A_16 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - BAL BAL



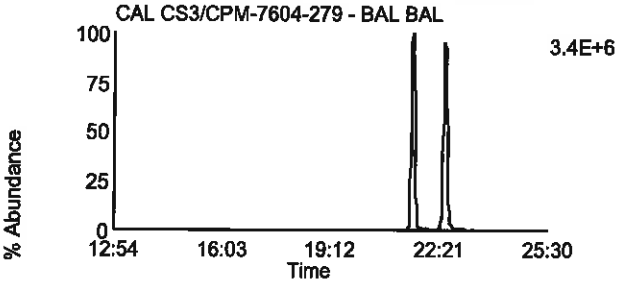
Data File: F130921A_16 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - BAL BAL



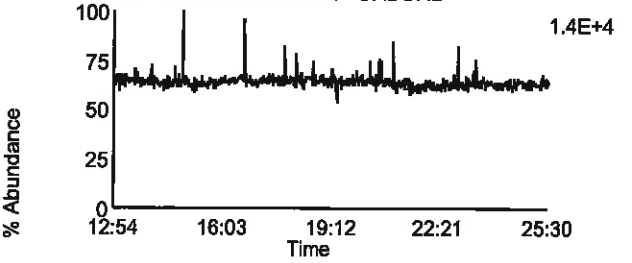
Data File: F130921A_16 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - BAL BAL



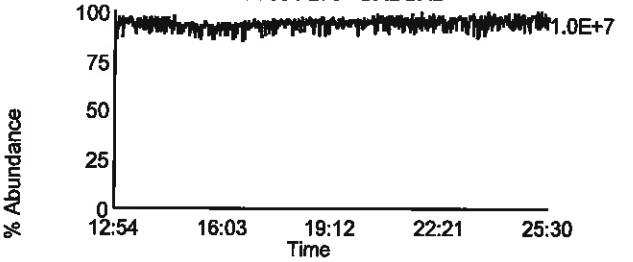
Data File: F130921A_16 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - BAL BAL



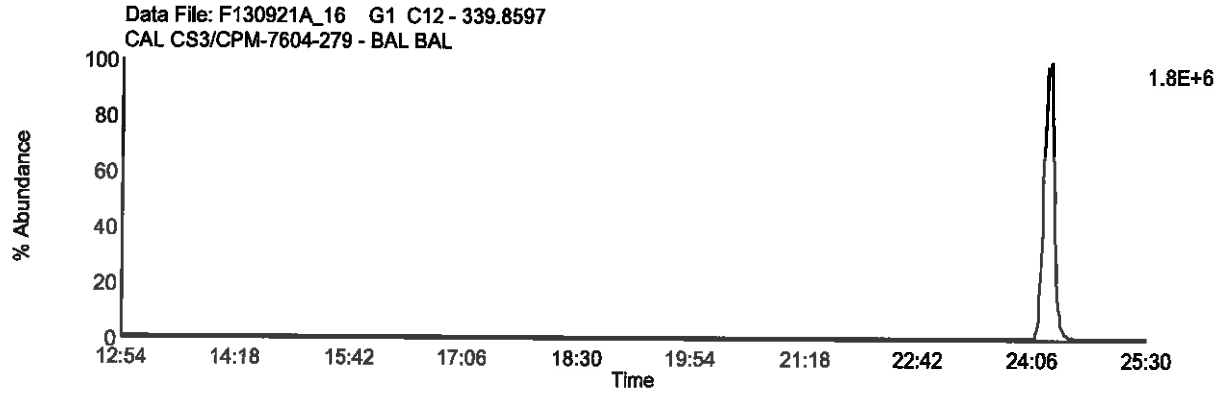
Data File: F130921A_16 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - BAL BAL

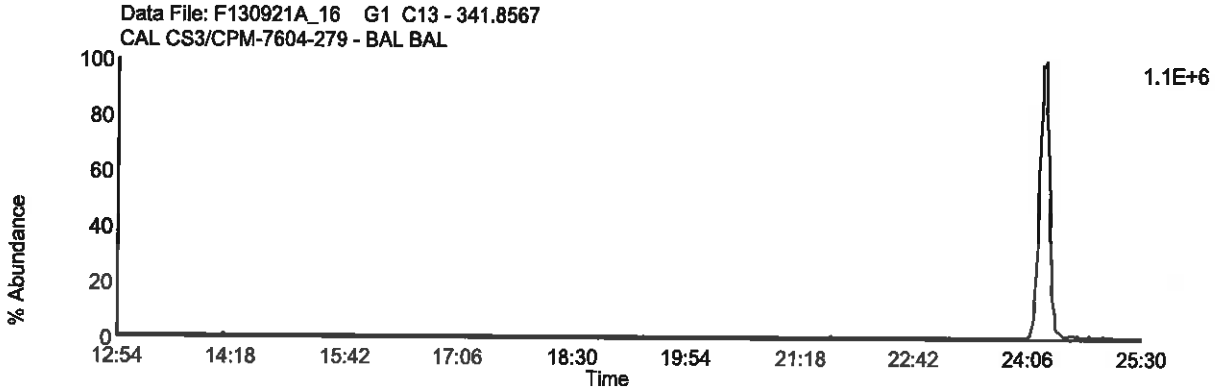


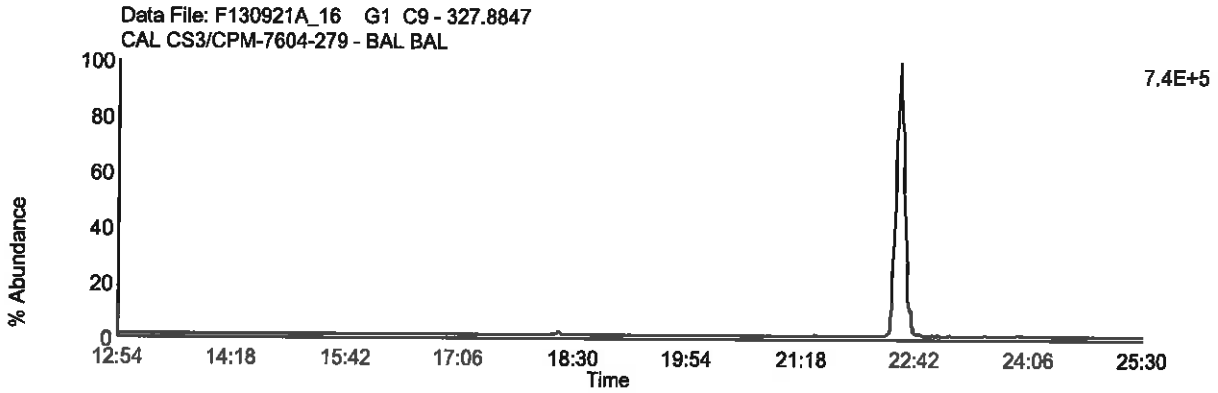
Homologue Group: Penta & Cleanup

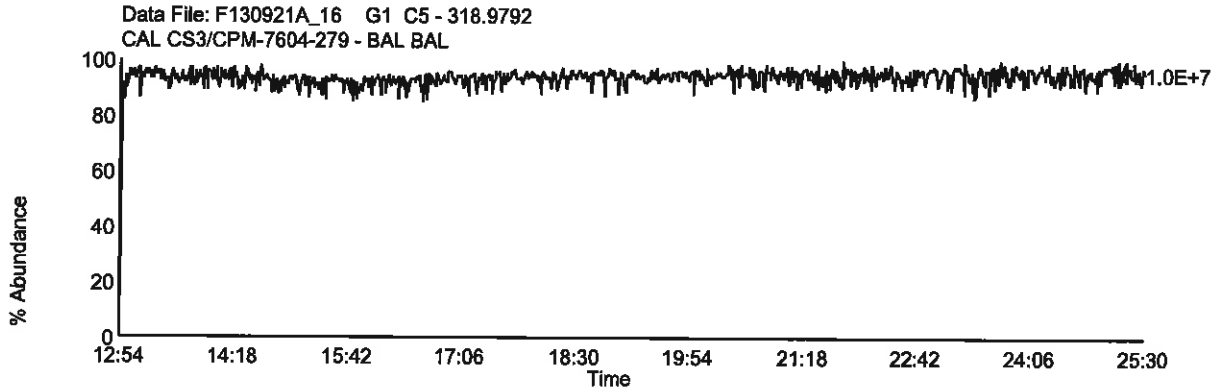
Data File Name: F130921A_16
Date Acquired: 9/21/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)







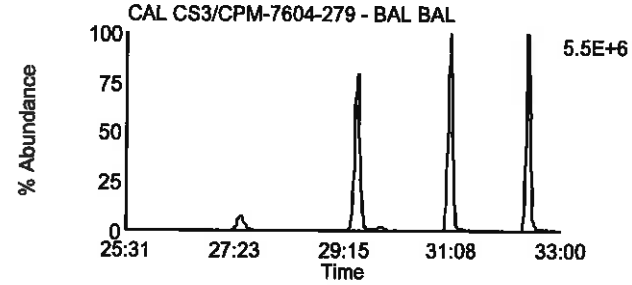


Homologue Group: Pentas

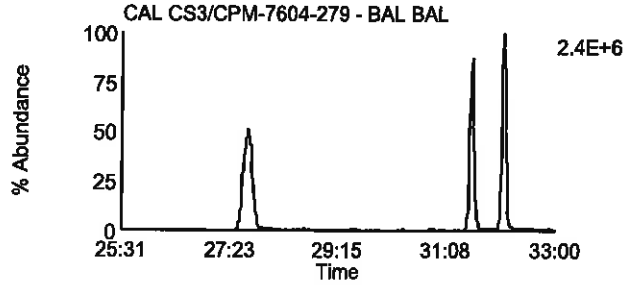
Data File Name: F130921A_16
Date Acquired: 9/21/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

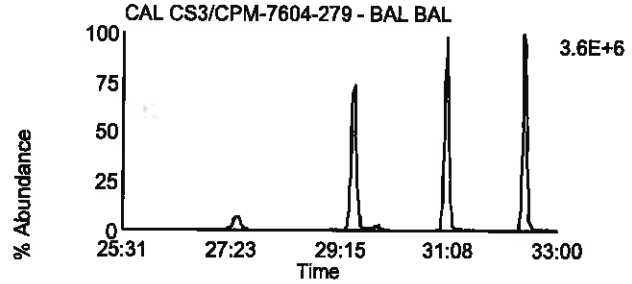
Data File: F130921A_16 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - BAL BAL



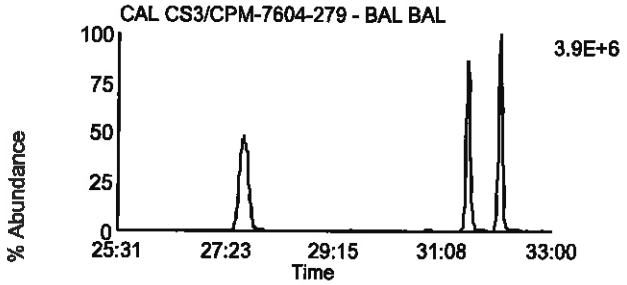
Data File: F130921A_16 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - BAL BAL



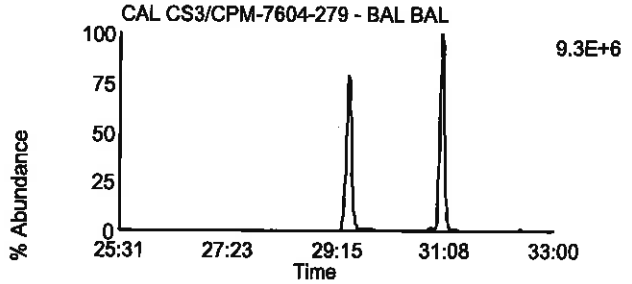
Data File: F130921A_16 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - BAL BAL



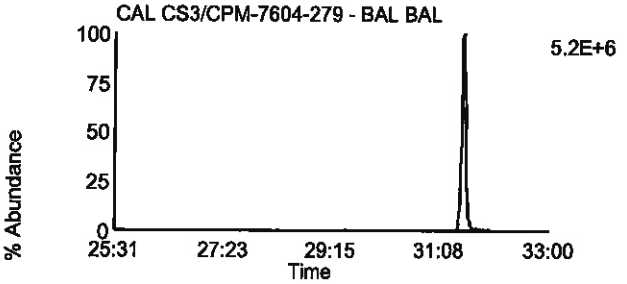
Data File: F130921A_16 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - BAL BAL



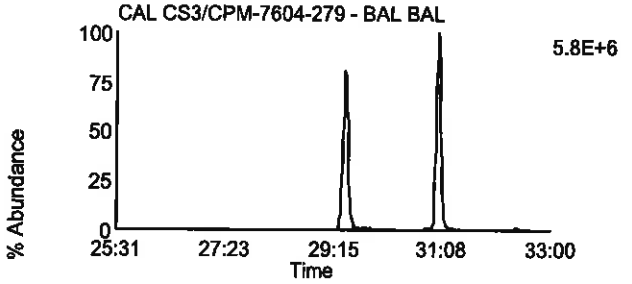
Data File: F130921A_16 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - BAL BAL



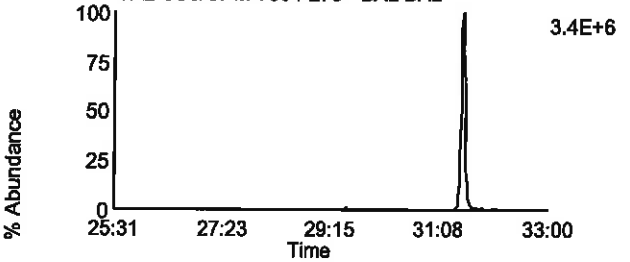
Data File: F130921A_16 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - BAL BAL



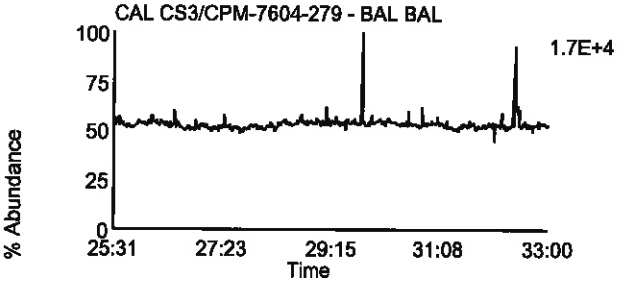
Data File: F130921A_16 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - BAL BAL



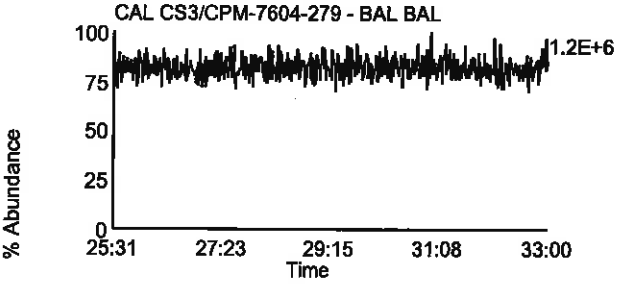
Data File: F130921A_16 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - BAL BAL

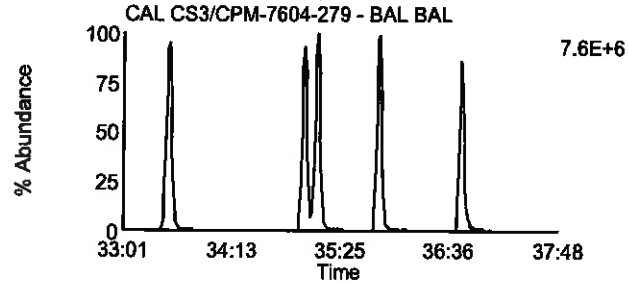


Homologue Group: Hexas

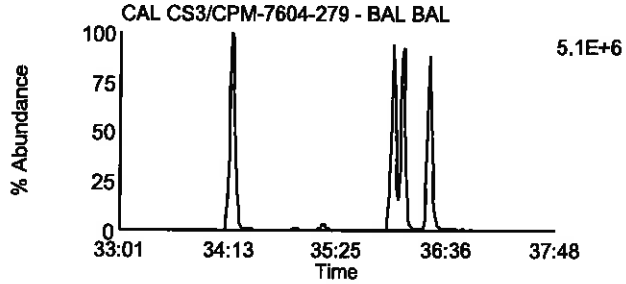
Data File Name: F130921A_16
Date Acquired: 9/21/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

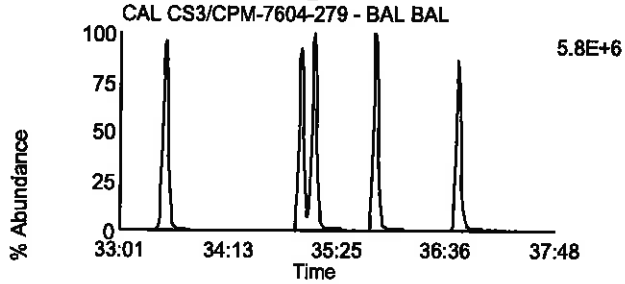
Data File: F130921A_16 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - BAL BAL



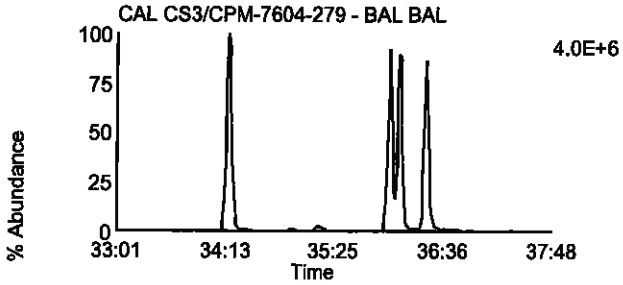
Data File: F130921A_16 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - BAL BAL



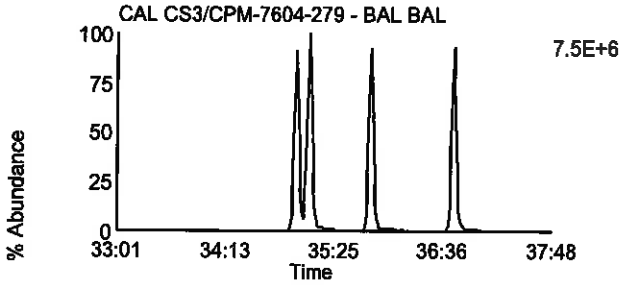
Data File: F130921A_16 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - BAL BAL



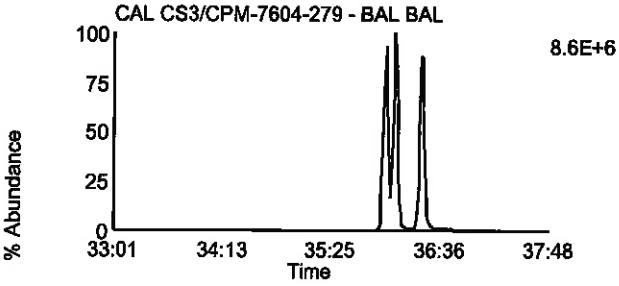
Data File: F130921A_16 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - BAL BAL



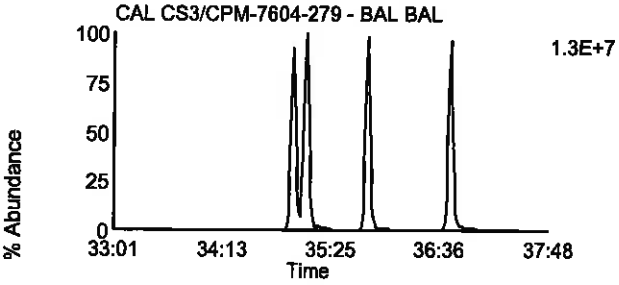
Data File: F130921A_16 G3 C5 - 383.8639
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - BAL BAL



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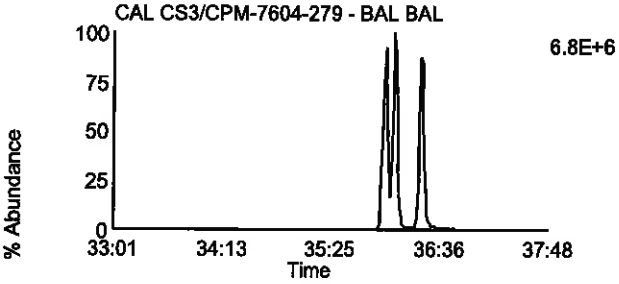
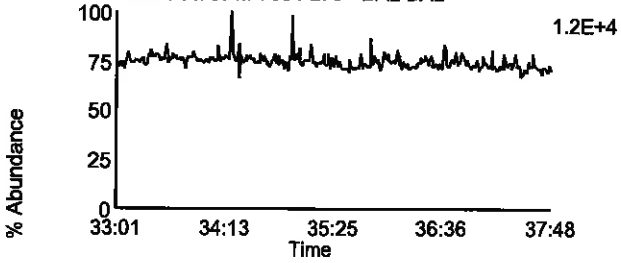
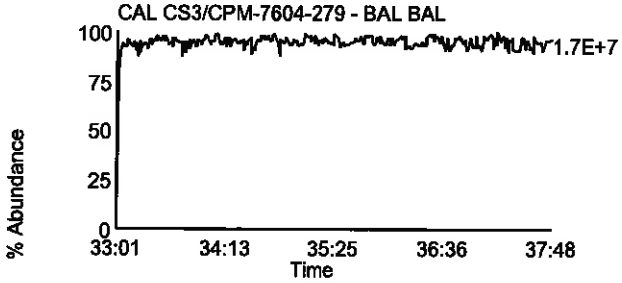
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - BAL BAL

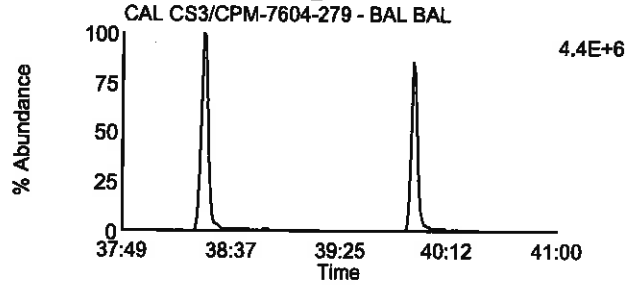


Homologue Group: Heptas

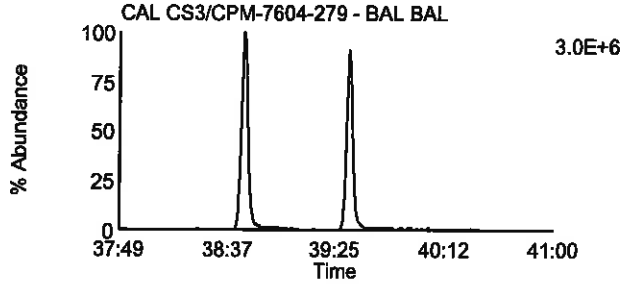
Data File Name: F130921A_16
Date Acquired: 9/21/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

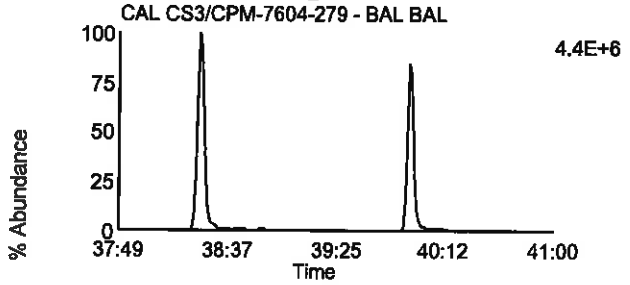
Data File: F130921A_16 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - BAL BAL



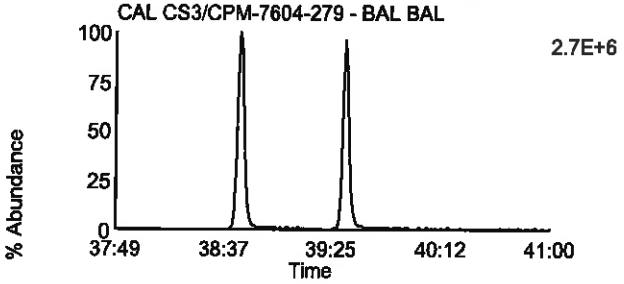
Data File: F130921A_16 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - BAL BAL



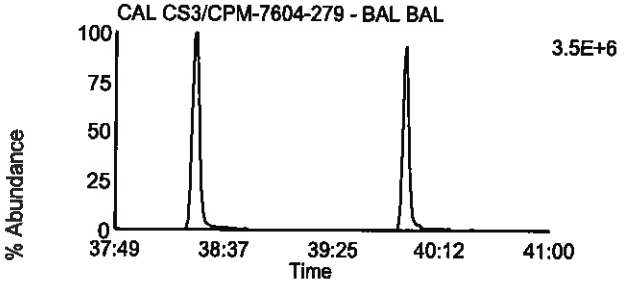
Data File: F130921A_16 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - BAL BAL



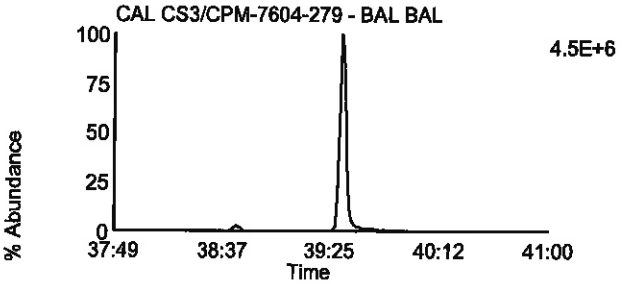
Data File: F130921A_16 G4 C9 - 425.7737
CAL CS3/CPM-7604-279 - BAL BAL



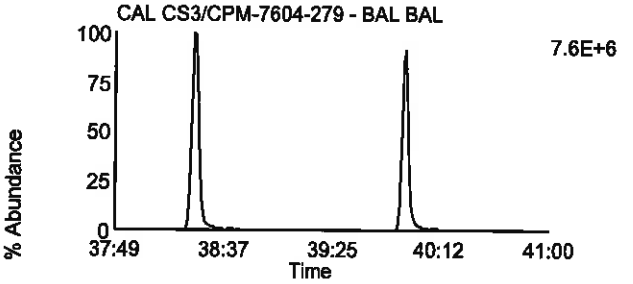
Data File: F130921A_16 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - BAL BAL



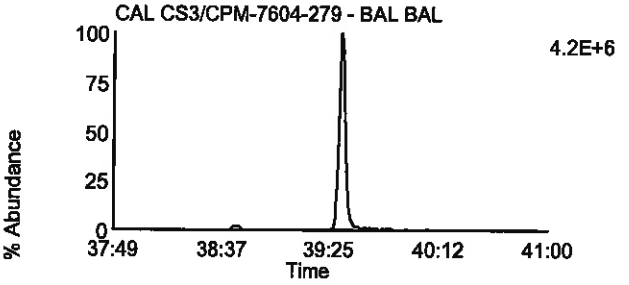
Data File: F130921A_16 G4 C11 - 435.8169
CAL CS3/CPM-7604-279 - BAL BAL



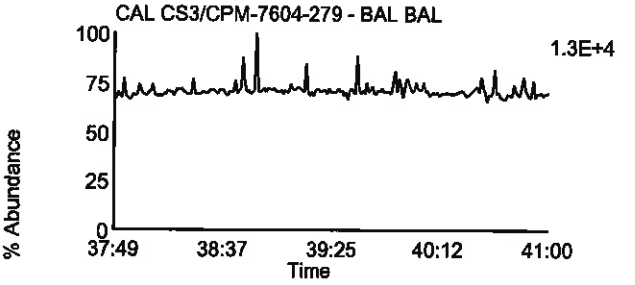
Data File: F130921A_16 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - BAL BAL



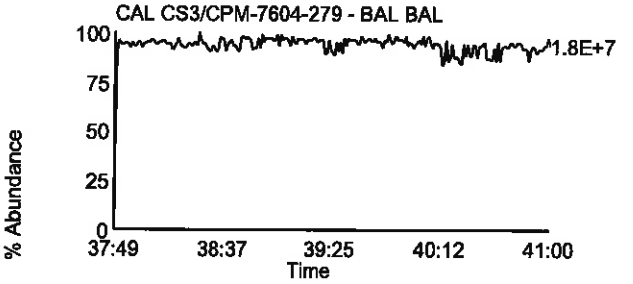
Data File: F130921A_16 G4 C12 - 437.814
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G4 C13 - 479.7165
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - BAL BAL

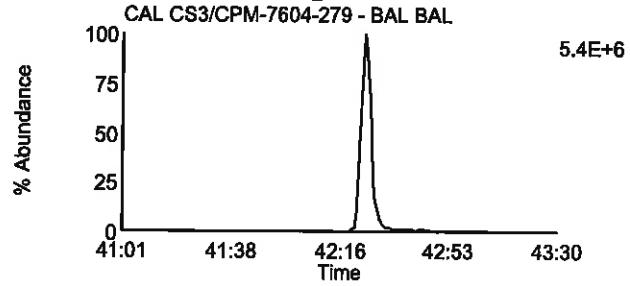


Homologue Group: Octas

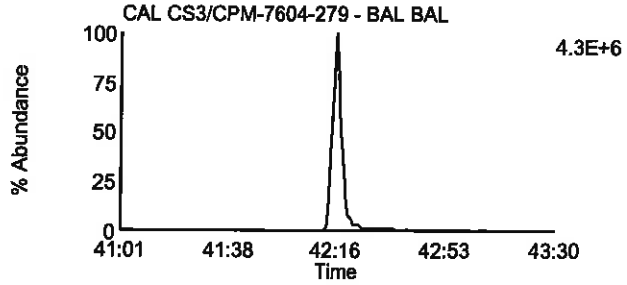
Data File Name: F130921A_16
Date Acquired: 9/21/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

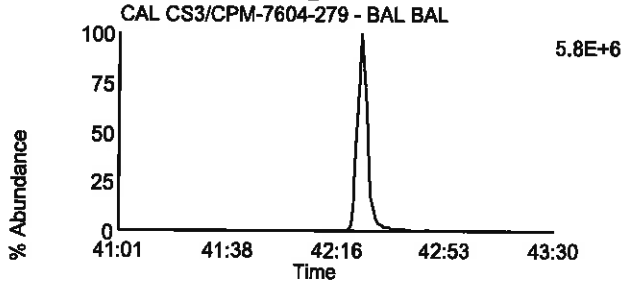
Data File: F130921A_16 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - BAL BAL



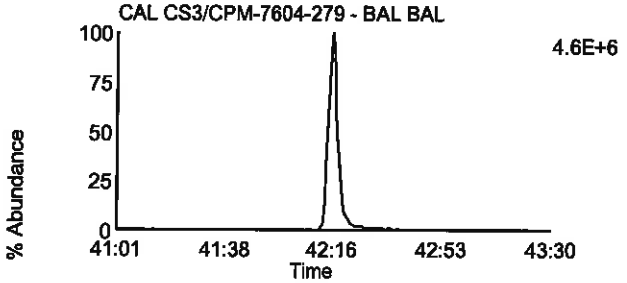
Data File: F130921A_16 G5 C8 - 457.7377
CAL CS3/CPM-7604-279 - BAL BAL



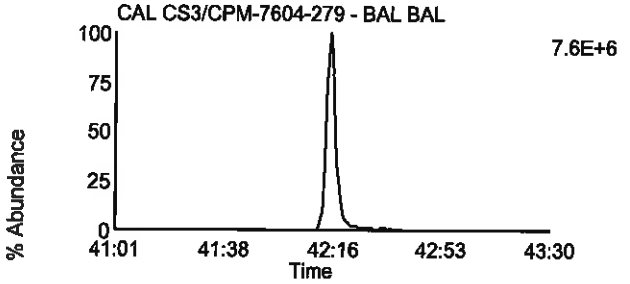
Data File: F130921A_16 G5 C5 - 443.7398
CAL CS3/CPM-7604-279 - BAL BAL



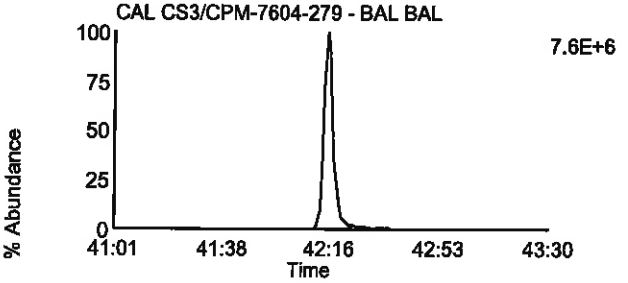
Data File: F130921A_16 G5 C9 - 459.7347
CAL CS3/CPM-7604-279 - BAL BAL



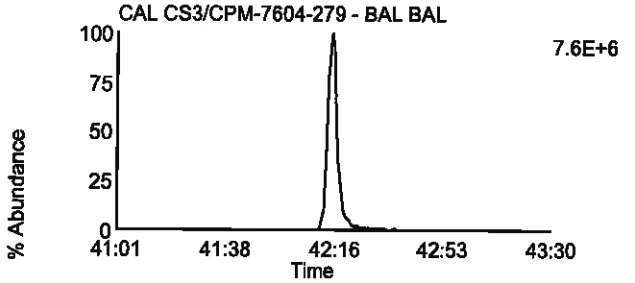
Data File: F130921A_16 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - BAL BAL



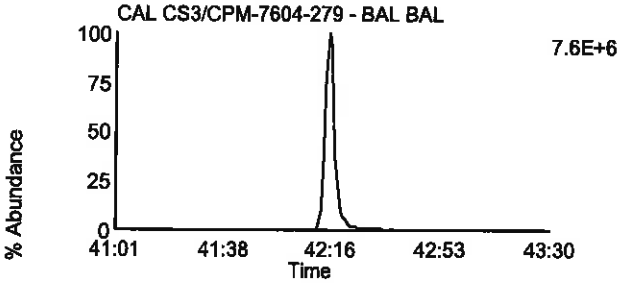
Data File: F130921A_16 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - BAL BAL



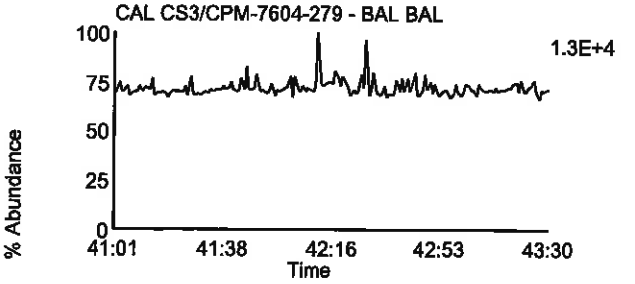
Data File: F130921A_16 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - BAL BAL



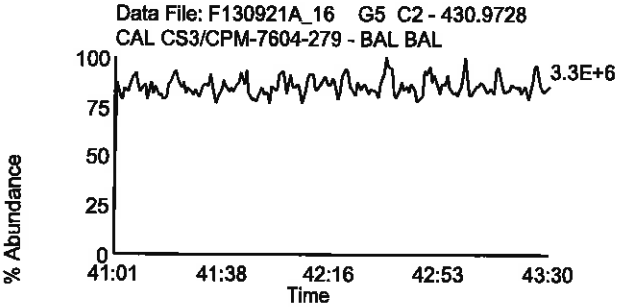
Data File: F130921A_16 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G5 C2 - 430.9728
CAL CS3/CPM-7604-279 - BAL BAL

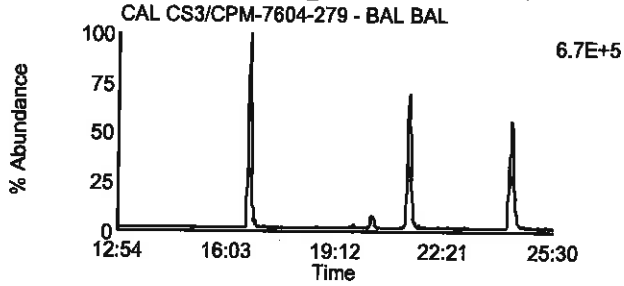


Homologue Group: Tetras

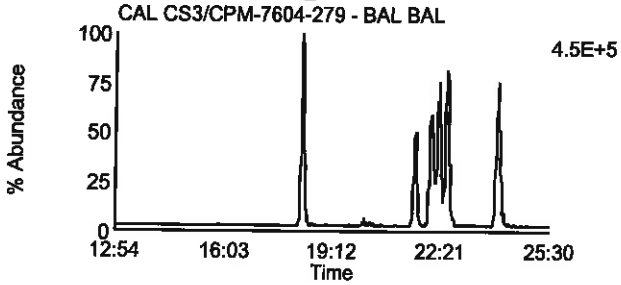
Data File Name: F130921B_16
Date Acquired: 9/22/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

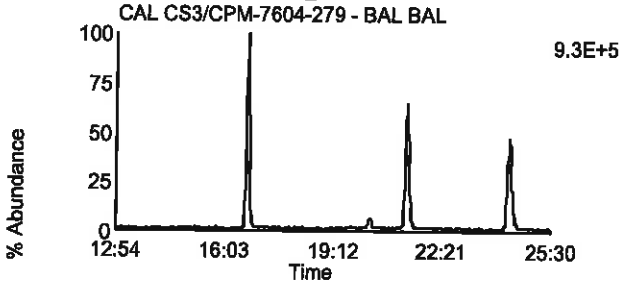
Data File: F130921B_16 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - BAL BAL



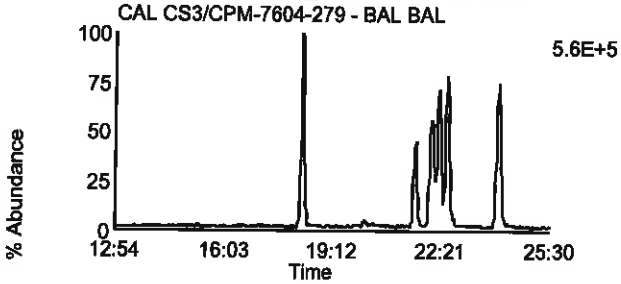
Data File: F130921B_16 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - BAL BAL



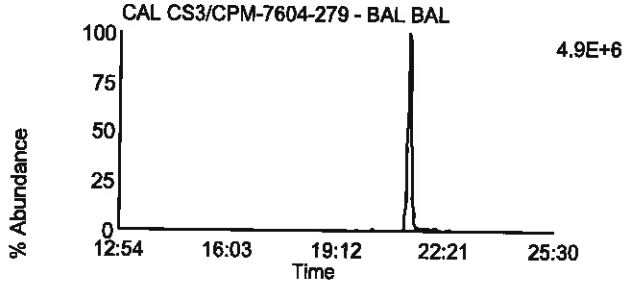
Data File: F130921B_16 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - BAL BAL



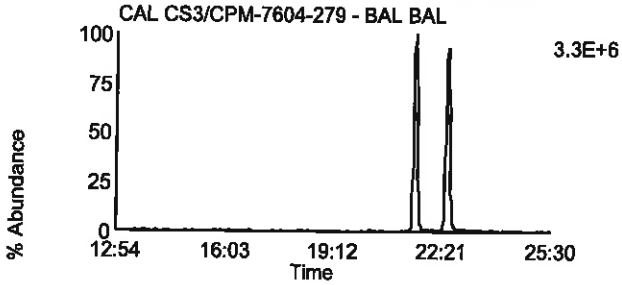
Data File: F130921B_16 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - BAL BAL



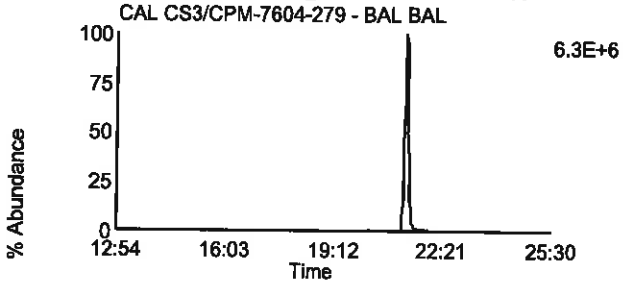
Data File: F130921B_16 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - BAL BAL



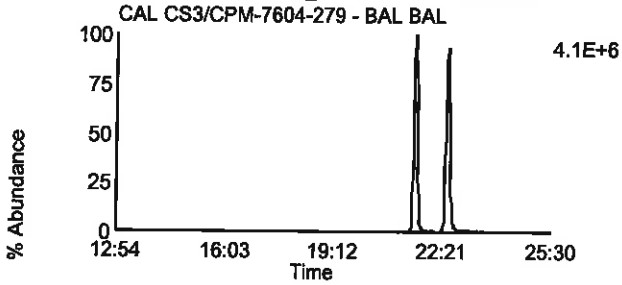
Data File: F130921B_16 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - BAL BAL



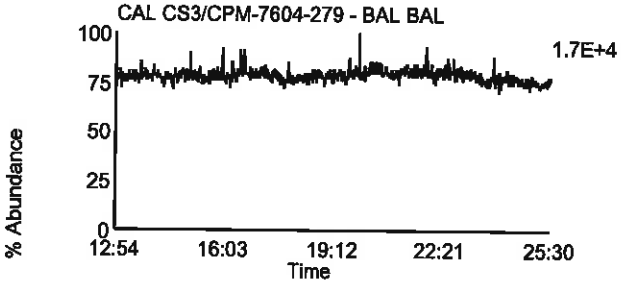
Data File: F130921B_16 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - BAL BAL



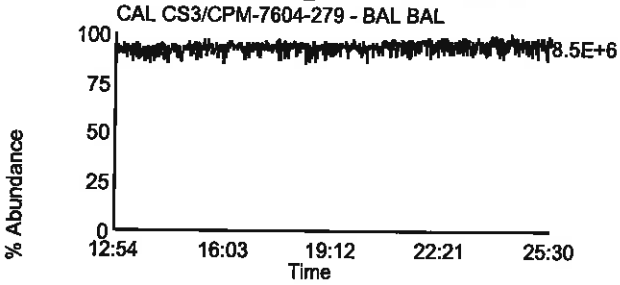
Data File: F130921B_16 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - BAL BAL

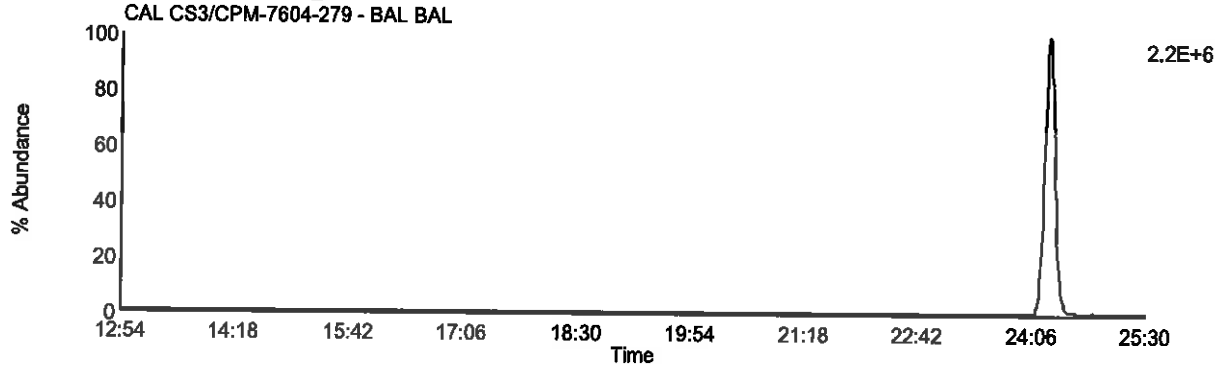


Homologue Group: Penta & Cleanup

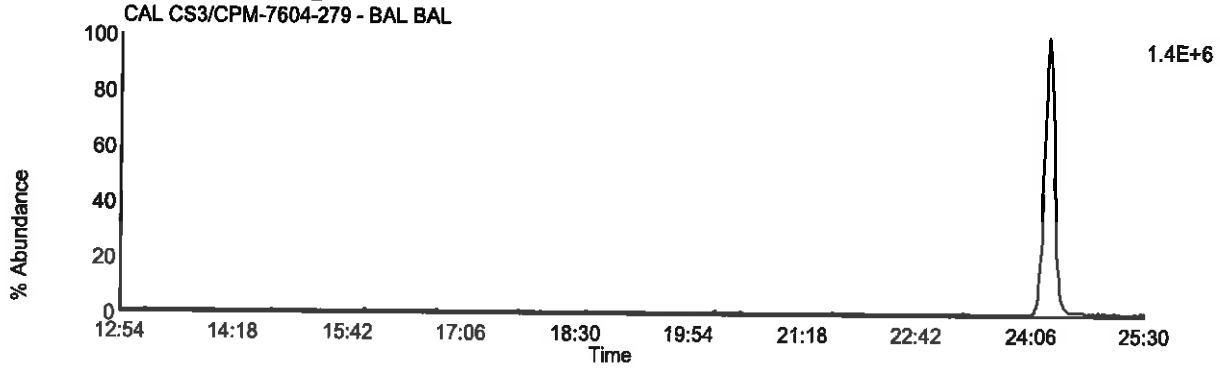
Data File Name: F130921B_16
Date Acquired: 9/22/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

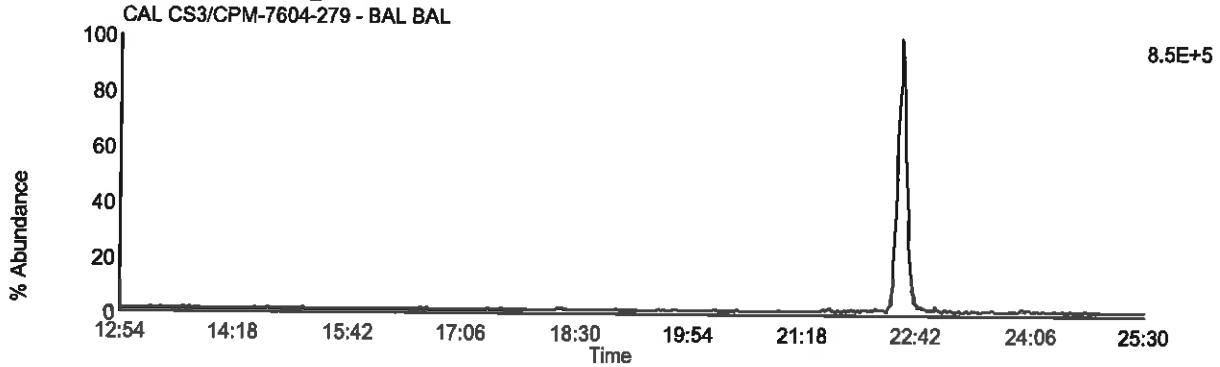
Data File: F130921B_16 G1 C12 - 339.8597
CAL CS3/CPM-7604-279 - BAL BAL



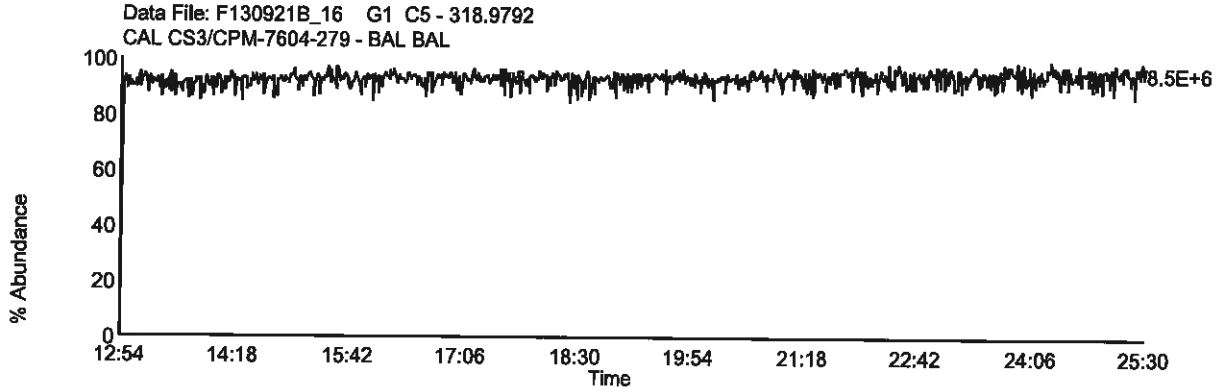
Data File: F130921B_16 G1 C13 - 341.8567
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G1 C9 - 327.8847
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - BAL BAL

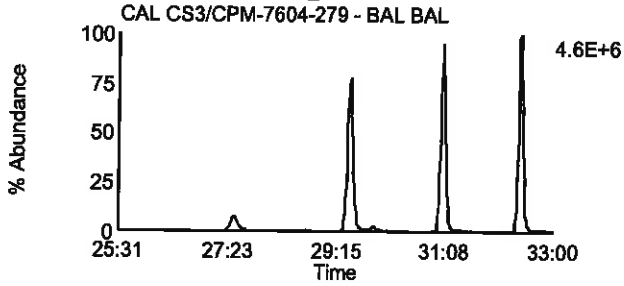


Homologue Group: Pentas

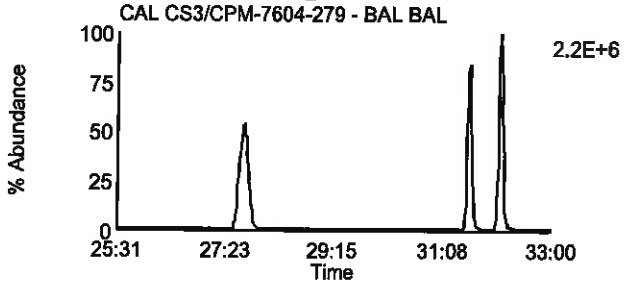
Data File Name: F130921B_16
Date Acquired: 9/22/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

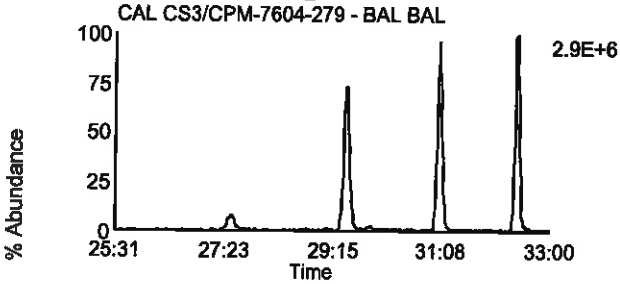
Data File: F130921B_16 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - BAL BAL



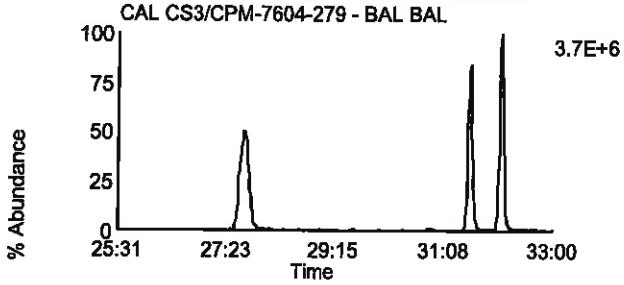
Data File: F130921B_16 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - BAL BAL



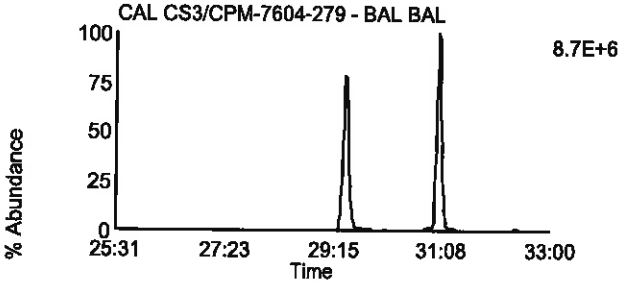
Data File: F130921B_16 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - BAL BAL



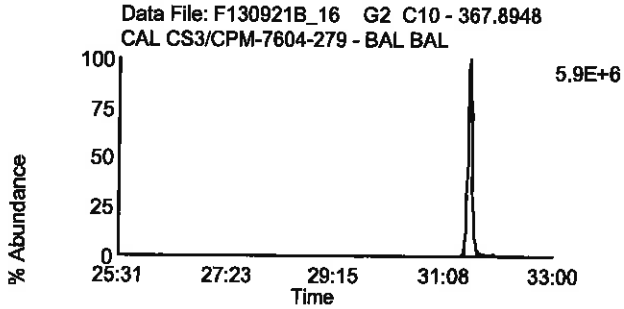
Data File: F130921B_16 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - BAL BAL



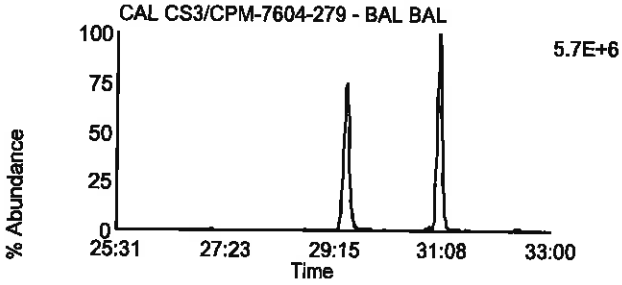
Data File: F130921B_16 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - BAL BAL



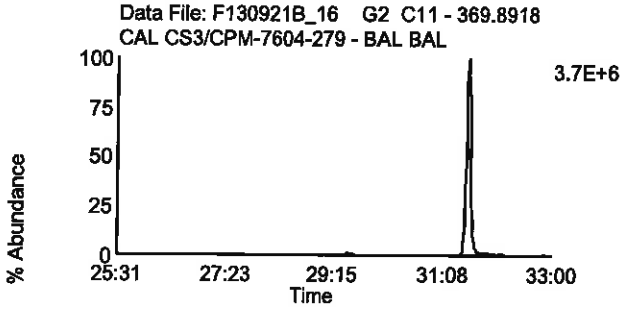
Data File: F130921B_16 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - BAL BAL



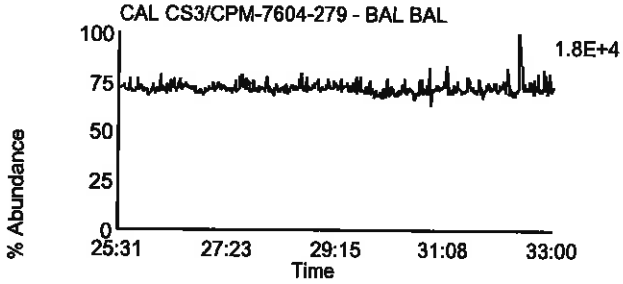
Data File: F130921B_16 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - BAL BAL



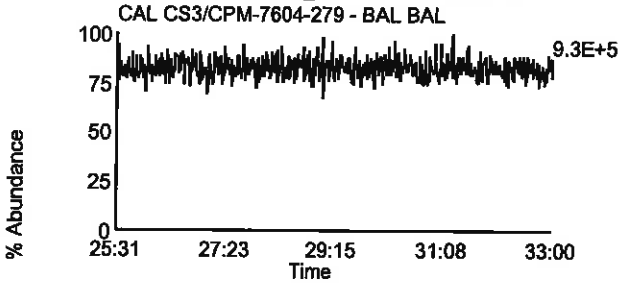
Data File: F130921B_16 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - BAL BAL

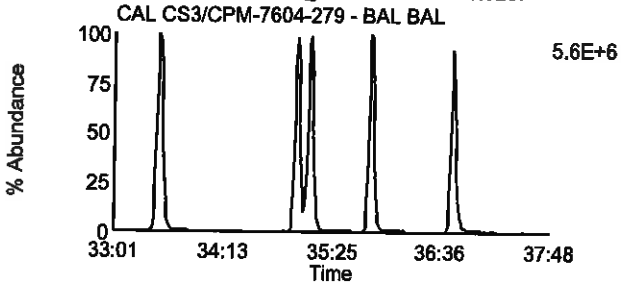


Homologue Group: Hexas

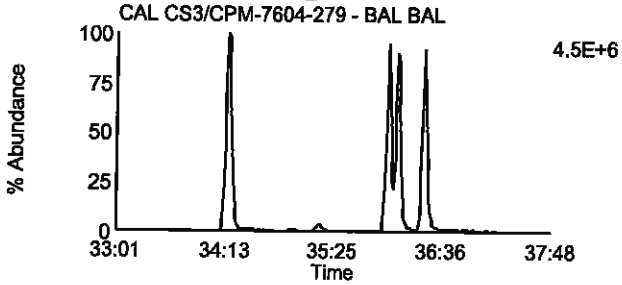
Data File Name: F130921B_16
Date Acquired: 9/22/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

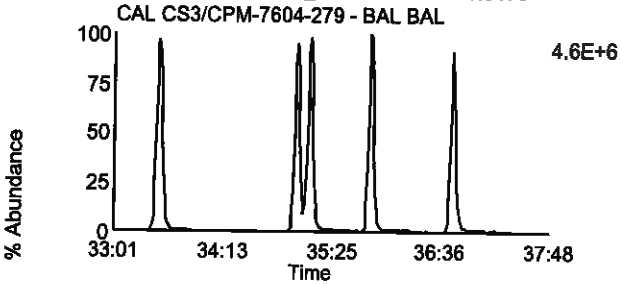
Data File: F130921B_16 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - BAL BAL



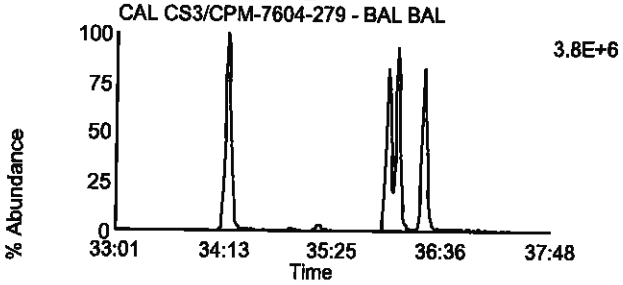
Data File: F130921B_16 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - BAL BAL



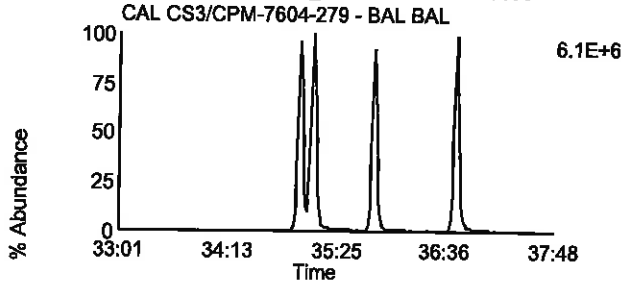
Data File: F130921B_16 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - BAL BAL



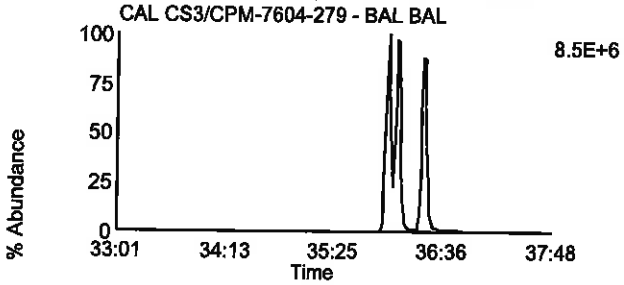
Data File: F130921B_16 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - BAL BAL



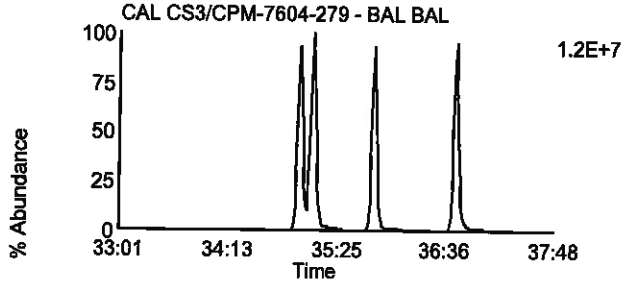
Data File: F130921B_16 G3 C5 - 383.8639
CAL CS3/CPM-7604-279 - BAL BAL



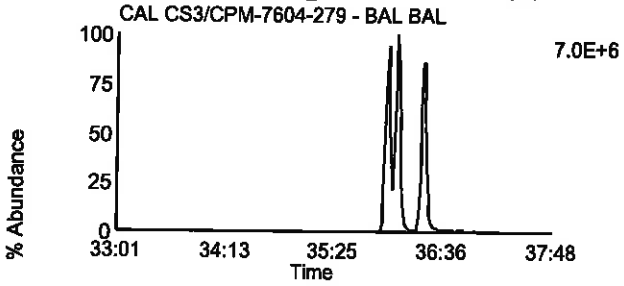
Data File: F130921B_16 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - BAL BAL



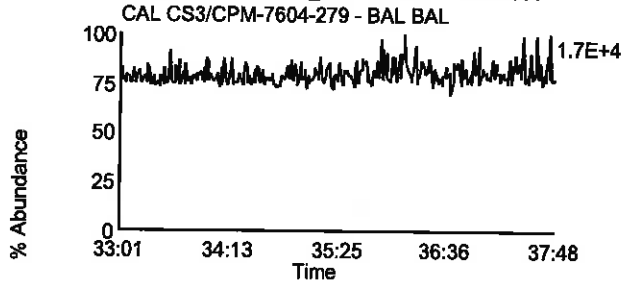
Data File: F130921B_16 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - BAL BAL



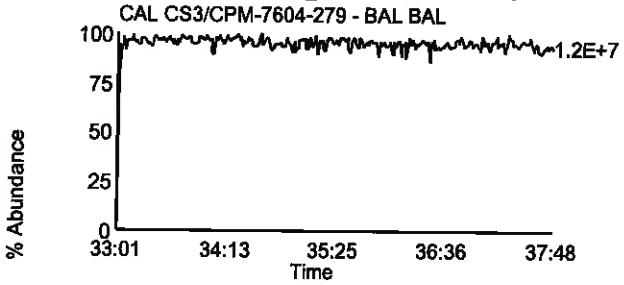
Data File: F130921B_16 G3 C10 - 403.8529
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - BAL BAL

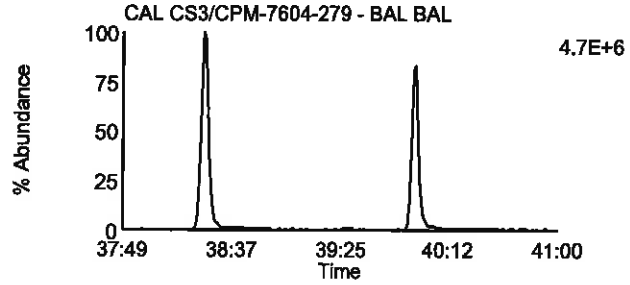


Homologue Group: Heptas

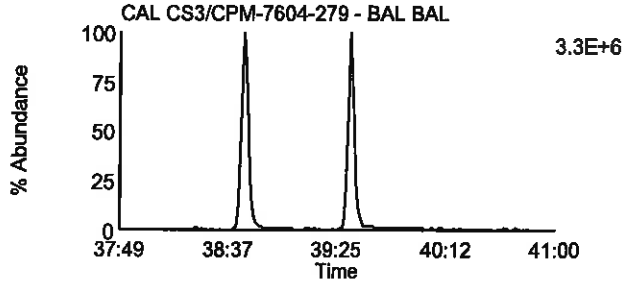
Data File Name: F130921B_16
Date Acquired: 9/22/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

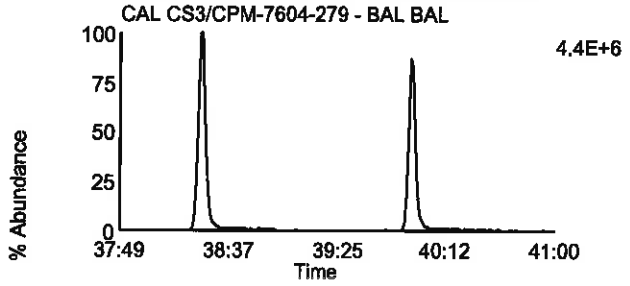
Data File: F130921B_16 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - BAL BAL



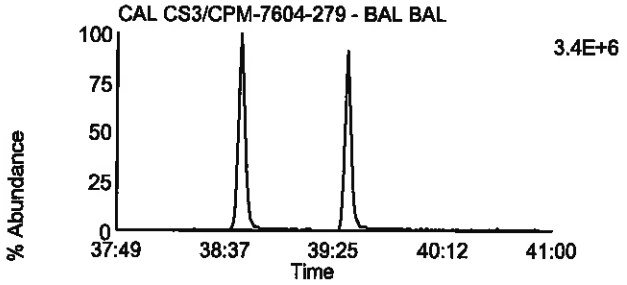
Data File: F130921B_16 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - BAL BAL



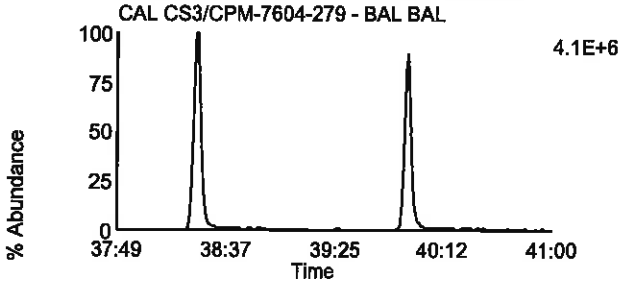
Data File: F130921B_16 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G4 C9 - 425.7737
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G4 C11 - 435.8169
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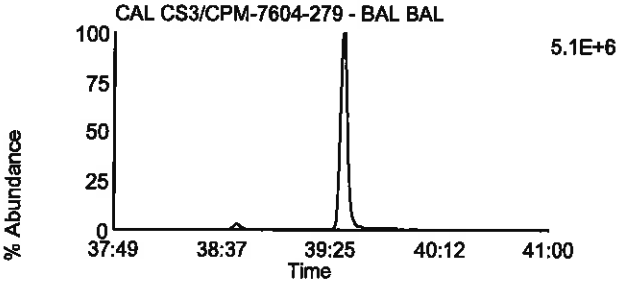
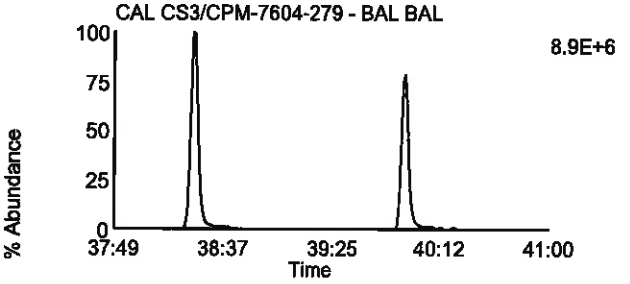
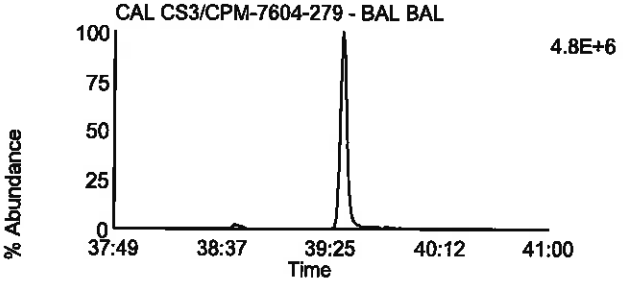


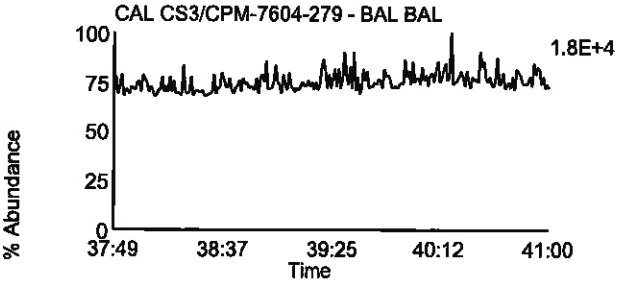
Data File: F130921B_16 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - BAL BAL



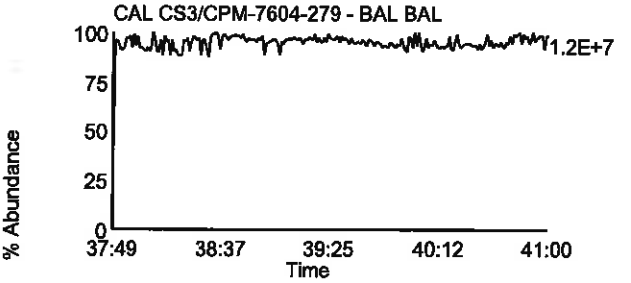
Data File: F130921B_16 G4 C12 - 437.814
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G4 C13 - 479.7165
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - BAL BAL

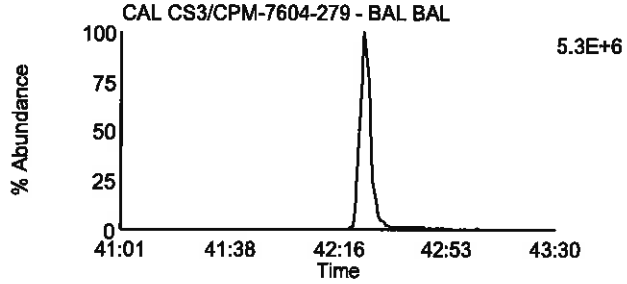


Homologue Group: Octas

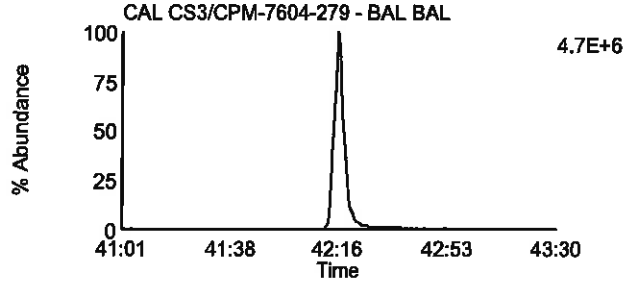
Data File Name: F130921B_16
Date Acquired: 9/22/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130921B_16 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G5 C8 - 457.7377
CAL CS3/CPM-7604-279 - BAL BAL



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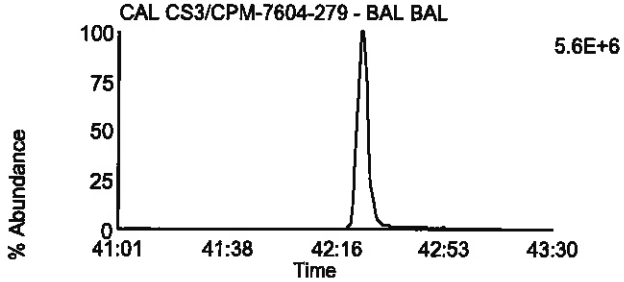
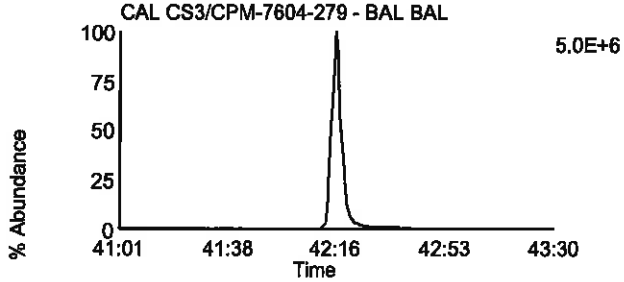
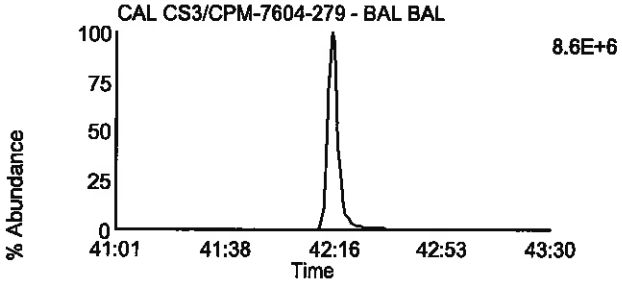
CAL CS3/CPM-7604-279 - BAL BAL



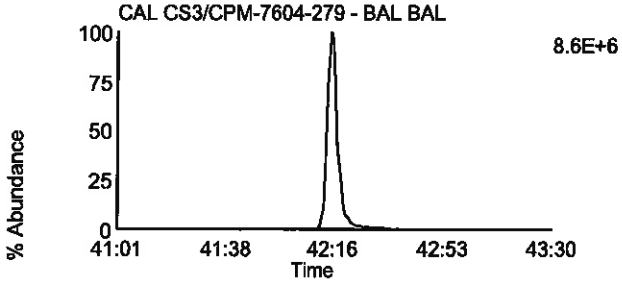
Data File: F130921B_16 G5 C9 - 459.7347
CAL CS3/CPM-7604-279 - BAL BAL



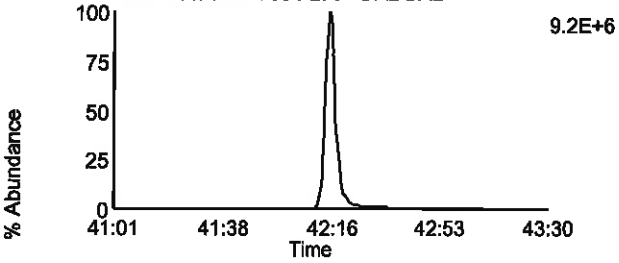
Data File: F130921B_16 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - BAL BAL



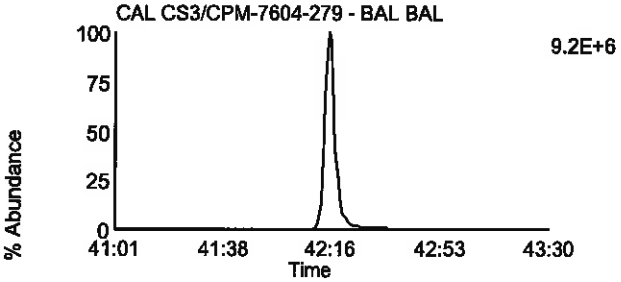
Data File: F130921B_16 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - BAL BAL



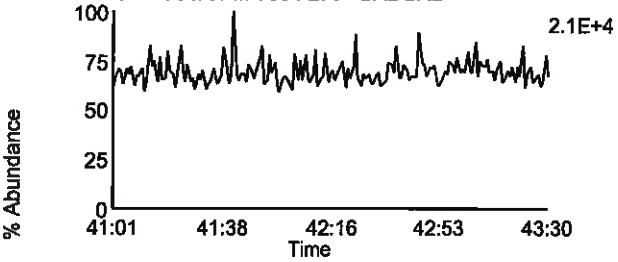
Data File: F130921B_16 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - BAL BAL



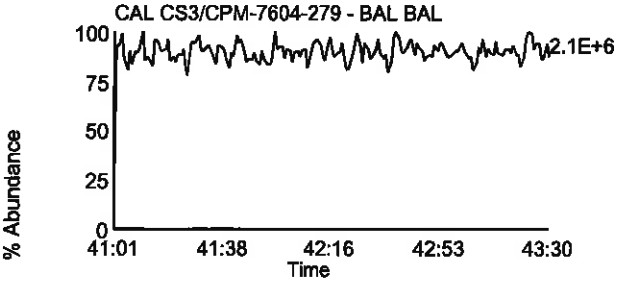
Data File: F130921B_16 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G5 C2 - 430.9728
CAL CS3/CPM-7604-279 - BAL BAL



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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS1-7604-273	Instrument ID	10MSHR05 (F)
Filename	F130918B_04	GC Column ID	USD174324H
Analyzed	09/18/2013 18:22	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:18	6.02e7	7.45e7	9.61e6	1.15e7	----	----	0.81	
2,3,7,8-TCDF	21:20	3.09e5	3.69e5	4.68e4	5.91e4	1.675e3	1.368e3	0.84	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:33	3.77e7	4.66e7	5.65e6	6.91e6	----	----	0.81	
2,3,7,8-TCDD-13C	22:28	3.43e7	4.22e7	4.95e6	6.00e6	----	----	0.81	
2,3,7,8-TCDD-37Cl4	22:30	3.82e5		5.80e4		----	----		
2,3,7,8-TCDD	22:29	2.00e5	2.31e5	3.19e4	3.79e4	7.628e2	8.716e2	0.86	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:27	7.12e7	4.40e7	1.14e7	7.23e6	----	----	1.62	
2,3,4,7,8-PeCDF-13C	31:03	7.06e7	4.34e7	1.48e7	9.29e6	----	----	1.63	
1,2,3,7,8-PeCDF	29:27	1.91e6	1.21e6	3.20e5	2.27e5	2.526e3	1.051e3	1.57	
2,3,4,7,8-PeCDF	31:04	1.93e6	1.28e6	3.61e5	2.38e5	4.564e3	1.951e3	1.51	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:32	3.88e7	2.44e7	7.80e6	4.98e6	----	----	1.59	
1,2,3,7,8-PeCDD	31:34	6.89e5	1.04e6	1.26e5	2.32e5	3.031e3	1.980e3	0.66	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:60	3.45e7	6.56e7	9.02e6	1.72e7	----	----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:09	3.86e7	7.13e7	1.00e7	1.77e7	----	----	0.54	
2,3,4,6,7,8-HxCDF-13C	35:49	3.68e7	6.98e7	1.03e7	1.93e7	----	----	0.53	
1,2,3,7,8,9-HxCDF-13C	36:43	3.33e7	6.19e7	8.95e6	1.65e7	----	----	0.54	
1,2,3,4,7,8-HxCDF	35:01	1.80e6	1.38e6	5.30e5	3.99e5	1.117e3	4.226e2	1.30	
1,2,3,6,7,8-HxCDF	35:09	1.98e6	1.54e6	5.20e5	4.01e5	1.700e3	3.871e2	1.29	
2,3,4,6,7,8-HxCDF	35:50	1.80e6	1.42e6	5.14e5	3.77e5	1.036e3	1.030e2	1.26	
1,2,3,7,8,9-HxCDF	36:45	1.48e6	1.26e6	3.83e5	3.37e5	8.472e2	8.312e2	1.18	

REPORT OF LABORATORY ANALYSIS

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS1-7604-273	Instrument ID	10MSHR05 (F)
Filename	F130918B_04	GC Column ID	USD174324H
Analyzed	09/18/2013 18:22	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	35:60	3.60e7	2.73e7	1.07e7	7.77e6	----	----	1.32	
1,2,3,6,7,8-HxCDD-13C	36:07	3.99e7	3.18e7	1.12e7	8.81e6	----	----	1.26	
1,2,3,7,8,9-HxCDD-13C	36:24	3.89e7	3.13e7	1.08e7	8.73e6	----	----	1.24	
1,2,3,4,7,8-HxCDD	36:01	1.03e6	8.06e5	2.81e5	2.34e5	1.517e3	8.183e2	1.27	
1,2,3,6,7,8-HxCDD	36:07	1.04e6	8.57e5	3.26e5	2.31e5	1.624e3	9.024e2	1.21	
1,2,3,7,8,9-HxCDD	36:25	9.92e5	8.04e5	2.45e5	2.30e5	1.368e3	1.755e3	1.23	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:24	1.78e7	4.05e7	4.64e6	1.12e7	----	----	0.44	
1,2,3,4,7,8,9-HpCDF-13C	39:56	1.35e7	3.19e7	3.81e6	9.31e6	----	----	0.42	
1,2,3,4,6,7,8-HpCDF	38:25	1.01e6	9.29e5	2.78e5	2.68e5	6.039e2	4.329e2	1.09	
1,2,3,4,7,8,9-HpCDF	39:57	7.34e5	7.87e5	2.45e5	2.13e5	1.025e3	5.003e2	0.93	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:29	2.09e7	1.82e7	6.07e6	5.55e6	----	----	1.14	
1,2,3,4,6,7,8-HpCDD	39:30	5.72e5	5.32e5	1.66e5	1.60e5	8.367e2	5.856e2	1.08	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	1.69e6	1.84e6	4.13e5	4.71e5	6.889e2	3.526e2	0.91	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:15	4.85e7	5.33e7	1.23e7	1.31e7	----	----	0.91	
OCDD	42:16	1.25e6	1.36e6	3.10e5	3.33e5	2.237e2	7.351e1	0.92	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS2-7604-276	Instrument ID	10MSHR05 (F)
Filename	F130918B_03	GC Column ID	USD174324H
Analyzed	09/18/2013 17:38	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:17	6.74e7	8.42e7	1.03e7	1.29e7	-----	-----	0.80	
2,3,7,8-TCDF	21:18	1.42e6	1.81e6	2.37e5	2.68e5	-----	-----	0.78	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:32	4.39e7	5.48e7	6.91e6	8.39e6	-----	-----	0.80	
2,3,7,8-TCDD-13C	22:28	4.02e7	5.00e7	5.76e6	7.04e6	-----	-----	0.81	
2,3,7,8-TCDD-37Cl4	22:30	2.00e6		2.94e5		-----	-----		
2,3,7,8-TCDD	22:29	7.98e5	1.10e6	1.21e5	1.69e5	-----	-----	0.73	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:26	8.51e7	5.20e7	1.37e7	8.25e6	-----	-----	1.64	
2,3,4,7,8-PeCDF-13C	31:02	8.27e7	5.17e7	1.66e7	1.02e7	-----	-----	1.60	
1,2,3,7,8-PeCDF	29:27	9.60e6	5.94e6	1.55e6	9.24e5	-----	-----	1.62	
2,3,4,7,8-PeCDF	31:04	9.62e6	5.92e6	1.86e6	1.17e6	-----	-----	1.63	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:31	4.59e7	2.90e7	1.02e7	6.25e6	-----	-----	1.58	
1,2,3,7,8-PeCDD	31:32	3.28e6	5.12e6	7.00e5	1.06e6	-----	-----	0.64	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:59	4.09e7	7.74e7	1.14e7	2.08e7	-----	-----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:08	4.80e7	8.59e7	1.20e7	2.17e7	-----	-----	0.56	
2,3,4,6,7,8-HxCDF-13C	35:48	4.24e7	7.64e7	1.15e7	2.11e7	-----	-----	0.55	
1,2,3,7,8,9-HxCDF-13C	36:43	4.01e7	7.56e7	1.07e7	1.94e7	-----	-----	0.53	
1,2,3,4,7,8-HxCDF	35:01	8.36e6	6.56e6	2.21e6	1.81e6	-----	-----	1.27	
1,2,3,6,7,8-HxCDF	35:09	9.15e6	7.36e6	2.40e6	1.86e6	-----	-----	1.24	
2,3,4,6,7,8-HxCDF	35:49	9.03e6	7.10e6	2.47e6	1.91e6	-----	-----	1.27	
1,2,3,7,8,9-HxCDF	36:44	7.53e6	5.97e6	2.08e6	1.60e6	-----	-----	1.26	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS2-7604-276	Instrument ID	10MSHR05 (F)
Filename	F130918B_03	GC Column ID	USD174324H
Analyzed	09/18/2013 17:38	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	35:60	4.47e7	3.50e7	1.27e7	9.82e6	----	----	1.28	
1,2,3,6,7,8-HxCDD-13C	36:06	4.91e7	3.93e7	1.31e7	1.06e7	----	----	1.25	
1,2,3,7,8,9-HxCDD-13C	36:24	4.67e7	3.71e7	1.20e7	9.45e6	----	----	1.26	
1,2,3,4,7,8-HxCDD	36:01	5.04e6	3.95e6	1.48e6	1.24e6	----	----	1.28	
1,2,3,6,7,8-HxCDD	36:07	5.49e6	4.19e6	1.51e6	1.14e6	----	----	1.31	
1,2,3,7,8,9-HxCDD	36:25	5.08e6	4.08e6	1.41e6	1.13e6	----	----	1.24	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:23	2.14e7	4.57e7	6.36e6	1.32e7	----	----	0.47	
1,2,3,4,7,8,9-HpCDF-13C	39:56	1.79e7	3.77e7	5.76e6	1.23e7	----	----	0.47	
1,2,3,4,6,7,8-HpCDF	38:24	4.82e6	4.85e6	1.34e6	1.32e6	----	----	0.99	
1,2,3,4,7,8,9-HpCDF	39:57	3.81e6	3.56e6	1.13e6	1.06e6	----	----	1.07	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:29	2.48e7	2.44e7	6.76e6	6.94e6	----	----	1.01	
1,2,3,4,6,7,8-HpCDD	39:30	2.77e6	2.82e6	7.76e5	8.19e5	----	----	0.98	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	8.79e6	9.35e6	2.30e6	2.39e6	----	----	0.94	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:15	6.30e7	6.91e7	1.53e7	1.69e7	----	----	0.91	
OCDD	42:15	6.56e6	7.35e6	1.78e6	1.90e6	----	----	0.89	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR05 (F)
Filename	F130918B_02	GC Column ID	USD174324H
Analyzed	09/18/2013 16:50	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:18	9.61e7	1.20e8	1.46e7	1.83e7	----	----	0.80	
2,3,7,8-TCDF	21:19	1.09e7	1.34e7	1.64e6	2.06e6	----	----	0.81	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:34	5.71e7	7.00e7	8.57e6	1.09e7	----	----	0.82	
2,3,7,8-TCDD-13C	22:29	5.81e7	7.15e7	8.31e6	1.05e7	----	----	0.81	
2,3,7,8-TCDD-37Cl4	22:31	1.47e7		2.09e6		----	----		
2,3,7,8-TCDD	22:31	6.62e6	8.36e6	9.32e5	1.16e6	----	----	0.79	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:27	1.26e8	7.77e7	2.14e7	1.34e7	----	----	1.62	
2,3,4,7,8-PeCDF-13C	31:03	1.32e8	7.98e7	2.64e7	1.62e7	----	----	1.65	
1,2,3,7,8-PeCDF	29:28	7.04e7	4.48e7	1.16e7	7.37e6	----	----	1.57	
2,3,4,7,8-PeCDF	31:05	7.59e7	4.69e7	1.47e7	9.09e6	----	----	1.62	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:32	7.40e7	4.57e7	1.56e7	9.58e6	----	----	1.62	
1,2,3,7,8-PeCDD	31:34	2.69e7	4.17e7	5.56e6	8.48e6	----	----	0.64	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:60	6.31e7	1.18e8	1.80e7	3.31e7	----	----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:09	6.88e7	1.29e8	1.80e7	3.38e7	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C	35:49	6.58e7	1.21e8	1.93e7	3.50e7	----	----	0.54	
1,2,3,7,8,9-HxCDF-13C	36:43	6.67e7	1.24e8	1.75e7	3.27e7	----	----	0.54	
1,2,3,4,7,8-HxCDF	35:01	6.49e7	4.97e7	1.79e7	1.39e7	----	----	1.31	
1,2,3,6,7,8-HxCDF	35:09	6.94e7	5.48e7	1.85e7	1.43e7	----	----	1.27	
2,3,4,6,7,8-HxCDF	35:50	6.97e7	5.44e7	1.99e7	1.54e7	----	----	1.28	
1,2,3,7,8,9-HxCDF	36:45	6.38e7	4.90e7	1.69e7	1.30e7	----	----	1.30	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR05 (F)
Filename	F130918B_02	GC Column ID	USD174324H
Analyzed	09/18/2013 16:50	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:01	6.64e7	5.20e7	2.02e7	1.55e7	----	----	1.28	
1,2,3,6,7,8-HxCDD-13C	36:07	7.69e7	6.17e7	2.08e7	1.68e7	----	----	1.25	
1,2,3,7,8,9-HxCDD-13C	36:24	7.33e7	5.74e7	1.98e7	1.51e7	----	----	1.28	
1,2,3,4,7,8-HxCDD	36:01	3.93e7	3.04e7	1.16e7	8.88e6	----	----	1.30	
1,2,3,6,7,8-HxCDD	36:07	4.19e7	3.27e7	1.16e7	9.22e6	----	----	1.28	
1,2,3,7,8,9-HxCDD	36:25	4.16e7	3.31e7	1.14e7	9.02e6	----	----	1.26	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:24	3.39e7	7.35e7	9.84e6	2.07e7	----	----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	39:57	2.60e7	5.64e7	7.80e6	1.58e7	----	----	0.46	
1,2,3,4,6,7,8-HpCDF	38:25	3.61e7	3.53e7	1.00e7	9.66e6	----	----	1.02	
1,2,3,4,7,8,9-HpCDF	39:58	2.87e7	2.94e7	8.62e6	9.07e6	----	----	0.98	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:29	3.90e7	3.60e7	1.25e7	1.13e7	----	----	1.08	
1,2,3,4,6,7,8-HpCDD	39:30	2.23e7	2.19e7	6.22e6	6.32e6	----	----	1.02	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	7.10e7	7.54e7	1.77e7	1.93e7	----	----	0.94	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:15	9.54e7	1.05e8	2.45e7	2.65e7	----	----	0.90	
OCDD	42:16	5.13e7	5.73e7	1.31e7	1.46e7	----	----	0.90	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS4-7604-277	Instrument ID	10MSHR05 (F)
Filename	F130918B_06	GC Column ID	USD174324H
Analyzed	09/18/2013 19:54	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:17	6.97e7	8.68e7	1.04e7	1.29e7	----	----	0.80	
2,3,7,8-TCDF	21:18	3.16e7	4.00e7	4.84e6	6.11e6	----	----	0.79	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:32	4.33e7	5.46e7	6.62e6	8.08e6	----	----	0.79	
2,3,7,8-TCDD-13C	22:27	4.11e7	5.11e7	5.71e6	7.13e6	----	----	0.80	
2,3,7,8-TCDD-37Cl4	22:29	4.32e7		6.16e6		----	----		
2,3,7,8-TCDD	22:29	1.88e7	2.40e7	2.70e6	3.42e6	----	----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:25	8.91e7	5.49e7	1.42e7	8.82e6	----	----	1.62	
2,3,4,7,8-PeCDF-13C	31:02	8.64e7	5.25e7	1.64e7	1.01e7	----	----	1.65	
1,2,3,7,8-PeCDF	29:27	2.06e8	1.28e8	3.31e7	2.10e7	----	----	1.61	
2,3,4,7,8-PeCDF	31:04	2.06e8	1.30e8	3.97e7	2.53e7	----	----	1.59	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:30	4.82e7	3.08e7	9.89e6	6.24e6	----	----	1.57	
1,2,3,7,8-PeCDD	31:32	7.12e7	1.10e8	1.38e7	2.23e7	----	----	0.64	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:59	4.27e7	8.16e7	1.12e7	2.26e7	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:08	4.88e7	9.15e7	1.26e7	2.30e7	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C	35:48	4.35e7	7.93e7	1.22e7	2.22e7	----	----	0.55	
1,2,3,7,8,9-HxCDF-13C	36:42	4.21e7	7.76e7	1.09e7	2.07e7	----	----	0.54	
1,2,3,4,7,8-HxCDF	34:60	1.82e8	1.41e8	4.85e7	3.74e7	----	----	1.29	
1;2,3,6,7,8-HxCDF	35:09	2.00e8	1.53e8	5.07e7	3.88e7	----	----	1.30	
2,3,4,6,7,8-HxCDF	35:49	1.91e8	1.46e8	5.35e7	4.09e7	----	----	1.31	
1,2,3,7,8,9-HxCDF	36:44	1.68e8	1.28e8	4.46e7	3.43e7	----	----	1.31	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS4-7604-277	Instrument ID	10MSHR05 (F)
Filename	F130918B_06	GC Column ID	USD174324H
Analyzed	09/18/2013 19:54	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	35:60	4.53e7	3.40e7	1.29e7	9.67e6	----	----	1.33	
1,2,3,6,7,8-HxCDD-13C	36:06	5.12e7	4.17e7	1.43e7	1.13e7	----	----	1.23	
1,2,3,7,8,9-HxCDD-13C	36:23	4.69e7	3.73e7	1.30e7	1.00e7	----	----	1.26	
1,2,3,4,7,8-HxCDD	36:01	1.09e8	7.89e7	3.15e7	2.31e7	----	----	1.38	
1,2,3,6,7,8-HxCDD	36:07	1.09e8	8.87e7	3.06e7	2.43e7	----	----	1.23	
1,2,3,7,8,9-HxCDD	36:24	1.10e8	8.45e7	2.92e7	2.35e7	----	----	1.30	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:23	2.17e7	4.81e7	5.95e6	1.29e7	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	39:56	1.85e7	4.11e7	5.87e6	1.23e7	----	----	0.45	
1,2,3,4,6,7,8-HpCDF	38:24	9.59e7	9.42e7	2.73e7	2.50e7	----	----	1.02	
1,2,3,4,7,8,9-HpCDF	39:56	8.50e7	7.81e7	2.48e7	2.50e7	----	----	1.09	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:29	2.81e7	2.52e7	8.61e6	7.37e6	----	----	1.11	
1,2,3,4,6,7,8-HpCDD	39:29	6.64e7	6.30e7	2.15e7	1.95e7	----	----	1.05	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	1.98e8	2.11e8	5.18e7	5.14e7	----	----	0.93	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:14	6.43e7	6.89e7	1.66e7	1.75e7	----	----	0.93	
OCDD	42:15	1.42e8	1.60e8	3.54e7	4.03e7	----	----	0.89	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS5-7604-278	Instrument ID	10MSHR05 (F)
Filename	F130918B_05	GC Column ID	USD174324H
Analyzed	09/18/2013 19:08	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:18	8.07e7	1.03e8	1.24e7	1.58e7	----	----	0.79	
2,3,7,8-TCDF	21:18	1.86e8	2.33e8	2.87e7	3.51e7	----	----	0.80	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:33	4.95e7	6.21e7	7.54e6	9.48e6	----	----	0.80	
2,3,7,8-TCDD-13C	22:28	4.87e7	6.12e7	7.19e6	8.88e6	----	----	0.80	
2,3,7,8-TCDD-37Cl4	22:30	2.56e8		3.70e7		----	----		
2,3,7,8-TCDD	22:30	1.13e8	1.43e8	1.62e7	2.14e7	----	----	0.79	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:26	1.06e8	6.57e7	1.65e7	1.05e7	----	----	1.61	
2,3,4,7,8-PeCDF-13C	31:03	1.04e8	6.41e7	2.06e7	1.25e7	----	----	1.62	
1,2,3,7,8-PeCDF	29:27	1.24e9	7.66e8	2.04e8	1.26e8	----	----	1.61	
2,3,4,7,8-PeCDF	31:04	1.25e9	7.76e8	2.56e8	1.58e8	----	----	1.61	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:31	5.95e7	3.71e7	1.26e7	7.71e6	----	----	1.61	
1,2,3,7,8-PeCDD	31:33	4.37e8	6.75e8	9.34e7	1.46e8	----	----	0.65	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:60	5.32e7	9.94e7	1.47e7	2.69e7	----	----	0.54	
1,2,3,6,7,8-HxCDF-13C	35:09	6.11e7	1.11e8	1.55e7	2.88e7	----	----	0.55	
2,3,4,6,7,8-HxCDF-13C	35:48	5.33e7	9.96e7	1.50e7	2.82e7	----	----	0.53	
1,2,3,7,8,9-HxCDF-13C	36:43	5.43e7	1.01e8	1.53e7	2.82e7	----	----	0.54	
1,2,3,4,7,8-HxCDF	35:01	1.14e9	8.95e8	3.12e8	2.43e8	----	----	1.27	
1,2,3,6,7,8-HxCDF	35:09	1.24e9	9.68e8	3.23e8	2.48e8	----	----	1.28	
2,3,4,6,7,8-HxCDF	35:50	1.16e9	9.15e8	3.20e8	2.56e8	----	----	1.26	
1,2,3,7,8,9-HxCDF	36:44	1.06e9	8.07e8	2.92e8	2.30e8	----	----	1.31	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS5-7604-278	Instrument ID	10MSHR05 (F)
Filename	F130918B_05	GC Column ID	USD174324H
Analyzed	09/18/2013 19:08	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	35:60	5.69e7	4.42e7	1.73e7	1.34e7	----	----	1.29	
1,2,3,6,7,8-HxCDD-13C	36:07	6.46e7	5.05e7	1.74e7	1.36e7	----	----	1.28	
1,2,3,7,8,9-HxCDD-13C	36:24	6.00e7	4.71e7	1.64e7	1.27e7	----	----	1.27	
1,2,3,4,7,8-HxCDD	36:01	6.75e8	5.22e8	2.01e8	1.56e8	----	----	1.29	
1,2,3,6,7,8-HxCDD	36:07	6.89e8	5.34e8	1.85e8	1.46e8	----	----	1.29	
1,2,3,7,8,9-HxCDD	36:25	6.77e8	5.31e8	1.81e8	1.40e8	----	----	1.28	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:24	2.70e7	5.90e7	7.89e6	1.63e7	----	----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	39:56	2.23e7	5.05e7	6.64e6	1.57e7	----	----	0.44	
1,2,3,4,6,7,8-HpCDF	38:24	6.03e8	6.24e8	1.84e8	1.77e8	----	----	0.97	
1,2,3,4,7,8,9-HpCDF	39:57	5.61e8	5.22e8	1.81e8	1.65e8	----	----	1.07	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:29	3.42e7	3.09e7	9.56e6	8.75e6	----	----	1.11	
1,2,3,4,6,7,8-HpCDD	39:30	4.09e8	3.86e8	1.20e8	1.11e8	----	----	1.06	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	1.39e9	1.47e9	3.66e8	3.91e8	----	----	0.95	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:15	8.74e7	9.61e7	2.23e7	2.41e7	----	----	0.91	
OCDD	42:15	9.71e8	1.07e9	2.41e8	2.69e8	----	----	0.91	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By_____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS1-7604-273	Instrument ID	10MSHR06 (U)
Filename	U130729B_11	GC Column ID	USD227224H
Analyzed	07/29/2013 23:48	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:49	5.76e7	7.40e7	8.39e6	1.11e7	-----	-----	0.78	
2,3,7,8-TCDF	22:53	2.89e5	3.26e5	4.09e4	4.51e4	-----	-----	0.89	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:08	3.71e7	4.66e7	5.27e6	6.57e6	-----	-----	0.80	
2,3,7,8-TCDD-13C	24:07	3.70e7	4.76e7	5.21e6	6.42e6	-----	-----	0.78	
2,3,7,8-TCDD-37Cl4	24:07	4.71e5		7.50e4		-----	-----		
2,3,7,8-TCDD	24:09	2.10e5	2.82e5	2.76e4	4.45e4	-----	-----	0.74	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:27	5.99e7	3.83e7	1.12e7	7.18e6	-----	-----	1.56	
2,3,4,7,8-PeCDF-13C	31:54	5.90e7	3.74e7	1.20e7	7.73e6	-----	-----	1.58	
1,2,3,7,8-PeCDF	30:29	1.24e6	8.50e5	2.51e5	1.68e5	-----	-----	1.46	
2,3,4,7,8-PeCDF	31:56	1.33e6	9.30e5	2.82e5	2.19e5	-----	-----	1.43	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:22	3.74e7	2.36e7	8.17e6	5.12e6	-----	-----	1.58	
1,2,3,7,8-PeCDD	32:23	6.28e5	1.02e6	1.34e5	2.07e5	-----	-----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:47	2.36e7	4.52e7	6.57e6	1.23e7	-----	-----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:55	2.86e7	5.51e7	7.15e6	1.37e7	-----	-----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:37	2.68e7	5.12e7	6.51e6	1.29e7	-----	-----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:36	2.37e7	4.47e7	5.55e6	1.05e7	-----	-----	0.53	
1,2,3,4,7,8-HxCDF	35:48	1.02e6	8.85e5	3.05e5	2.43e5	-----	-----	1.15	
1,2,3,6,7,8-HxCDF	35:56	1.17e6	9.33e5	3.09e5	2.50e5	-----	-----	1.25	
2,3,4,6,7,8-HxCDF	36:39	1.07e6	8.87e5	3.11e5	2.69e5	-----	-----	1.21	
1,2,3,7,8,9-HxCDF	37:37	8.74e5	7.51e5	2.04e5	1.96e5	-----	-----	1.16	

REPORT OF LABORATORY ANALYSIS

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Fax: 612- 607-6444

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS1-7604-273	Instrument ID	10MSHR06 (U)
Filename	U130729B_11	GC Column ID	USD227224H
Analyzed	07/29/2013 23:48	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:49	3.07e7	2.41e7	9.32e6	7.13e6	-----	-----	1.27	
1,2,3,6,7,8-HxCDD-13C	36:56	3.78e7	2.98e7	9.38e6	7.44e6	-----	-----	1.27	
1,2,3,7,8,9-HxCDD-13C	37:14	3.56e7	2.82e7	8.26e6	6.71e6	-----	-----	1.26	
1,2,3,4,7,8-HxCDD	36:51	7.87e5	6.85e5	2.19e5	2.04e5	-----	-----	1.15	
1,2,3,6,7,8-HxCDD	36:57	8.83e5	7.72e5	2.35e5	1.82e5	-----	-----	1.14	
1,2,3,7,8,9-HxCDD	37:15	8.71e5	7.38e5	2.01e5	1.70e5	-----	-----	1.18	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	39:15	2.08e7	4.66e7	5.77e6	1.25e7	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	40:53	1.68e7	3.75e7	4.51e6	9.86e6	-----	-----	0.45	
1,2,3,4,6,7,8-HpCDF	39:16	1.16e6	1.13e6	3.25e5	3.36e5	-----	-----	1.03	
1,2,3,4,7,8,9-HpCDF	40:54	9.95e5	9.40e5	2.56e5	2.75e5	-----	-----	1.06	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	40:23	2.79e7	2.59e7	7.17e6	6.78e6	-----	-----	1.08	
1,2,3,4,6,7,8-HpCDD	40:23	7.84e5	7.93e5	1.91e5	1.86e5	-----	-----	0.99	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	43:28	1.35e6	1.44e6	3.57e5	3.34e5	-----	-----	0.94	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	43:16	4.44e7	4.88e7	1.05e7	1.15e7	-----	-----	0.91	
OCDD	43:16	1.11e6	1.39e6	2.50e5	3.23e5	-----	-----	0.79	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By_____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS2-7604-276	Instrument ID	10MSHR06 (U)
Filename	U130729B_10	GC Column ID	USD227224H
Analyzed	07/29/2013 23:00	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:49	5.19e7	6.80e7	7.11e6	9.25e6	----	----	0.76	
2,3,7,8-TCDF	22:52	9.32e5	1.28e6	1.42e5	1.93e5	----	----	0.73	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:08	3.56e7	4.47e7	5.00e6	6.36e6	----	----	0.80	
2,3,7,8-TCDD-13C	24:07	3.51e7	4.48e7	4.86e6	5.99e6	----	----	0.78	
2,3,7,8-TCDD-37Cl4	24:08	1.82e6		2.44e5		----	----		
2,3,7,8-TCDD	24:09	7.28e5	9.24e5	1.01e5	1.29e5	----	----	0.79	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:28	5.59e7	3.65e7	1.01e7	6.59e6	----	----	1.53	
2,3,4,7,8-PeCDF-13C	31:54	5.80e7	3.66e7	1.24e7	8.05e6	----	----	1.58	
1,2,3,7,8-PeCDF	30:29	4.87e6	3.18e6	9.66e5	5.95e5	----	----	1.53	
2,3,4,7,8-PeCDF	31:56	5.23e6	3.45e6	1.04e6	7.30e5	----	----	1.52	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:22	3.70e7	2.33e7	7.83e6	5.01e6	----	----	1.59	
1,2,3,7,8-PeCDD	32:23	2.30e6	3.80e6	5.13e5	7.98e5	----	----	0.60	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:47	2.36e7	4.51e7	6.42e6	1.22e7	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:55	2.72e7	5.38e7	6.73e6	1.31e7	----	----	0.51	
2,3,4,6,7,8-HxCDF-13C	36:38	2.49e7	4.75e7	6.45e6	1.24e7	----	----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:36	2.36e7	4.58e7	5.88e6	1.12e7	----	----	0.52	
1,2,3,4,7,8-HxCDF	35:48	4.13e6	3.32e6	1.03e6	8.73e5	----	----	1.24	
1,2,3,6,7,8-HxCDF	35:57	4.44e6	3.62e6	1.14e6	8.91e5	----	----	1.23	
2,3,4,6,7,8-HxCDF	36:39	4.52e6	3.63e6	1.22e6	1.01e6	----	----	1.25	
1,2,3,7,8,9-HxCDF	37:37	3.78e6	2.95e6	9.75e5	7.58e5	----	----	1.28	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS2-7604-276	Instrument ID	10MSHR06 (U)
Filename	U130729B_10	GC Column ID	USD227224H
Analyzed	07/29/2013 23:00	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:49	3.15e7	2.40e7	8.65e6	6.86e6	-----	-----	1.31	
1,2,3,6,7,8-HxCDD-13C	36:56	3.74e7	3.08e7	9.89e6	7.83e6	-----	-----	1.21	
1,2,3,7,8,9-HxCDD-13C	37:15	3.53e7	2.78e7	8.10e6	6.49e6	-----	-----	1.27	
1,2,3,4,7,8-HxCDD	36:50	3.16e6	2.66e6	8.77e5	7.46e5	-----	-----	1.19	
1,2,3,6,7,8-HxCDD	36:57	3.51e6	3.02e6	8.69e5	7.05e5	-----	-----	1.17	
1,2,3,7,8,9-HxCDD	37:15	3.47e6	2.93e6	8.75e5	6.90e5	-----	-----	1.18	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	39:15	2.07e7	4.54e7	6.02e6	1.28e7	-----	-----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	40:53	1.66e7	3.65e7	4.32e6	9.68e6	-----	-----	0.45	
1,2,3,4,6,7,8-HpCDF	39:16	4.58e6	4.49e6	1.25e6	1.23e6	-----	-----	1.02	
1,2,3,4,7,8,9-HpCDF	40:53	3.86e6	3.43e6	1.00e6	9.19e5	-----	-----	1.13	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	40:23	2.80e7	2.61e7	7.12e6	6.80e6	-----	-----	1.07	
1,2,3,4,6,7,8-HpCDD	40:23	2.91e6	2.81e6	7.69e5	7.64e5	-----	-----	1.04	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	43:28	5.28e6	5.89e6	1.24e6	1.39e6	-----	-----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	43:16	4.45e7	4.95e7	1.03e7	1.14e7	-----	-----	0.90	
OCDD	43:17	4.63e6	5.25e6	1.07e6	1.22e6	-----	-----	0.88	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-274	Instrument ID	10MSHR06 (U)
Filename	U130729B_09	GC Column ID	USD227224H
Analyzed	07/29/2013 22:12	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:51	2.12e8	2.73e8	3.05e7	3.91e7	-----	-----	0.78	
2,3,7,8-TCDF	22:52	1.84e7	2.44e7	2.63e6	3.51e6	-----	-----	0.76	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:10	1.41e8	1.79e8	2.03e7	2.58e7	-----	-----	0.79	
2,3,7,8-TCDD-13C	24:08	1.43e8	1.85e8	1.89e7	2.39e7	-----	-----	0.77	
2,3,7,8-TCDD-37Cl4	24:09	3.55e7		4.75e6		-----	-----		
2,3,7,8-TCDD	24:09	1.49e7	2.02e7	1.86e6	2.61e6	-----	-----	0.74	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:28	2.36e8	1.50e8	4.38e7	2.91e7	-----	-----	1.57	
2,3,4,7,8-PeCDF-13C	31:55	2.39e8	1.57e8	5.06e7	3.21e7	-----	-----	1.53	
1,2,3,7,8-PeCDF	30:29	1.01e8	6.63e7	1.95e7	1.25e7	-----	-----	1.53	
2,3,4,7,8-PeCDF	31:56	1.06e8	6.98e7	2.25e7	1.52e7	-----	-----	1.52	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:22	1.61e8	1.02e8	3.42e7	2.22e7	-----	-----	1.58	
1,2,3,7,8-PeCDD	32:23	4.76e7	7.89e7	1.08e7	1.73e7	-----	-----	0.60	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:48	9.66e7	1.86e8	2.56e7	5.07e7	-----	-----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:56	1.17e8	2.18e8	2.76e7	5.32e7	-----	-----	0.53	
2,3,4,6,7,8-HxCDF-13C	36:38	6.84e7	1.37e8	1.87e7	3.57e7	-----	-----	0.50	
1,2,3,7,8,9-HxCDF-13C	37:36	9.71e7	1.88e8	2.36e7	4.52e7	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:49	7.94e7	6.53e7	2.22e7	1.79e7	-----	-----	1.22	
1,2,3,6,7,8-HxCDF	35:57	9.42e7	7.52e7	2.30e7	1.90e7	-----	-----	1.25	
2,3,4,6,7,8-HxCDF	36:39	5.95e7	4.91e7	1.58e7	1.31e7	-----	-----	1.21	
1,2,3,7,8,9-HxCDF	37:37	7.28e7	5.96e7	1.76e7	1.41e7	-----	-----	1.22	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-274	Instrument ID	10MSHR06 (U)
Filename	U130729B_09	GC Column ID	USD227224H
Analyzed	07/29/2013 22:12	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:50	1.17e8	9.30e7	3.34e7	2.62e7	-----	-----	1.25	
1,2,3,6,7,8-HxCDD-13C	36:57	1.51e8	1.20e8	3.77e7	3.04e7	-----	-----	1.26	
1,2,3,7,8,9-HxCDD-13C	37:15	1.52e8	1.23e8	3.51e7	2.80e7	-----	-----	1.23	
1,2,3,4,7,8-HxCDD	36:51	5.73e7	4.64e7	1.68e7	1.33e7	-----	-----	1.24	
1,2,3,6,7,8-HxCDD	36:58	6.90e7	5.58e7	1.76e7	1.42e7	-----	-----	1.24	
1,2,3,7,8,9-HxCDD	37:16	7.25e7	5.65e7	1.67e7	1.35e7	-----	-----	1.28	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	39:15	8.55e7	1.92e8	2.40e7	5.34e7	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	40:54	6.91e7	1.49e8	1.83e7	4.01e7	-----	-----	0.46	
1,2,3,4,6,7,8-HpCDF	39:16	9.14e7	9.08e7	2.58e7	2.53e7	-----	-----	1.01	
1,2,3,4,7,8,9-HpCDF	40:54	7.46e7	7.10e7	1.90e7	1.88e7	-----	-----	1.05	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	40:23	1.17e8	1.10e8	3.25e7	3.05e7	-----	-----	1.06	
1,2,3,4,6,7,8-HpCDD	40:24	6.06e7	5.93e7	1.65e7	1.58e7	-----	-----	1.02	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	43:28	1.03e8	1.16e8	2.53e7	2.76e7	-----	-----	0.89	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	43:16	1.88e8	2.09e8	4.29e7	4.86e7	-----	-----	0.90	
OCDD	43:17	9.16e7	1.03e8	2.13e7	2.45e7	-----	-----	0.89	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By_____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS4-7604-277	Instrument ID	10MSHR06 (U)
Filename	U130729B_13	GC Column ID	USD227224H
Analyzed	07/30/2013 01:25	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:50	4.59e7	5.90e7	6.30e6	7.97e6	----	----	0.78	
2,3,7,8-TCDF	22:51	1.60e7	2.15e7	2.26e6	2.94e6	----	----	0.75	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:08	3.11e7	3.88e7	4.30e6	5.24e6	----	----	0.80	
2,3,7,8-TCDD-13C	24:07	3.06e7	3.94e7	4.00e6	5.27e6	----	----	0.78	
2,3,7,8-TCDD-37Cl4	24:09	3.11e7		3.94e6		----	----		
2,3,7,8-TCDD	24:08	1.25e7	1.63e7	1.70e6	2.16e6	----	----	0.77	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:27	4.93e7	3.12e7	8.98e6	5.87e6	----	----	1.58	
2,3,4,7,8-PeCDF-13C	31:54	4.81e7	3.11e7	1.01e7	6.51e6	----	----	1.55	
1,2,3,7,8-PeCDF	30:29	8.62e7	5.62e7	1.64e7	1.06e7	----	----	1.53	
2,3,4,7,8-PeCDF	31:56	8.83e7	5.68e7	1.91e7	1.23e7	----	----	1.55	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:21	3.13e7	1.97e7	6.67e6	4.22e6	----	----	1.59	
1,2,3,7,8-PeCDD	32:23	3.86e7	6.36e7	8.23e6	1.34e7	----	----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:47	1.92e7	3.71e7	5.15e6	1.00e7	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:55	2.30e7	4.33e7	5.75e6	1.11e7	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C	36:38	2.02e7	3.88e7	5.03e6	9.80e6	----	----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:36	1.87e7	3.75e7	4.44e6	8.78e6	----	----	0.50	
1,2,3,4,7,8-HxCDF	35:48	6.58e7	5.43e7	1.75e7	1.47e7	----	----	1.21	
1,2,3,6,7,8-HxCDF	35:56	7.47e7	6.22e7	1.78e7	1.51e7	----	----	1.20	
2,3,4,6,7,8-HxCDF	36:39	7.29e7	5.84e7	1.93e7	1.54e7	----	----	1.25	
1,2,3,7,8,9-HxCDF	37:37	6.00e7	4.74e7	1.48e7	1.20e7	----	----	1.27	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS4-7604-277	Instrument ID	10MSHR06 (U)
Filename	U130729B_13	GC Column ID	USD227224H
Analyzed	07/30/2013 01:25	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:49	2.43e7	1.92e7	7.24e6	5.67e6	-----	-----	1.27	
1,2,3,6,7,8-HxCDD-13C	36:56	3.07e7	2.45e7	7.37e6	6.00e6	-----	-----	1.25	
1,2,3,7,8,9-HxCDD-13C	37:14	2.82e7	2.23e7	6.76e6	5.53e6	-----	-----	1.26	
1,2,3,4,7,8-HxCDD	36:50	4.99e7	3.94e7	1.42e7	1.16e7	-----	-----	1.27	
1,2,3,6,7,8-HxCDD	36:57	5.49e7	4.56e7	1.39e7	1.15e7	-----	-----	1.20	
1,2,3,7,8,9-HxCDD	37:15	5.41e7	4.41e7	1.34e7	1.10e7	-----	-----	1.23	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	39:15	1.63e7	3.63e7	4.54e6	1.02e7	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	40:54	1.31e7	2.87e7	3.27e6	7.05e6	-----	-----	0.46	
1,2,3,4,6,7,8-HpCDF	39:16	7.40e7	6.88e7	2.06e7	2.00e7	-----	-----	1.08	
1,2,3,4,7,8,9-HpCDF	40:54	5.81e7	5.50e7	1.46e7	1.44e7	-----	-----	1.06	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	40:23	2.15e7	2.02e7	5.72e6	5.54e6	-----	-----	1.07	
1,2,3,4,6,7,8-HpCDD	40:24	4.40e7	4.25e7	1.17e7	1.13e7	-----	-----	1.04	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	43:28	8.61e7	9.66e7	1.92e7	2.23e7	-----	-----	0.89	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	43:16	3.46e7	3.90e7	7.70e6	8.69e6	-----	-----	0.89	
OCDD	43:17	7.04e7	8.08e7	1.59e7	1.77e7	-----	-----	0.87	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS5-7604-278	Instrument ID	10MSHR06 (U)
Filename	U130729B_12	GC Column ID	USD227224H
Analyzed	07/30/2013 00:36	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:49	5.21e7	6.79e7	7.27e6	9.34e6	----	----	0.77	
2,3,7,8-TCDF	22:51	9.09e7	1.21e8	1.34e7	1.75e7	----	----	0.75	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:09	3.49e7	4.39e7	4.99e6	6.28e6	----	----	0.80	
2,3,7,8-TCDD-13C	24:07	3.58e7	4.54e7	4.82e6	5.97e6	----	----	0.79	
2,3,7,8-TCDD-37Cl4	24:08	1.81e8		2.33e7		----	----		
2,3,7,8-TCDD	24:09	7.37e7	9.46e7	9.39e6	1.21e7	----	----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:27	5.85e7	3.69e7	1.07e7	7.12e6	----	----	1.59	
2,3,4,7,8-PeCDF-13C	31:54	5.79e7	3.80e7	1.26e7	8.11e6	----	----	1.52	
1,2,3,7,8-PeCDF	30:29	5.20e8	3.38e8	9.90e7	6.35e7	----	----	1.54	
2,3,4,7,8-PeCDF	31:56	5.24e8	3.55e8	1.14e8	7.59e7	----	----	1.48	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:22	3.83e7	2.41e7	8.37e6	5.20e6	----	----	1.59	
1,2,3,7,8-PeCDD	32:23	2.35e8	3.84e8	5.17e7	8.80e7	----	----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:47	2.36e7	4.54e7	6.48e6	1.23e7	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:56	2.78e7	5.39e7	6.73e6	1.27e7	----	----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:38	2.44e7	4.64e7	6.32e6	1.21e7	----	----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:36	2.42e7	4.56e7	5.86e6	1.11e7	----	----	0.53	
1,2,3,4,7,8-HxCDF	35:48	4.02e8	3.29e8	1.04e8	8.67e7	----	----	1.22	
1,2,3,6,7,8-HxCDF	35:57	4.70e8	3.81e8	1.14e8	9.25e7	----	----	1.23	
2,3,4,6,7,8-HxCDF	36:39	4.50e8	3.53e8	1.14e8	9.21e7	----	----	1.28	
1,2,3,7,8,9-HxCDF	37:37	3.82e8	3.10e8	9.41e7	7.67e7	----	----	1.23	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS5-7604-278	Instrument ID	10MSHR06 (U)
Filename	U130729B_12	GC Column ID	USD227224H
Analyzed	07/30/2013 00:36	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:50	3.10e7	2.38e7	8.59e6	6.86e6	----	----	1.30	
1,2,3,6,7,8-HxCDD-13C	36:56	3.73e7	3.06e7	9.63e6	7.63e6	----	----	1.22	
1,2,3,7,8,9-HxCDD-13C	37:15	3.47e7	2.80e7	8.48e6	6.65e6	----	----	1.24	
1,2,3,4,7,8-HxCDD	36:51	3.08e8	2.50e8	8.77e7	6.96e7	----	----	1.23	
1,2,3,6,7,8-HxCDD	36:57	3.42e8	2.77e8	8.67e7	7.13e7	----	----	1.23	
1,2,3,7,8,9-HxCDD	37:15	3.42e8	2.82e8	8.18e7	6.70e7	----	----	1.21	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	39:16	2.04e7	4.51e7	5.43e6	1.23e7	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	40:54	1.69e7	3.65e7	4.43e6	9.66e6	----	----	0.46	
1,2,3,4,6,7,8-HpCDF	39:16	4.50e8	4.34e8	1.23e8	1.19e8	----	----	1.04	
1,2,3,4,7,8,9-HpCDF	40:54	3.72e8	3.58e8	9.45e7	8.99e7	----	----	1.04	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	40:23	2.72e7	2.50e7	7.31e6	6.78e6	----	----	1.09	
1,2,3,4,6,7,8-HpCDD	40:24	2.83e8	2.70e8	7.41e7	7.04e7	----	----	1.05	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	43:29	5.96e8	6.61e8	1.36e8	1.51e8	----	----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	43:17	4.60e7	5.15e7	1.02e7	1.12e7	----	----	0.89	
OCDD	43:18	4.81e8	5.49e8	1.05e8	1.16e8	----	----	0.88	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR06 (U)
Filename	U130917A_06	GC Column ID	USD227224H
Analyzed	09/17/2013 13:13	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:39	5.17e7	6.57e7	7.37e6	9.35e6	----	----	0.79	
2,3,7,8-TCDF	21:40	4.31e6	5.80e6	6.36e5	8.93e5	----	----	0.74	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:54	3.49e7	4.42e7	4.92e6	6.33e6	----	----	0.79	
2,3,7,8-TCDD-13C	22:51	3.32e7	4.26e7	4.38e6	5.59e6	----	----	0.78	
2,3,7,8-TCDD-37Cl4	22:53	8.59e6		1.11e6		----	----		
2,3,7,8-TCDD	22:53	3.65e6	4.83e6	4.79e5	6.26e5	----	----	0.76	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:31	5.06e7	3.30e7	7.97e6	5.33e6	----	----	1.53	
2,3,4,7,8-PeCDF-13C	31:06	5.14e7	3.35e7	1.00e7	6.55e6	----	----	1.53	
1,2,3,7,8-PeCDF	29:34	2.13e7	1.39e7	3.37e6	2.33e6	----	----	1.53	
2,3,4,7,8-PeCDF	31:08	2.21e7	1.48e7	4.19e6	2.88e6	----	----	1.50	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:35	3.39e7	2.12e7	6.61e6	4.05e6	----	----	1.60	
1,2,3,7,8-PeCDD	31:36	1.05e7	1.66e7	2.01e6	3.23e6	----	----	0.63	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:10	2.06e7	4.02e7	5.12e6	1.01e7	----	----	0.51	
1,2,3,6,7,8-HxCDF-13C	35:20	2.46e7	4.85e7	5.37e6	1.04e7	----	----	0.51	
2,3,4,6,7,8-HxCDF-13C	36:02	2.23e7	4.22e7	5.25e6	1.03e7	----	----	0.53	
1,2,3,7,8,9-HxCDF-13C	37:02	1.90e7	3.64e7	4.07e6	7.83e6	----	----	0.52	
1,2,3,4,7,8-HxCDF	35:11	1.67e7	1.39e7	4.11e6	3.36e6	----	----	1.20	
1,2,3,6,7,8-HxCDF	35:21	1.88e7	1.63e7	4.43e6	3.63e6	----	----	1.16	
2,3,4,6,7,8-HxCDF	36:04	1.79e7	1.48e7	4.25e6	3.44e6	----	----	1.21	
1,2,3,7,8,9-HxCDF	37:03	1.38e7	1.15e7	3.05e6	2.65e6	----	----	1.20	

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Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR06 (U)
Filename	U130917A_06	GC Column ID	USD227224H
Analyzed	09/17/2013 13:13	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:15	2.79e7	2.22e7	7.49e6	5.90e6	----	----	1.25	
1,2,3,6,7,8-HxCDD-13C	36:22	3.54e7	2.77e7	8.44e6	6.64e6	----	----	1.28	
1,2,3,7,8,9-HxCDD-13C	36:40	3.05e7	2.45e7	6.70e6	5.46e6	----	----	1.25	
1,2,3,4,7,8-HxCDD	36:15	1.39e7	1.11e7	3.75e6	2.93e6	----	----	1.25	
1,2,3,6,7,8-HxCDD	36:23	1.57e7	1.29e7	3.75e6	3.02e6	----	----	1.22	
1,2,3,7,8,9-HxCDD	36:41	1.45e7	1.21e7	3.27e6	2.65e6	----	----	1.20	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:45	1.84e7	4.10e7	4.88e6	1.06e7	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	40:23	1.35e7	3.00e7	3.45e6	7.79e6	----	----	0.45	
1,2,3,4,6,7,8-HpCDF	38:46	2.05e7	1.96e7	5.39e6	4.96e6	----	----	1.04	
1,2,3,4,7,8,9-HpCDF	40:24	1.47e7	1.44e7	3.83e6	3.63e6	----	----	1.02	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:54	2.22e7	2.06e7	5.59e6	5.18e6	----	----	1.08	
1,2,3,4,6,7,8-HpCDD	39:55	1.21e7	1.13e7	2.87e6	2.68e6	----	----	1.07	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:57	2.23e7	2.59e7	5.15e6	6.10e6	----	----	0.86	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:46	3.88e7	4.28e7	8.49e6	9.42e6	----	----	0.91	
OCDD	42:47	1.93e7	2.17e7	4.45e6	5.09e6	----	----	0.89	

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PCDD/PCDF Detected Peak List

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Reviewed By _____ Date _____

Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR06 (U)
Filename	U130917A_22	GC Column ID	USD227224H
Analyzed	09/18/2013 02:01	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:41	6.70e7	8.61e7	9.41e6	1.21e7	-----	-----	0.78	
2,3,7,8-TCDF	21:43	5.75e6	7.43e6	8.05e5	1.07e6	-----	-----	0.77	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:58	4.42e7	5.57e7	6.32e6	7.91e6	-----	-----	0.79	
2,3,7,8-TCDD-13C	22:53	4.31e7	5.53e7	5.77e6	7.27e6	-----	-----	0.78	
2,3,7,8-TCDD-37Cl4	22:55	1.10e7		1.43e6		-----	-----		
2,3,7,8-TCDD	22:55	4.79e6	6.18e6	6.40e5	8.07e5	-----	-----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:34	6.78e7	4.38e7	1.20e7	7.74e6	-----	-----	1.55	
2,3,4,7,8-PeCDF-13C	31:08	6.93e7	4.46e7	1.36e7	8.90e6	-----	-----	1.56	
1,2,3,7,8-PeCDF	29:35	2.91e7	1.91e7	4.99e6	3.22e6	-----	-----	1.53	
2,3,4,7,8-PeCDF	31:09	2.94e7	1.97e7	5.94e6	3.94e6	-----	-----	1.49	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:36	4.44e7	2.81e7	8.82e6	5.62e6	-----	-----	1.58	
1,2,3,7,8-PeCDD	31:38	1.38e7	2.26e7	2.71e6	4.81e6	-----	-----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:11	2.81e7	5.38e7	7.33e6	1.41e7	-----	-----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:21	3.29e7	6.32e7	8.15e6	1.55e7	-----	-----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:04	2.91e7	5.71e7	7.69e6	1.46e7	-----	-----	0.51	
1,2,3,7,8,9-HxCDF-13C	37:03	2.63e7	5.02e7	6.42e6	1.21e7	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:13	2.24e7	1.86e7	5.78e6	4.79e6	-----	-----	1.20	
1,2,3,6,7,8-HxCDF	35:22	2.58e7	2.12e7	6.11e6	5.24e6	-----	-----	1.21	
2,3,4,6,7,8-HxCDF	36:05	2.44e7	2.06e7	6.61e6	5.48e6	-----	-----	1.18	
1,2,3,7,8,9-HxCDF	37:04	1.89e7	1.58e7	4.56e6	3.64e6	-----	-----	1.20	

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Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR06 (U)
Filename	U130917A_22	GC Column ID	USD227224H
Analyzed	09/18/2013 02:01	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:16	3.67e7	2.97e7	1.06e7	8.35e6	-----	-----	1.24	
1,2,3,6,7,8-HxCDD-13C	36:23	4.64e7	3.68e7	1.16e7	9.17e6	-----	-----	1.26	
1,2,3,7,8,9-HxCDD-13C	36:42	4.07e7	3.23e7	9.30e6	7.52e6	-----	-----	1.26	
1,2,3,4,7,8-HxCDD	36:17	1.86e7	1.50e7	5.32e6	4.03e6	-----	-----	1.24	
1,2,3,6,7,8-HxCDD	36:24	2.05e7	1.71e7	5.19e6	4.44e6	-----	-----	1.20	
1,2,3,7,8,9-HxCDD	36:43	1.93e7	1.58e7	4.58e6	3.77e6	-----	-----	1.22	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:46	2.54e7	5.54e7	6.93e6	1.51e7	-----	-----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	40:24	1.91e7	4.22e7	4.95e6	1.12e7	-----	-----	0.45	
1,2,3,4,6,7,8-HpCDF	38:47	2.79e7	2.66e7	7.38e6	7.26e6	-----	-----	1.05	
1,2,3,4,7,8,9-HpCDF	40:25	2.07e7	2.04e7	5.66e6	5.72e6	-----	-----	1.02	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:55	2.99e7	2.82e7	8.27e6	7.45e6	-----	-----	1.06	
1,2,3,4,6,7,8-HpCDD	39:55	1.63e7	1.56e7	4.52e6	4.24e6	-----	-----	1.05	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:57	3.29e7	3.72e7	8.18e6	9.18e6	-----	-----	0.89	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:47	5.58e7	6.23e7	1.28e7	1.47e7	-----	-----	0.89	
OCDD	42:48	2.77e7	3.12e7	6.67e6	7.59e6	-----	-----	0.89	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____
Reviewed By _____ Date _____

Client ID		Injected By	BAL
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR05 (F)
Filename	F130921A_16	GC Column ID	USD174324H
Analyzed	09/21/2013 13:44	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:18	3.72e7	4.60e7	5.24e6	6.50e6	-----	-----	0.81	
2,3,7,8-TCDF	21:19	4.15e6	5.24e6	5.81e5	7.06e5	-----	-----	0.79	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:32	1.98e7	2.45e7	2.77e6	3.36e6	-----	-----	0.81	
2,3,7,8-TCDD-13C	22:29	1.98e7	2.50e7	2.68e6	3.19e6	-----	-----	0.79	
2,3,7,8-TCDD-37Cl4	22:31	5.33e6		7.27e5		-----	-----		
2,3,7,8-TCDD	22:31	2.45e6	3.02e6	3.22e5	4.08e5	-----	-----	0.81	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:27	4.82e7	2.98e7	7.37e6	4.65e6	-----	-----	1.62	
2,3,4,7,8-PeCDF-13C	31:04	5.00e7	3.09e7	9.33e6	5.80e6	-----	-----	1.62	
1,2,3,7,8-PeCDF	29:30	2.82e7	1.74e7	4.37e6	2.60e6	-----	-----	1.62	
2,3,4,7,8-PeCDF	31:06	2.95e7	1.86e7	5.50e6	3.46e6	-----	-----	1.59	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:33	2.72e7	1.74e7	5.16e6	3.42e6	-----	-----	1.56	
1,2,3,7,8-PeCDD	31:35	1.04e7	1.67e7	2.07e6	3.38e6	-----	-----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:01	2.61e7	4.87e7	6.81e6	1.22e7	-----	-----	0.54	
1,2,3,6,7,8-HxCDF-13C	35:09	3.03e7	5.55e7	7.45e6	1.32e7	-----	-----	0.55	
2,3,4,6,7,8-HxCDF-13C	35:49	2.66e7	4.96e7	6.90e6	1.30e7	-----	-----	0.54	
1,2,3,7,8,9-HxCDF-13C	36:44	2.57e7	4.68e7	6.95e6	1.27e7	-----	-----	0.55	
1,2,3,4,7,8-HxCDF	35:02	2.79e7	2.14e7	7.10e6	5.33e6	-----	-----	1.31	
1,2,3,6,7,8-HxCDF	35:10	3.05e7	2.32e7	7.60e6	5.76e6	-----	-----	1.31	
2,3,4,6,7,8-HxCDF	35:51	2.87e7	2.20e7	7.50e6	5.77e6	-----	-----	1.31	
1,2,3,7,8,9-HxCDF	36:45	2.46e7	1.93e7	6.60e6	4.98e6	-----	-----	1.28	

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Client ID		Injected By	BAL
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR05 (F)
Filename	F130921A_16	GC Column ID	USD174324H
Analyzed	09/21/2013 13:44	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:01	2.83e7	2.21e7	8.06e6	6.26e6	----	----	1.28	
1,2,3,6,7,8-HxCDD-13C	36:07	3.23e7	2.50e7	8.62e6	6.81e6	----	----	1.29	
1,2,3,7,8,9-HxCDD-13C	36:24	2.96e7	2.28e7	7.59e6	5.98e6	----	----	1.30	
1,2,3,4,7,8-HxCDD	36:01	1.66e7	1.26e7	4.75e6	3.67e6	----	----	1.32	
1,2,3,6,7,8-HxCDD	36:08	1.74e7	1.36e7	4.63e6	3.56e6	----	----	1.28	
1,2,3,7,8,9-HxCDD	36:26	1.68e7	1.30e7	4.48e6	3.44e6	----	----	1.29	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:25	1.35e7	2.93e7	3.45e6	7.58e6	----	----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	39:57	1.10e7	2.35e7	3.21e6	6.93e6	----	----	0.47	
1,2,3,4,6,7,8-HpCDF	38:25	1.66e7	1.61e7	4.40e6	4.34e6	----	----	1.04	
1,2,3,4,7,8,9-HpCDF	39:57	1.26e7	1.25e7	3.74e6	3.68e6	----	----	1.01	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:29	1.55e7	1.39e7	4.51e6	4.16e6	----	----	1.12	
1,2,3,4,6,7,8-HpCDD	39:30	9.20e6	8.69e6	2.75e6	2.59e6	----	----	1.06	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	2.22e7	2.34e7	5.35e6	5.83e6	----	----	0.95	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:15	2.97e7	3.12e7	7.57e6	7.58e6	----	----	0.95	
OCDD	42:16	1.66e7	1.85e7	4.32e6	4.63e6	----	----	0.90	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client ID		Injected By	BAL
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR05 (F)
Filename	F130921B_16	GC Column ID	USD174324H
Analyzed	09/22/2013 01:59	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:18	3.82e7	4.81e7	4.90e6	6.24e6	-----	-----	0.80	
2,3,7,8-TCDF	21:19	3.39e6	4.58e6	4.60e5	5.87e5	-----	-----	0.74	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:34	2.46e7	3.01e7	3.32e6	4.11e6	-----	-----	0.82	
2,3,7,8-TCDD-13C	22:30	2.49e7	3.04e7	3.10e6	3.84e6	-----	-----	0.82	
2,3,7,8-TCDD-37Cl4	22:31	6.22e6		8.41e5		-----	-----		
2,3,7,8-TCDD	22:31	2.83e6	3.38e6	3.59e5	4.28e5	-----	-----	0.84	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:27	4.77e7	2.99e7	6.82e6	4.26e6	-----	-----	1.60	
2,3,4,7,8-PeCDF-13C	31:04	4.92e7	3.10e7	8.71e6	5.69e6	-----	-----	1.59	
1,2,3,7,8-PeCDF	29:30	2.36e7	1.49e7	3.57e6	2.10e6	-----	-----	1.58	
2,3,4,7,8-PeCDF	31:06	2.45e7	1.56e7	4.35e6	2.77e6	-----	-----	1.57	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:33	3.17e7	2.00e7	5.91e6	3.70e6	-----	-----	1.58	
1,2,3,7,8-PeCDD	31:35	1.05e7	1.72e7	1.86e6	3.12e6	-----	-----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:01	2.42e7	4.56e7	5.88e6	1.09e7	-----	-----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:09	2.64e7	5.02e7	6.14e6	1.17e7	-----	-----	0.53	
2,3,4,6,7,8-HxCDF-13C	35:49	2.36e7	4.46e7	5.67e6	1.10e7	-----	-----	0.53	
1,2,3,7,8,9-HxCDF-13C	36:44	2.31e7	4.33e7	6.06e6	1.12e7	-----	-----	0.53	
1,2,3,4,7,8-HxCDF	35:02	2.26e7	1.78e7	5.52e6	4.41e6	-----	-----	1.27	
1,2,3,6,7,8-HxCDF	35:10	2.47e7	1.96e7	5.54e6	4.54e6	-----	-----	1.26	
2,3,4,6,7,8-HxCDF	35:50	2.30e7	1.88e7	5.60e6	4.63e6	-----	-----	1.22	
1,2,3,7,8,9-HxCDF	36:45	1.99e7	1.58e7	5.18e6	4.24e6	-----	-----	1.26	

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Client ID		Injected By	BAL
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR05 (F)
Filename	F130921B_16	GC Column ID	USD174324H
Analyzed	09/22/2013 01:59	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:01	2.99e7	2.36e7	8.52e6	6.60e6	-----	-----	1.27	
1,2,3,6,7,8-HxCDD-13C	36:07	3.32e7	2.69e7	8.30e6	7.02e6	-----	-----	1.24	
1,2,3,7,8,9-HxCDD-13C	36:24	3.13e7	2.52e7	7.56e6	5.97e6	-----	-----	1.24	
1,2,3,4,7,8-HxCDD	36:01	1.58e7	1.25e7	4.28e6	3.17e6	-----	-----	1.26	
1,2,3,6,7,8-HxCDD	36:07	1.62e7	1.32e7	4.02e6	3.57e6	-----	-----	1.23	
1,2,3,7,8,9-HxCDD	36:25	1.62e7	1.25e7	4.12e6	3.15e6	-----	-----	1.30	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:25	1.66e7	3.58e7	4.12e6	8.89e6	-----	-----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	39:57	1.31e7	2.71e7	3.67e6	6.97e6	-----	-----	0.48	
1,2,3,4,6,7,8-HpCDF	38:25	1.82e7	1.74e7	4.68e6	4.39e6	-----	-----	1.05	
1,2,3,4,7,8,9-HpCDF	39:58	1.43e7	1.40e7	3.90e6	3.85e6	-----	-----	1.03	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:30	1.95e7	1.71e7	5.06e6	4.77e6	-----	-----	1.14	
1,2,3,4,6,7,8-HpCDD	39:30	1.14e7	1.05e7	3.34e6	3.09e6	-----	-----	1.09	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	2.29e7	2.51e7	5.32e6	5.60e6	-----	-----	0.91	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:15	3.71e7	4.01e7	8.58e6	9.17e6	-----	-----	0.93	
OCDD	42:16	1.93e7	2.07e7	4.68e6	4.98e6	-----	-----	0.93	

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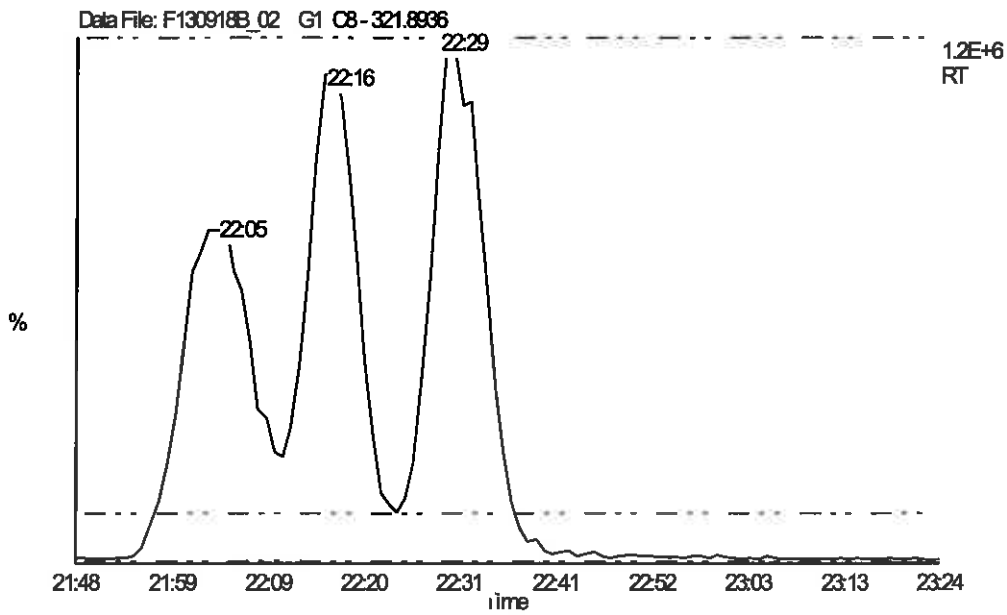
Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID	CS3/CPM-7604-279	Injected By	SMT	
Raw Data File	F130918B_02	Instrument ID	10MSHR05 (F)	
Date Analyzed	9/18/2013	GC Column Type	DB-5MS	0.25 uM
Time Analyzed	16:50	GC Column S/N	USD174324H	
Resolution	**9.1%**			



Group	Mass	First Eluter	Last Eluter
TCDF	305.8987	16:43	24:16
PeCDF	341.8567	24:17	32:25
HxCDF	373.8207	33:29	36:44
HpCDF	407.7818	38:25	39:58
OCDF	441.7428	42:24	42:24
TCDD	321.8936	18:18	23:59
PeCDD	357.8517	27:40	32:06
HxCDD	391.8127	34:14	36:24
HpCDD	425.7737	38:44	39:30
OCDD	459.7347	42:15	42:15
1234-TCDD-13C(RS)	331.9367	21:33	21:33
123789-HxCDD-13C(RS)	401.8559	36:23	36:23

REPORT OF LABORATORY ANALYSIS

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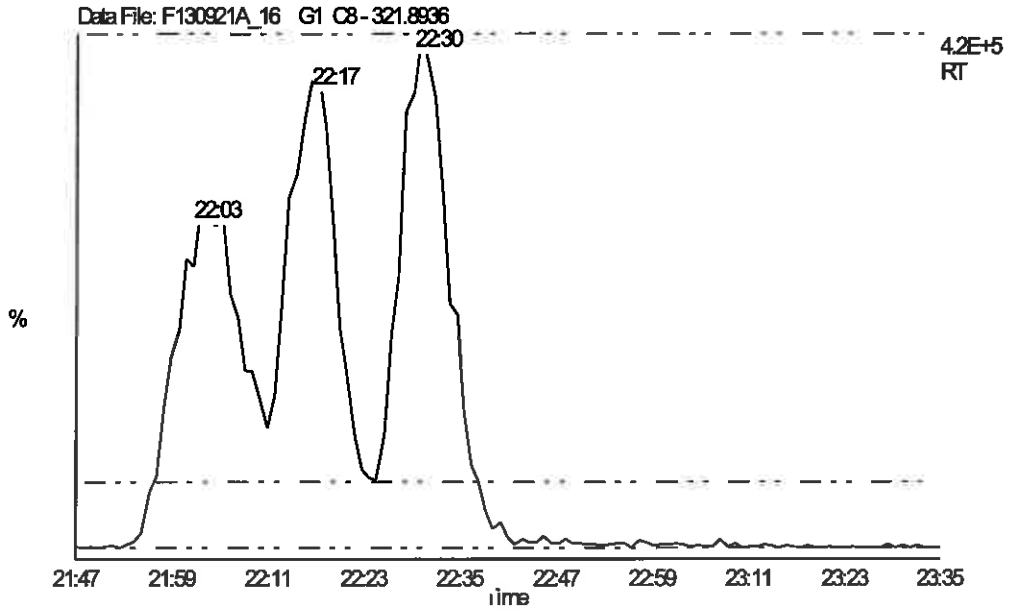
Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID	CS3/CPM-7604-279	Injected By	BAL	
Raw Data File	F130921A_16	Instrument ID	10MSHR05 (F)	
Date Analyzed	12/30/1899	GC Column Type	DB-5MS	0.25 uM
Time Analyzed	13:44	GC Column S/N	USD174324H	
Resolution	**12.9%**			



Group	Mass	First Eluter	Last Eluter
TCDF	305.8987	16:42	24:17
PeCDF	341.8567	24:18	32:25
HxCDF	373.8207	33:31	36:44
HpCDF	407.7818	38:25	39:57
OCDF	441.7428	42:24	0:00
TCDD	321.8936	18:17	23:58
PeCDD	357.8517	27:41	32:06
HxCDD	391.8127	34:14	36:24
HpCDD	425.7737	38:44	39:30
OCDD	459.7347	42:15	0:00
1234-TCDD-13C(RS)	331.9367	21:32	0:00
123789-HxCDD-13C(RS)	401.8559	36:23	0:00

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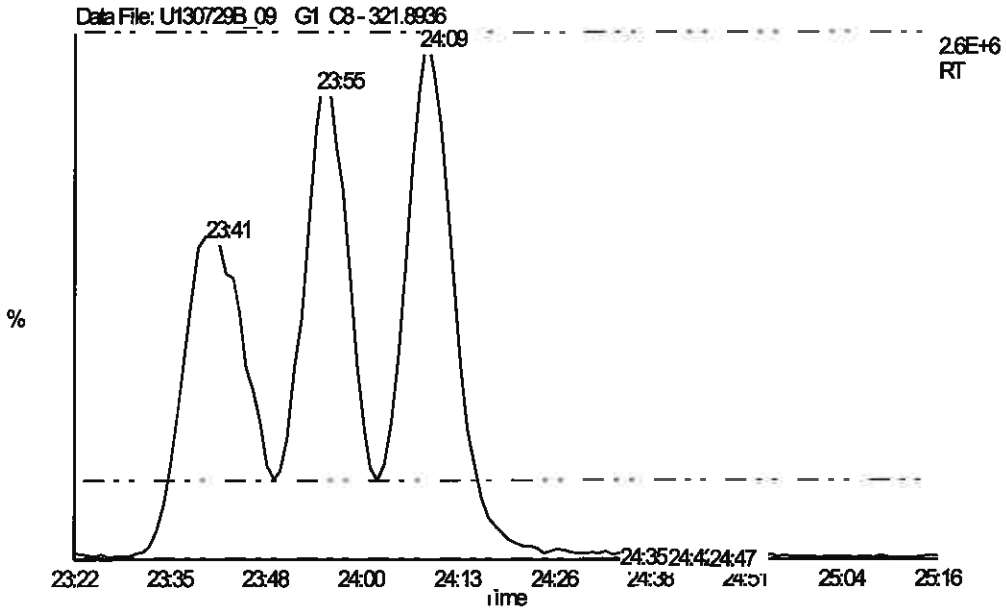
Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID	CS3/CPM-7604-274	Injected By	SMT	
Raw Data File	U130729B_09	Instrument ID	10MSHR06 (U)	
Date Analyzed	7/29/2013	GC Column Type	DB-5MS	0.25 uM
Time Analyzed	22:12	GC Column S/N	USD227224H	
Resolution	**14.9%**			



Group	Mass	First Eluter	Last Eluter
TCDF	305.8987	17:52	26:07
PeCDF	341.8567	26:04	33:15
HxCDF	373.8207	34:15	37:37
HpCDF	407.7818	39:16	40:53
OCDF	441.7428	43:27	0:00
TCDD	321.8936	19:36	25:48
PeCDD	357.8517	28:59	32:55
HxCDD	391.8127	35:00	37:15
HpCDD	425.7737	39:35	40:24
OCDD	459.7347	43:17	0:00
1234-TCDD-13C(RS)	331.9367	23:10	0:00
123789-HxCDD-13C(RS)	401.8559	37:15	0:00

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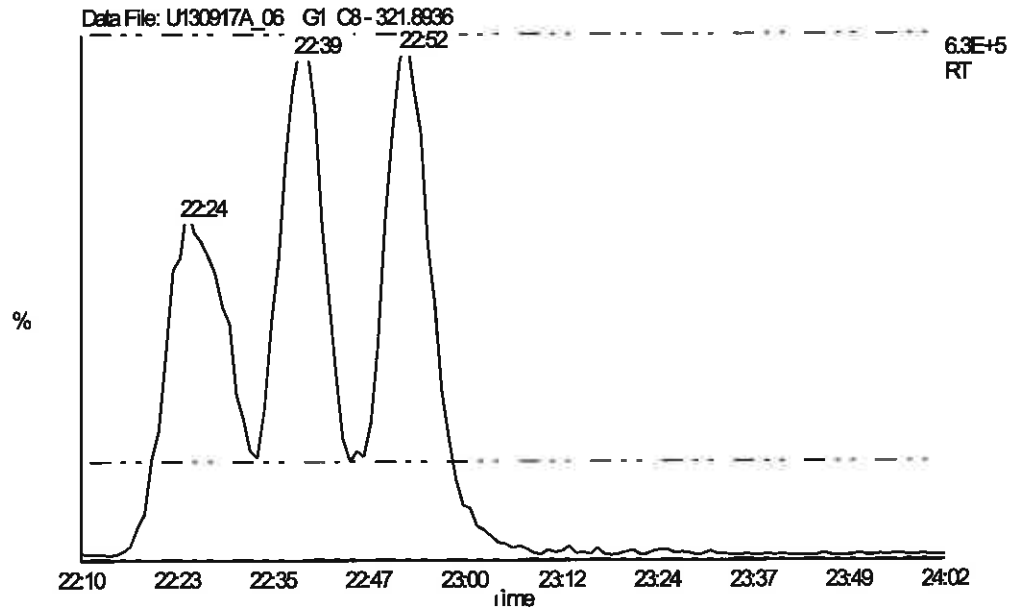
Tel: 612-607-1700
Fax: 612- 607-6444

Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID	CS3/CPM-7604-279	Injected By	SMT	
Raw Data File	U130917A_06	Instrument ID	10MSHR06 (U)	
Date Analyzed	9/17/2013	GC Column Type	DB-5MS	0.25 uM
Time Analyzed	13:13	GC Column S/N	USD227224H	
Resolution	**18.6%**			



Group	Mass	First Eluter	Last Eluter
TCDF	305.8987	16:57	24:41
PeCDF	341.8567	24:40	32:29
HxCDF	373.8207	33:35	37:02
HpCDF	407.7818	38:46	40:24
OCDF	441.7428	42:56	0:00
TCDD	321.8936	18:33	24:25
PeCDD	357.8517	27:54	32:09
HxCDD	391.8127	34:21	36:41
HpCDD	425.7737	39:05	39:54
OCDD	459.7347	42:46	0:00
1234-TCDD-13C(RS)	331.9367	21:54	0:00
123789-HxCDD-13C(RS)	401.8559	36:40	0:00

REPORT OF LABORATORY ANALYSIS

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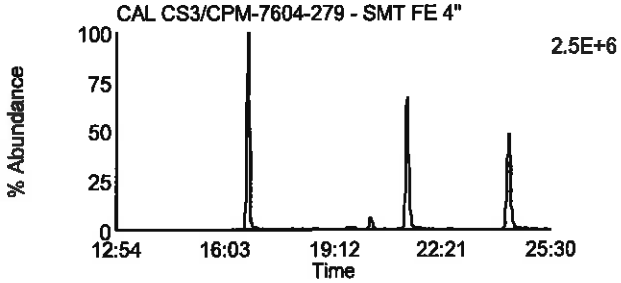
Homologue Group: Tetras

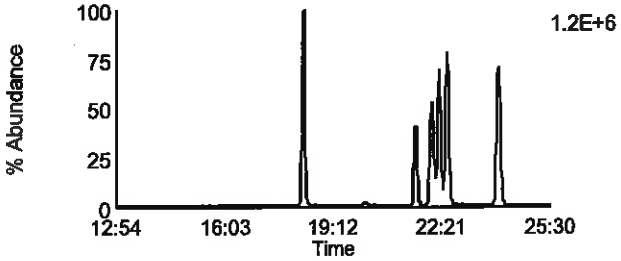
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

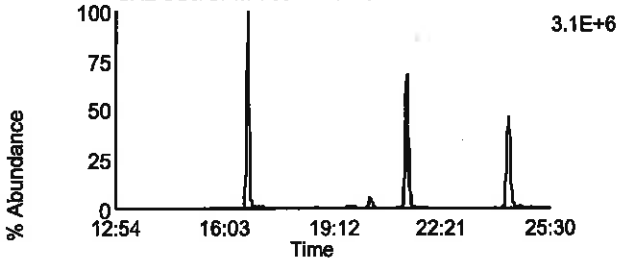
Data File: F130918B_02 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - SMT FE 4"



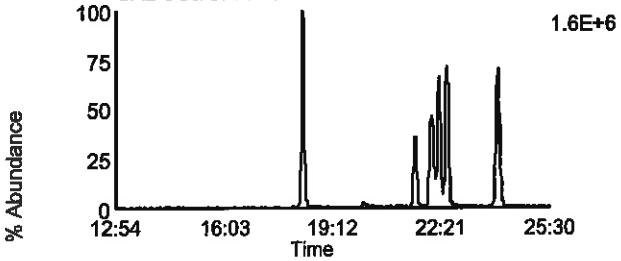
Data File: F130918B_02 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - SMT FE 4"



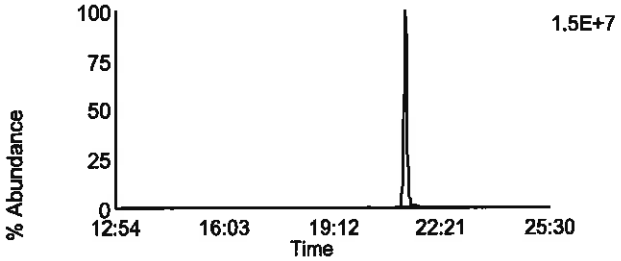
Data File: F130918B_02 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - SMT FE 4"



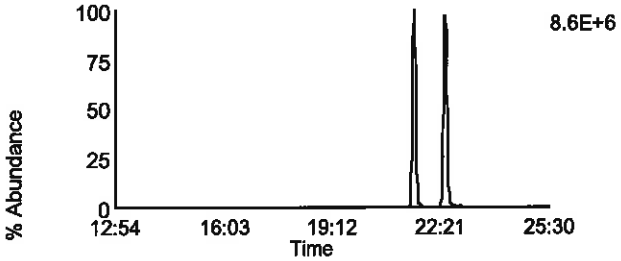
Data File: F130918B_02 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - SMT FE 4"



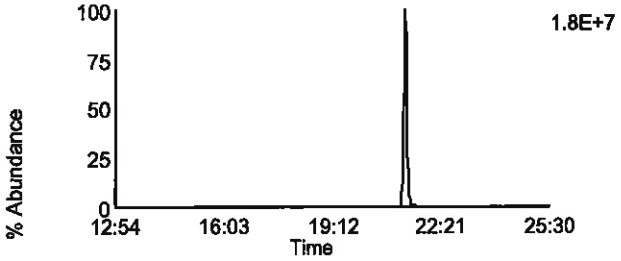
Data File: F130918B_02 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - SMT FE 4"



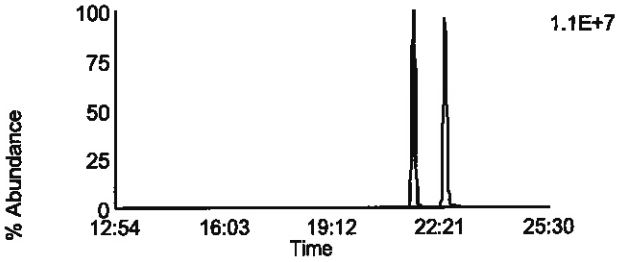
Data File: F130918B_02 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - SMT FE 4"



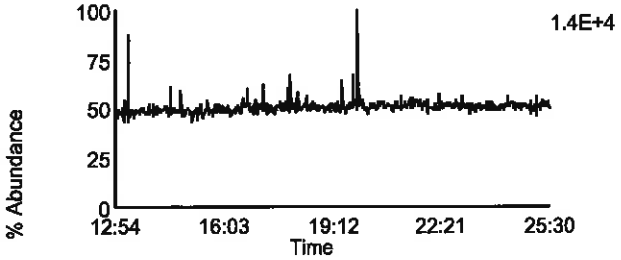
Data File: F130918B_02 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - SMT FE 4"



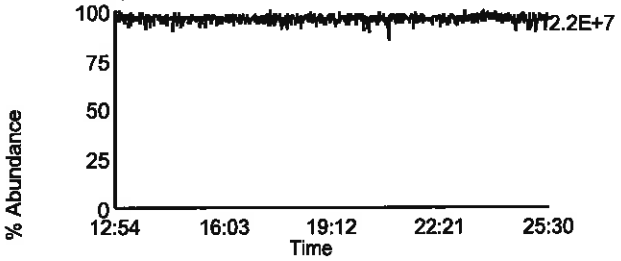
Data File: F130918B_02 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT FE 4"

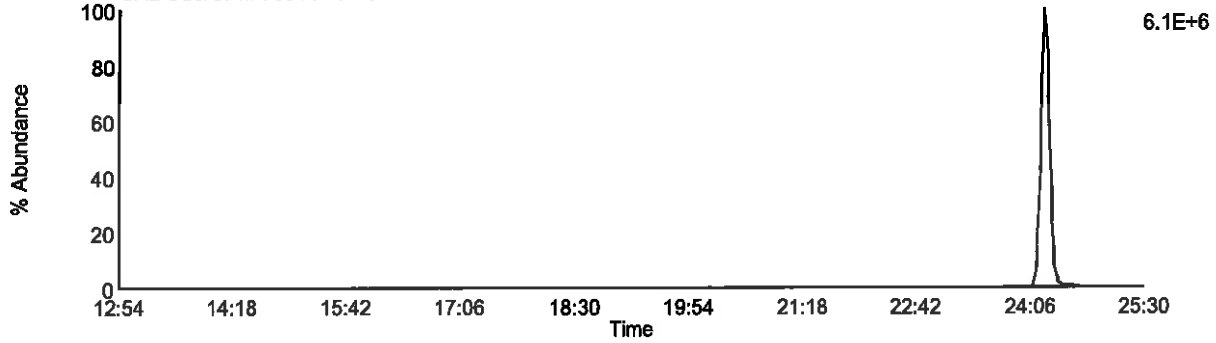


Homologue Group: Penta & Cleanup

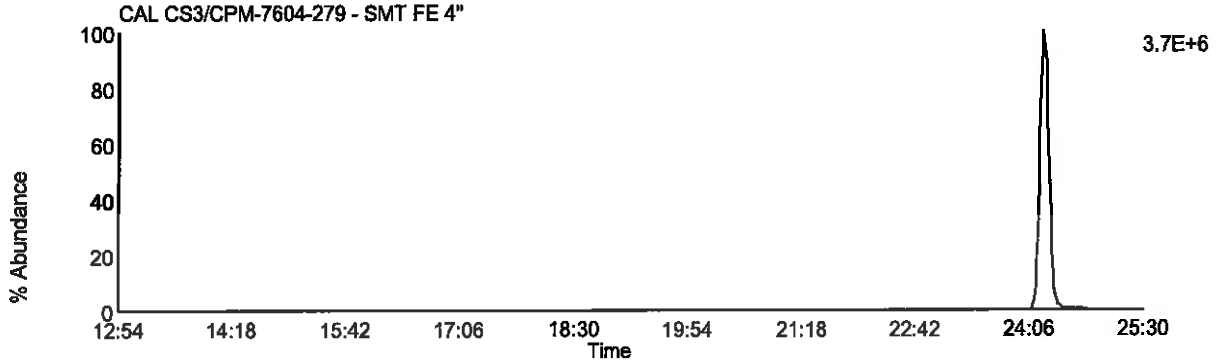
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

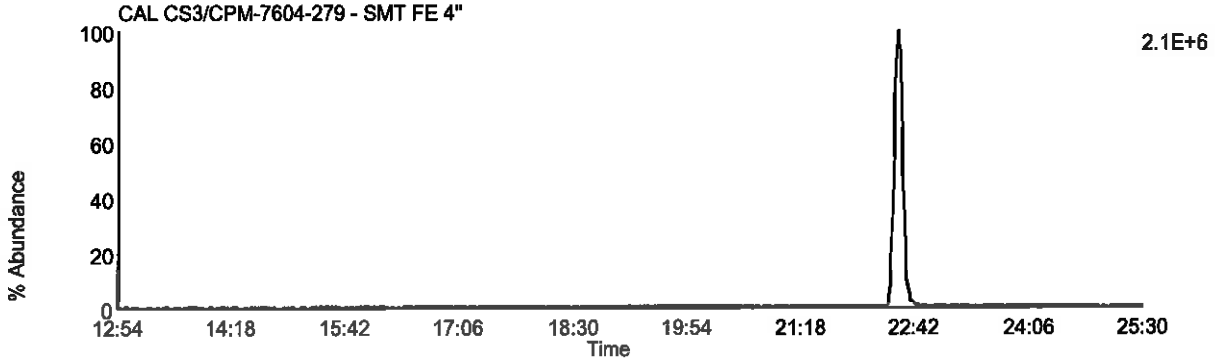
Data File: F130918B_02 G1 C12 - 339.8597
CAL CS3/CPM-7604-279 - SMT FE 4"



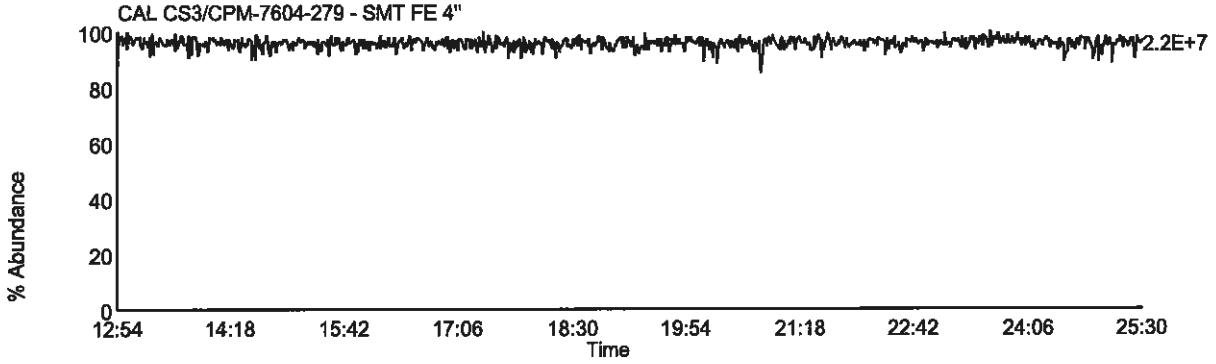
Data File: F130918B_02 G1 C13 - 341.8567
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C9 - 327.8847
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT FE 4"

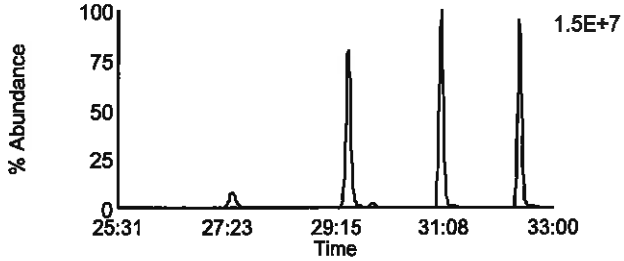


Homologue Group: Pentas

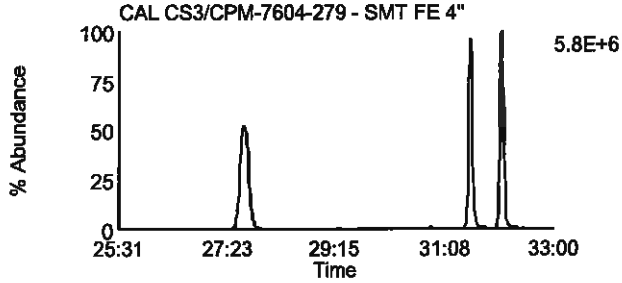
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

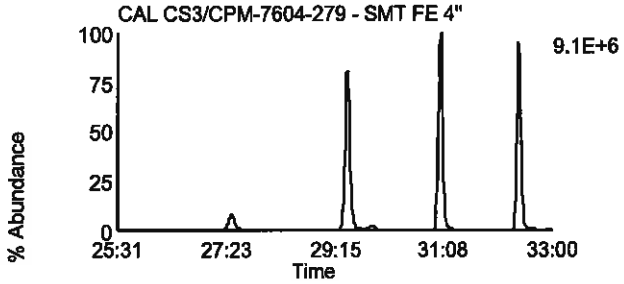
Data File: F130918B_02 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - SMT FE 4"



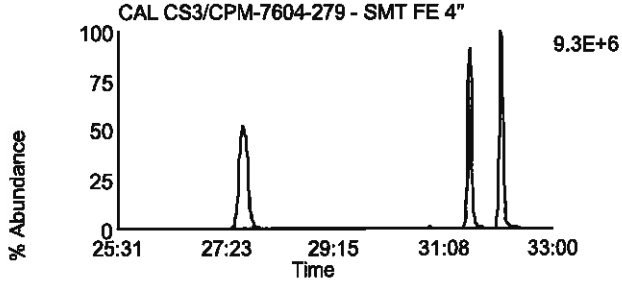
Data File: F130918B_02 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - SMT FE 4"



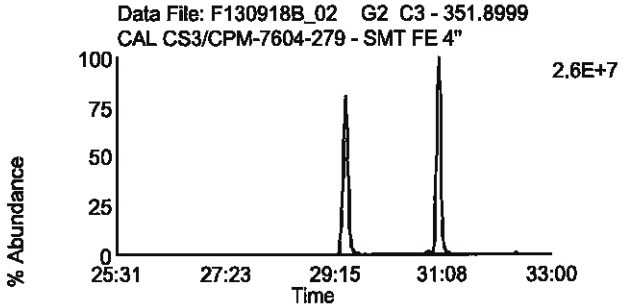
Data File: F130918B_02 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - SMT FE 4"



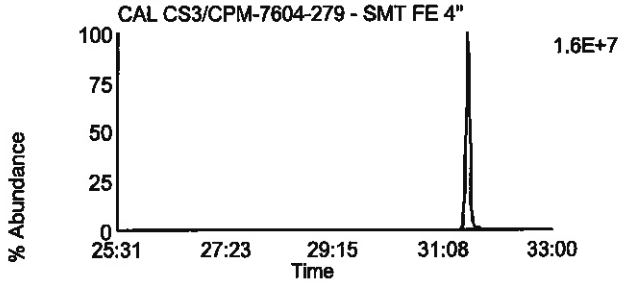
Data File: F130918B_02 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - SMT FE 4"



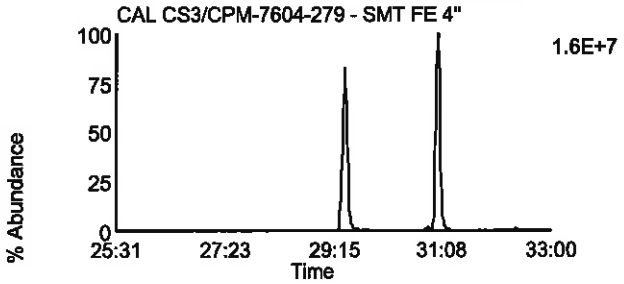
Data File: F130918B_02 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - SMT FE 4"



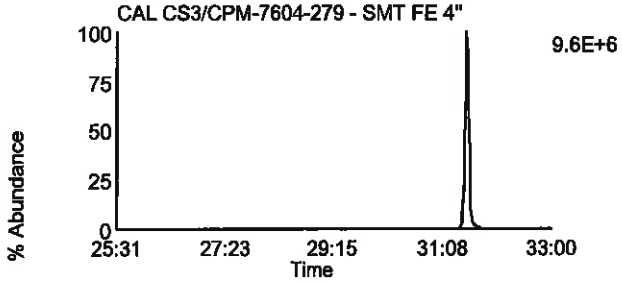
Data File: F130918B_02 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - SMT FE 4"



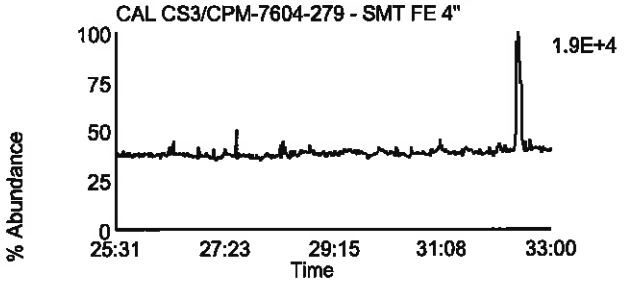
Data File: F130918B_02 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - SMT FE 4"



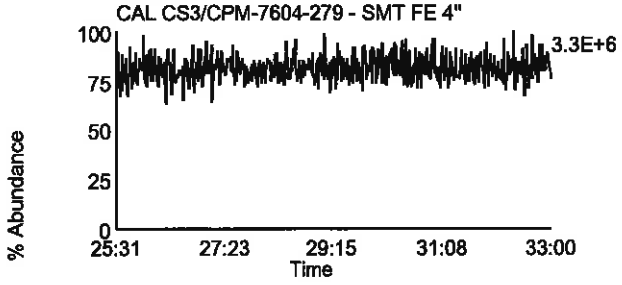
Data File: F130918B_02 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - SMT FE 4"

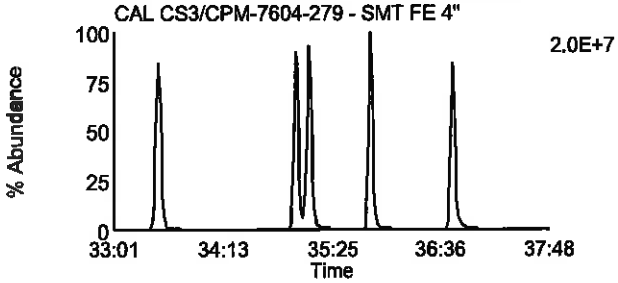


Homologue Group: Hexas

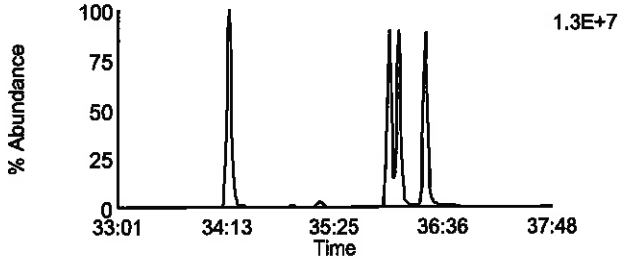
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

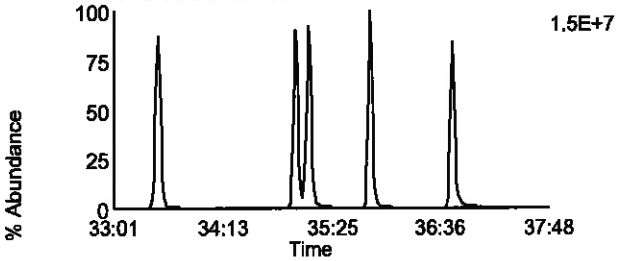
Data File: F130918B_02 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - SMT FE 4"



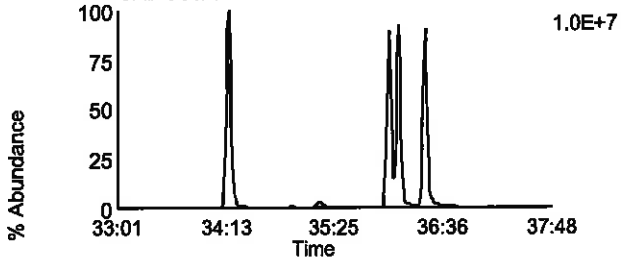
Data File: F130918B_02 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - SMT FE 4"



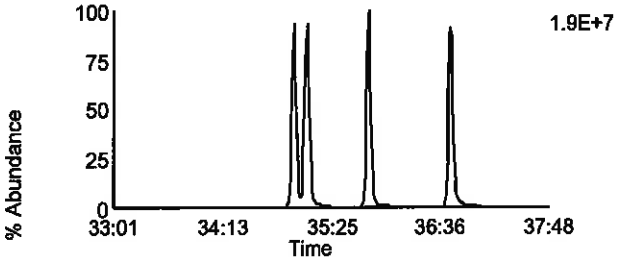
Data File: F130918B_02 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - SMT FE 4"



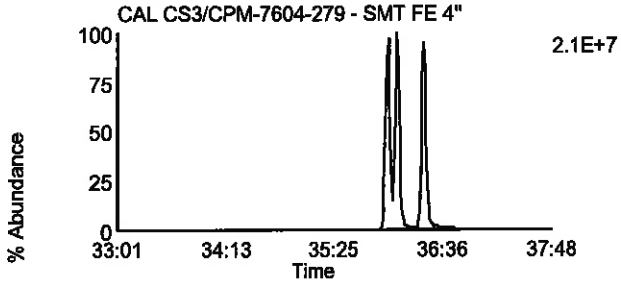
Data File: F130918B_02 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - SMT FE 4"



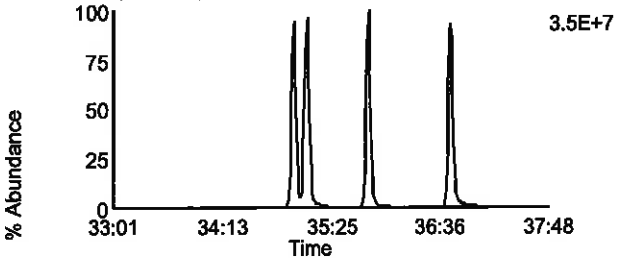
Data File: F130918B_02 G3 C5 - 383.8639
CAL CS3/CPM-7604-279 - SMT FE 4"



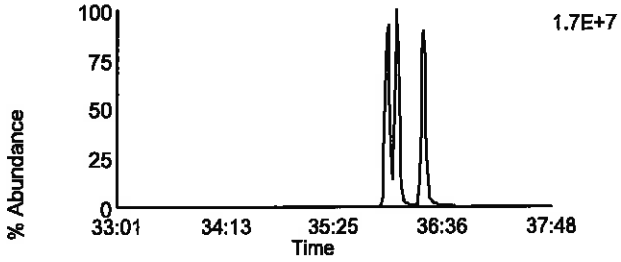
Data File: F130918B_02 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - SMT FE 4"



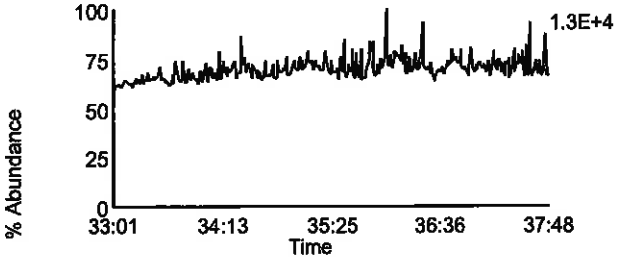
Data File: F130918B_02 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - SMT FE 4"



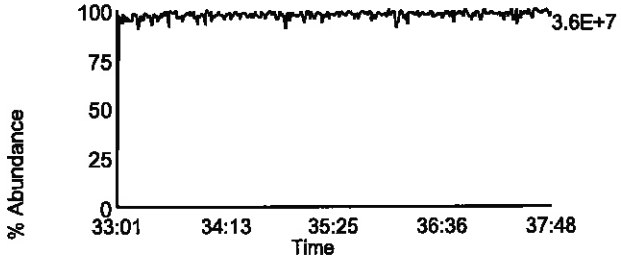
Data File: F130918B_02 G3 C10 - 403.8529
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - SMT FE 4"

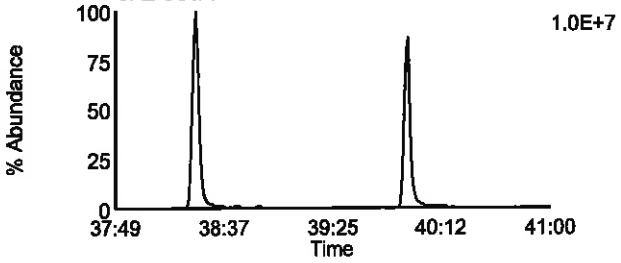


Homologue Group: Heptas

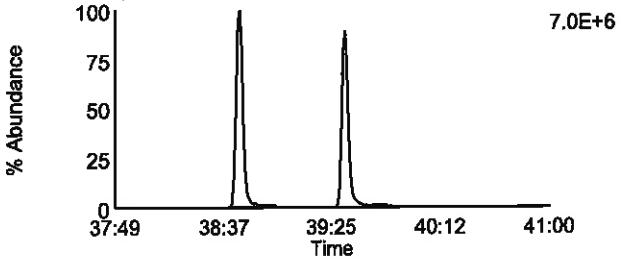
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

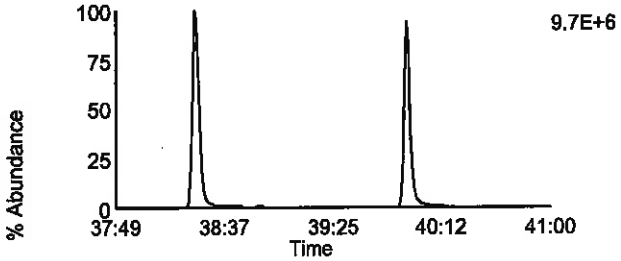
Data File: F130918B_02 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - SMT FE 4"



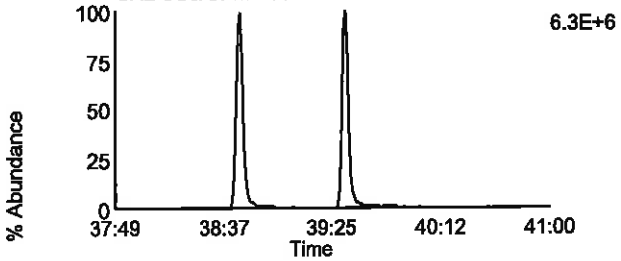
Data File: F130918B_02 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - SMT FE 4"



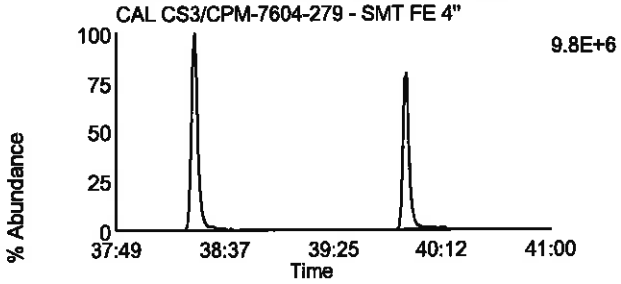
Data File: F130918B_02 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - SMT FE 4"



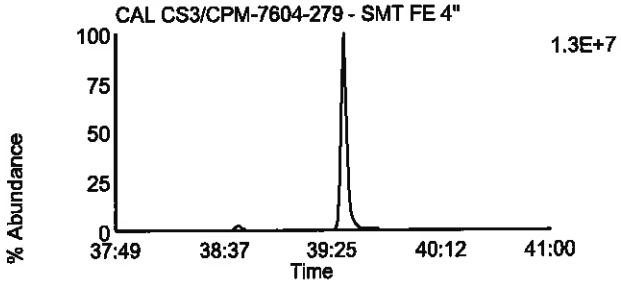
Data File: F130918B_02 G4 C9 - 425.7737
CAL CS3/CPM-7604-279 - SMT FE 4"



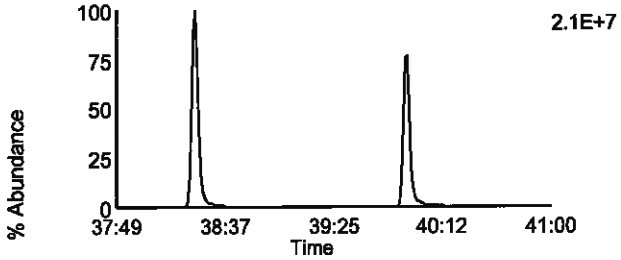
Data File: F130918B_02 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - SMT FE 4"



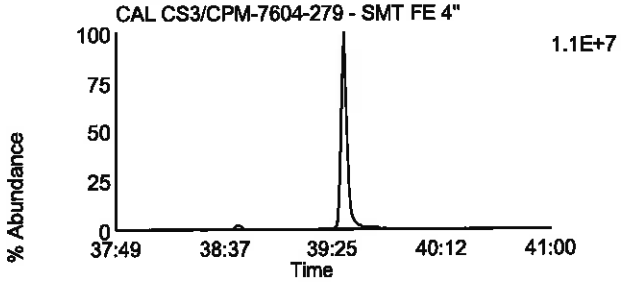
Data File: F130918B_02 G4 C11 - 435.8169
CAL CS3/CPM-7604-279 - SMT FE 4"



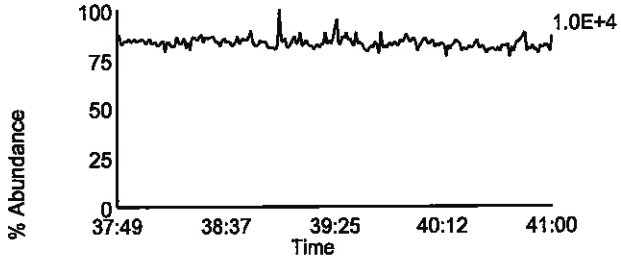
Data File: F130918B_02 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - SMT FE 4"



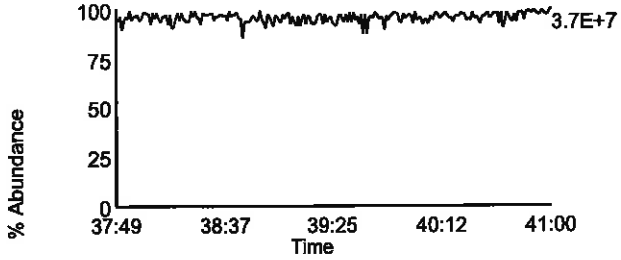
Data File: F130918B_02 G4 C12 - 437.814
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G4 C13 - 479.7165
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - SMT FE 4"

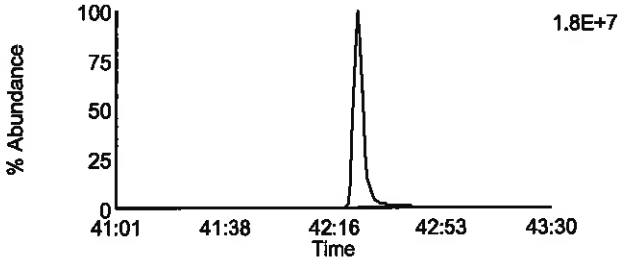


Homologue Group: Octas

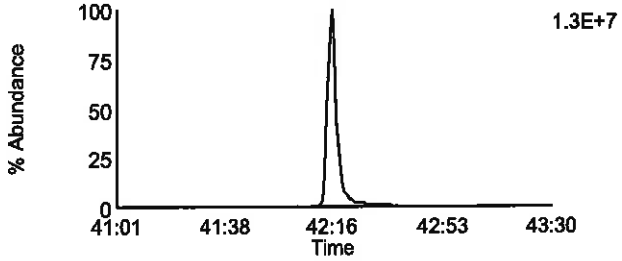
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

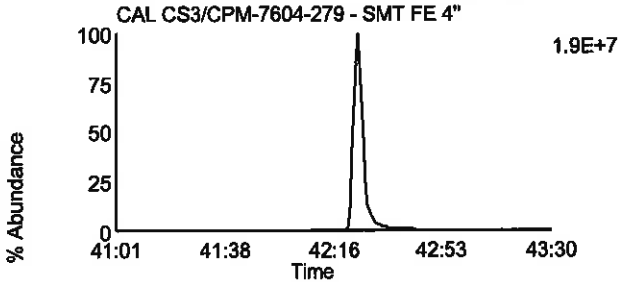
Data File: F130918B_02 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - SMT FE 4"



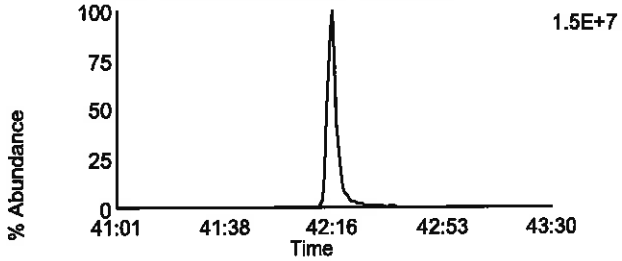
Data File: F130918B_02 G5 C8 - 457.7377
CAL CS3/CPM-7604-279 - SMT FE 4"



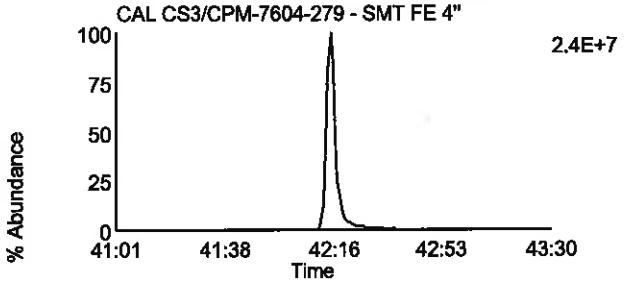
Data File: F130918B_02 G5 C5 - 443.7398
CAL CS3/CPM-7604-279 - SMT FE 4"



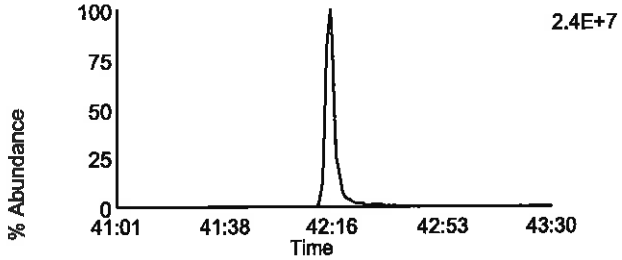
Data File: F130918B_02 G5 C9 - 459.7347
CAL CS3/CPM-7604-279 - SMT FE 4"



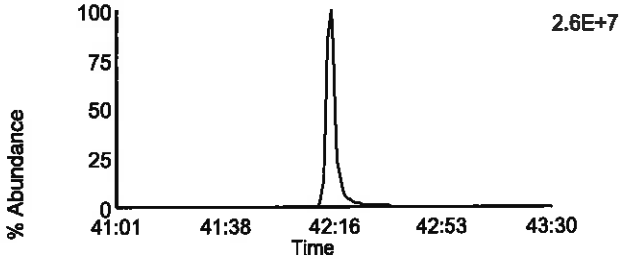
Data File: F130918B_02 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT FE 4"



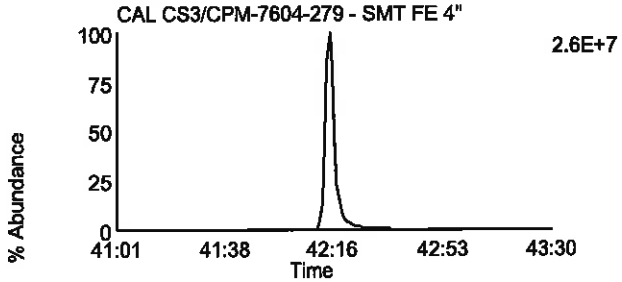
Data File: F130918B_02 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT FE 4"



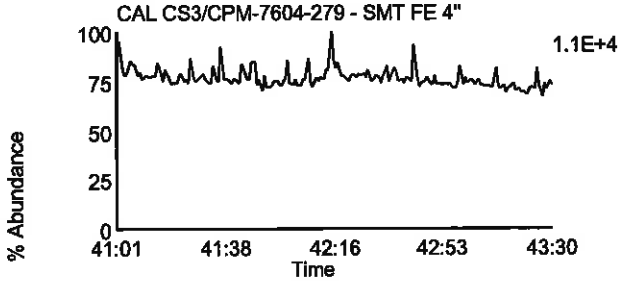
Data File: F130918B_02 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT FE 4"



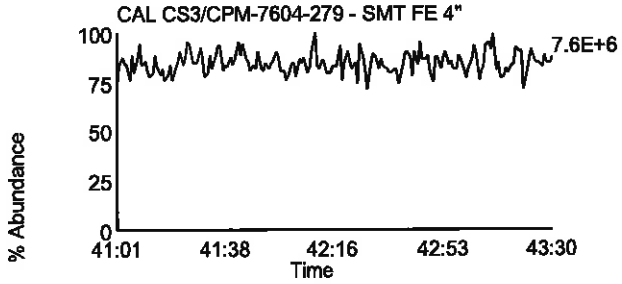
Data File: F130918B_02 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G5 C2 - 430.9728
CAL CS3/CPM-7604-279 - SMT FE 4"

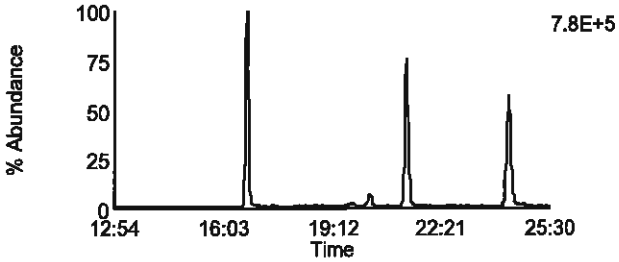


Homologue Group: Tetras

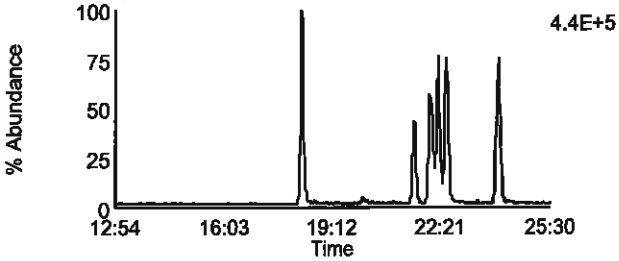
Data File Name: F130921A_16
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

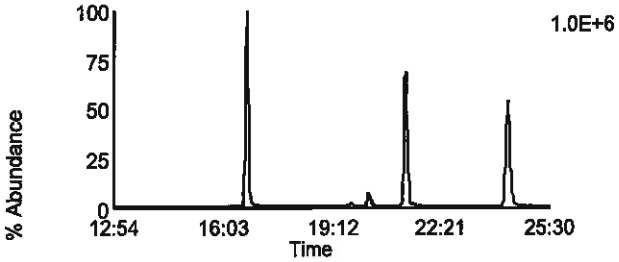
Data File: F130921A_16 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - BAL BAL



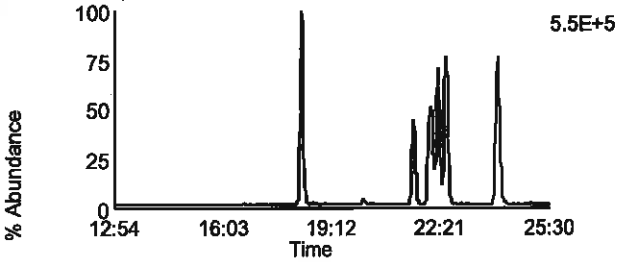
Data File: F130921A_16 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - BAL BAL



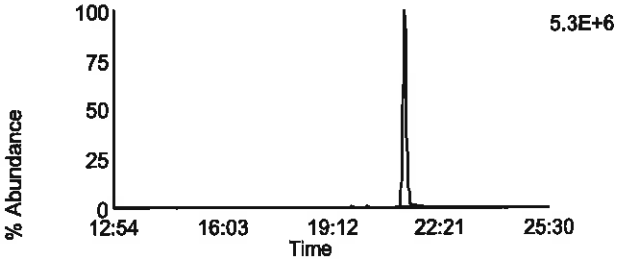
Data File: F130921A_16 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - BAL BAL



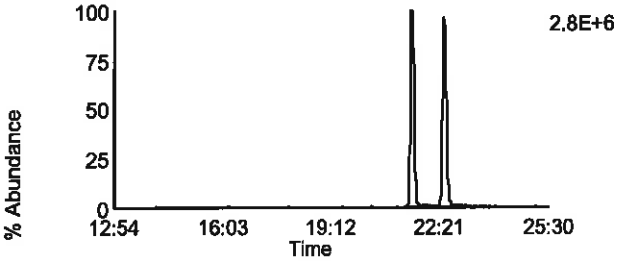
Data File: F130921A_16 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - BAL BAL



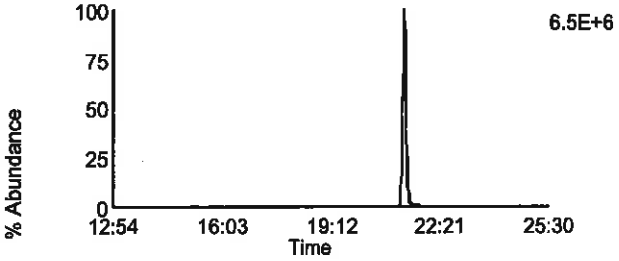
Data File: F130921A_16 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - BAL BAL



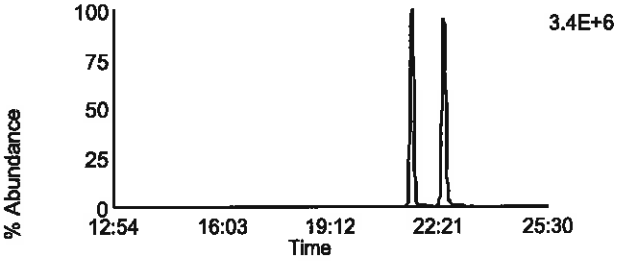
Data File: F130921A_16 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - BAL BAL



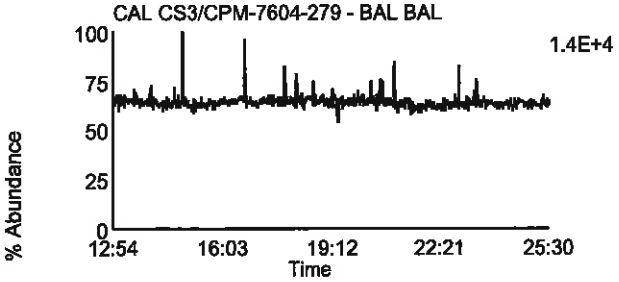
Data File: F130921A_16 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - BAL BAL



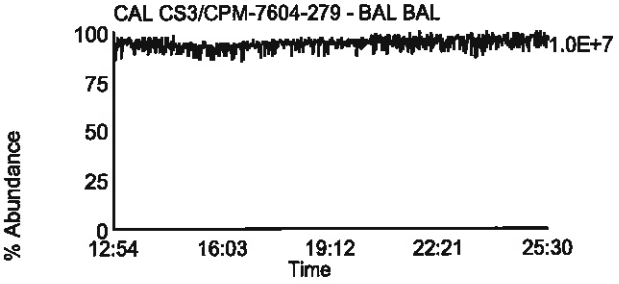
Data File: F130921A_16 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - BAL BAL

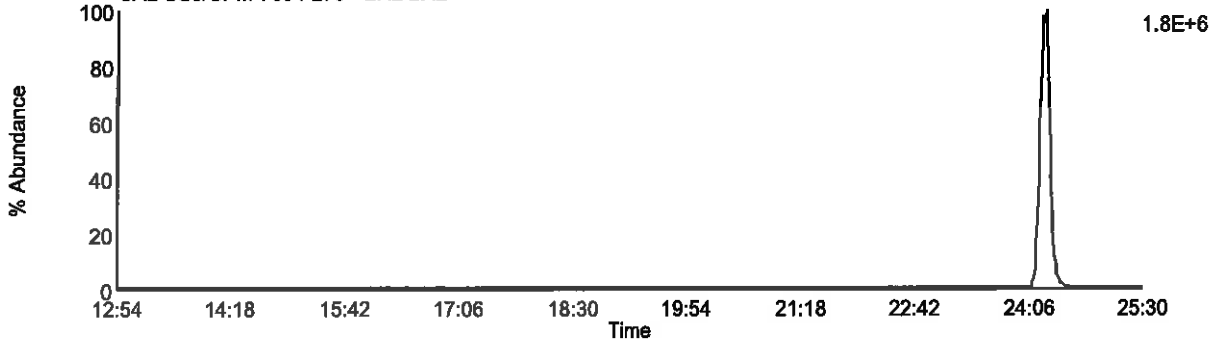


Homologue Group: Penta & Cleanup

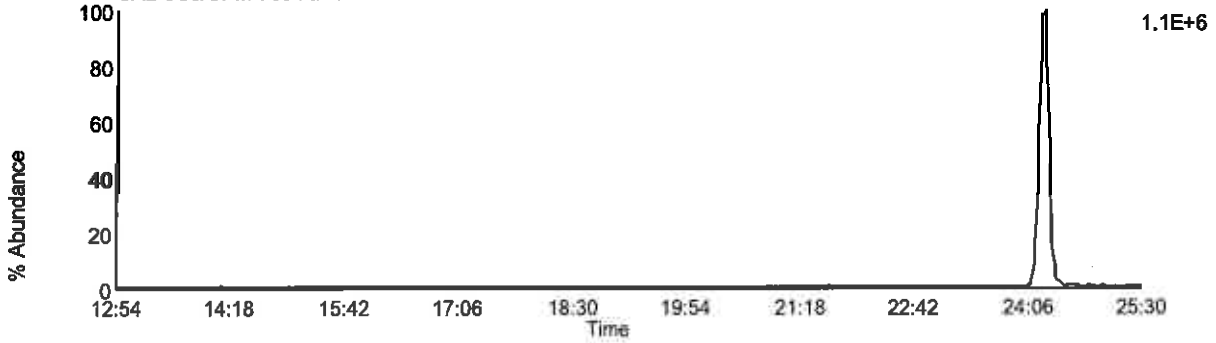
Data File Name: F130921A_16
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

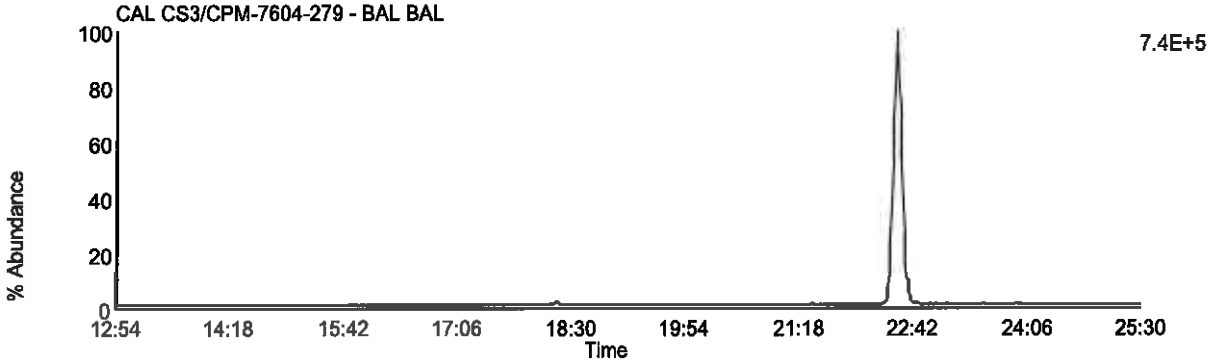
Data File: F130921A_16 G1 C12 - 339.8597
CAL CS3/CPM-7604-279 - BAL BAL



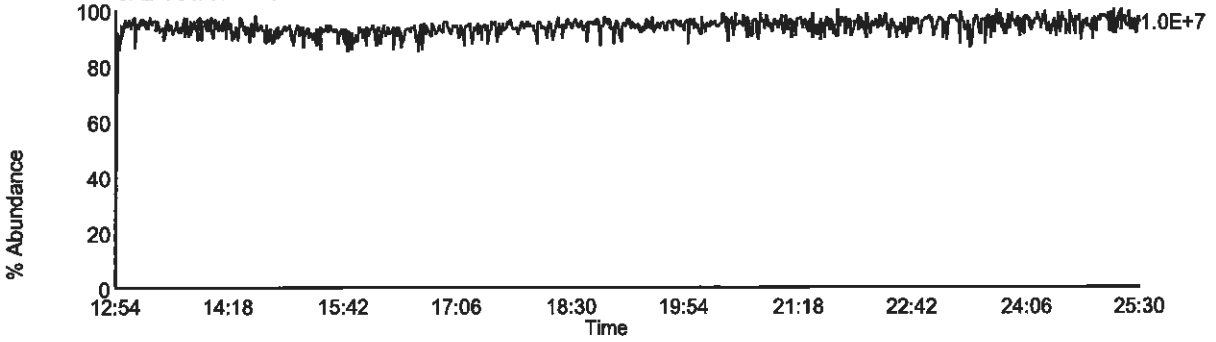
Data File: F130921A_16 G1 C13 - 341.8567
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G1 C9 - 327.8847
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - BAL BAL

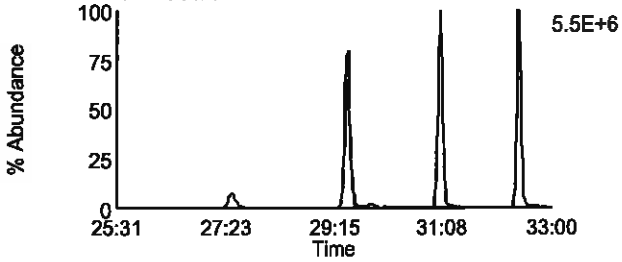


Homologue Group: Pentas

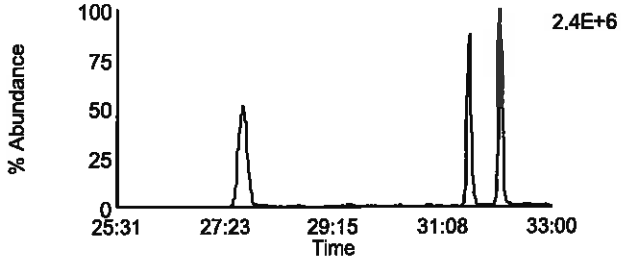
Data File Name: F130921A_16
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

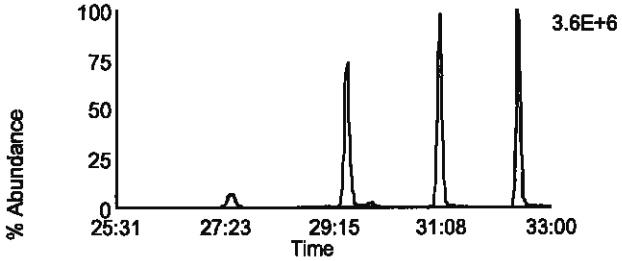
Data File: F130921A_16 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - BAL BAL



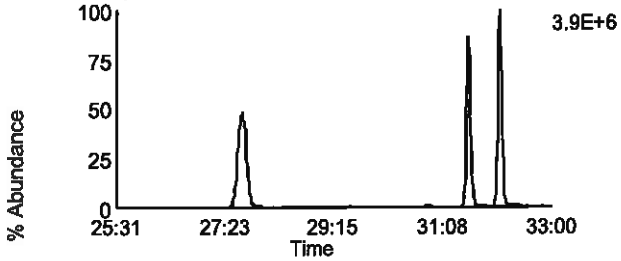
Data File: F130921A_16 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - BAL BAL



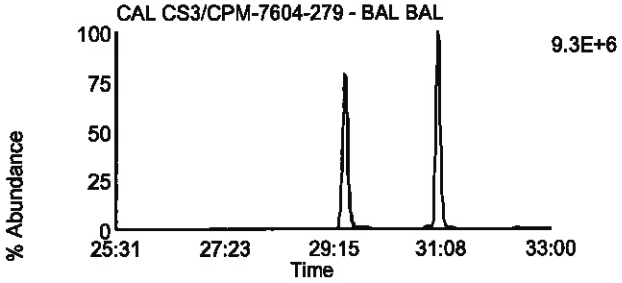
Data File: F130921A_16 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - BAL BAL



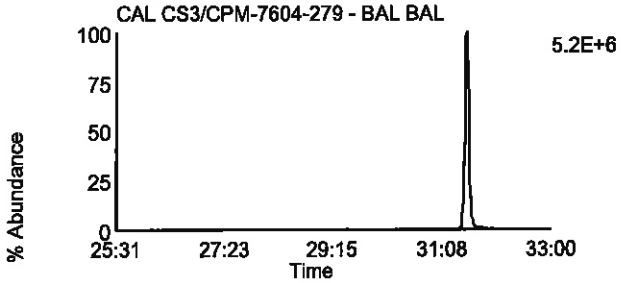
Data File: F130921A_16 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - BAL BAL



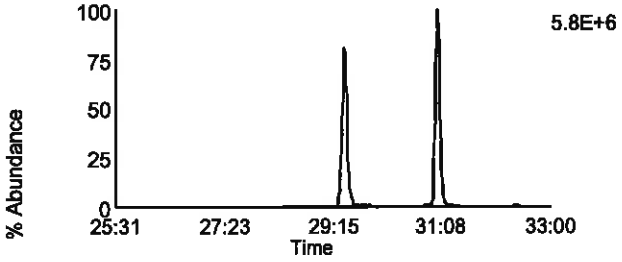
Data File: F130921A_16 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - BAL BAL



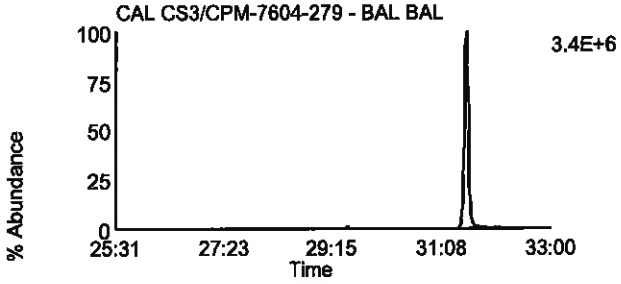
Data File: F130921A_16 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - BAL BAL



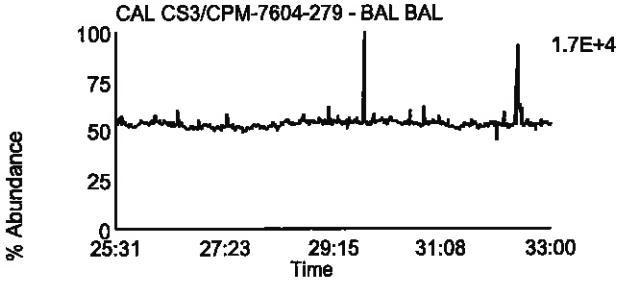
Data File: F130921A_16 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - BAL BAL



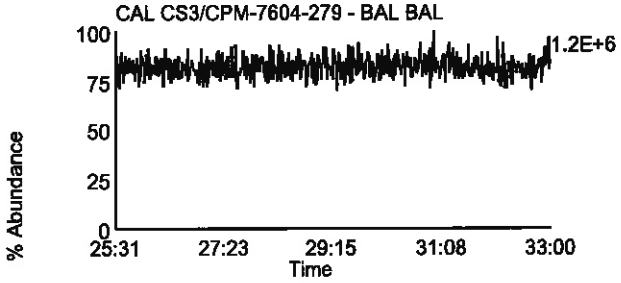
Data File: F130921A_16 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - BAL BAL

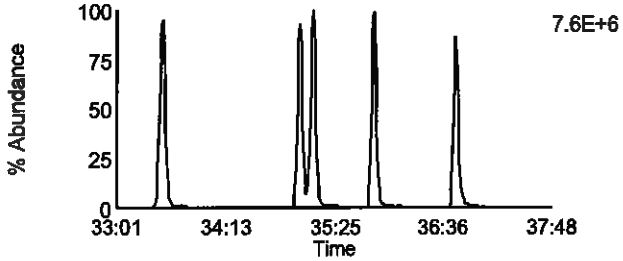


Homologue Group: Hexas

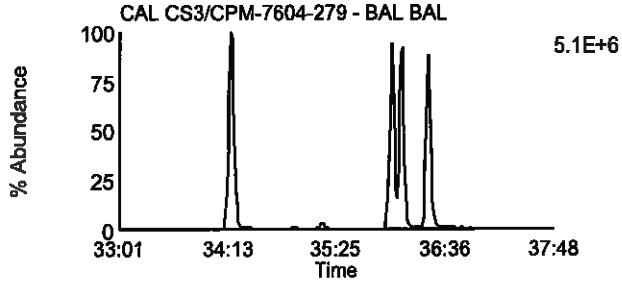
Data File Name: F130921A_16
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

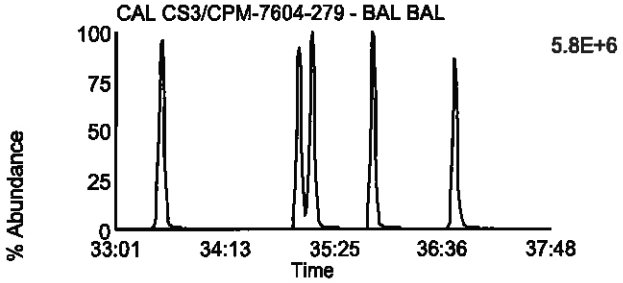
Data File: F130921A_16 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - BAL BAL



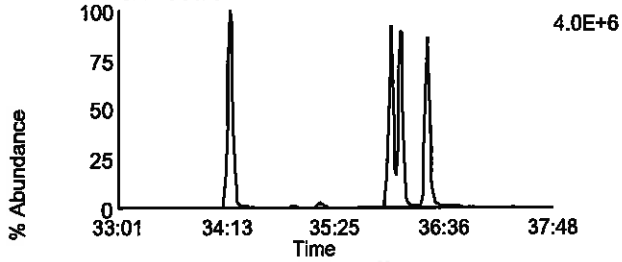
Data File: F130921A_16 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - BAL BAL



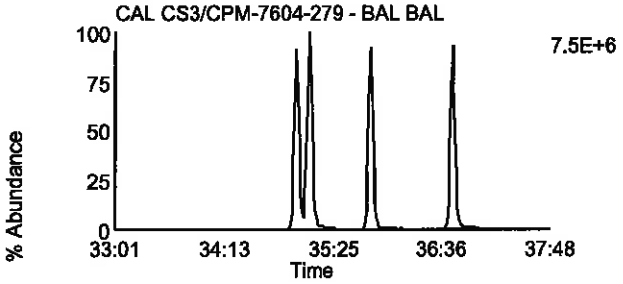
Data File: F130921A_16 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - BAL BAL



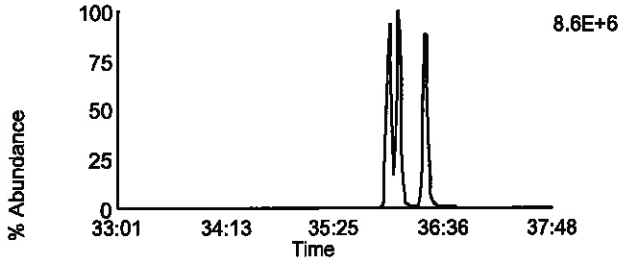
Data File: F130921A_16 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - BAL BAL



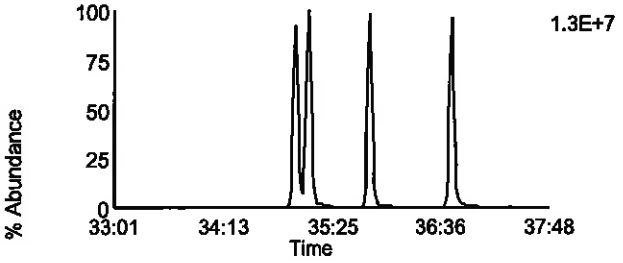
Data File: F130921A_16 G3 C5 - 383.8639
CAL CS3/CPM-7604-279 - BAL BAL



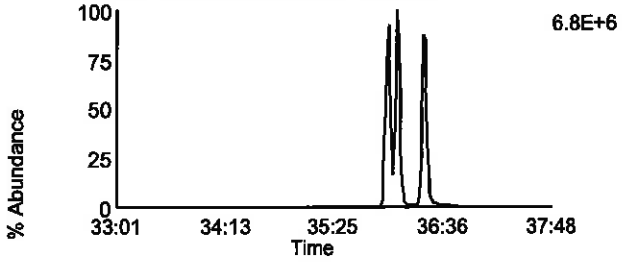
Data File: F130921A_16 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - BAL BAL



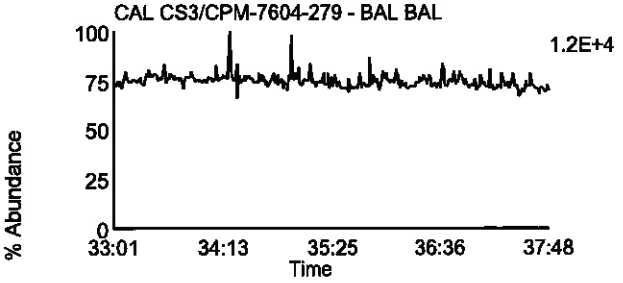
Data File: F130921A_16 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - BAL BAL



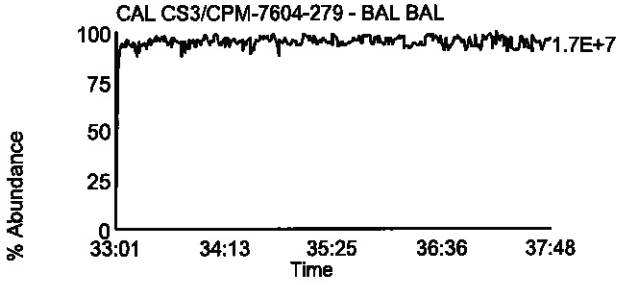
Data File: F130921A_16 G3 C10 - 403.8529
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - BAL BAL

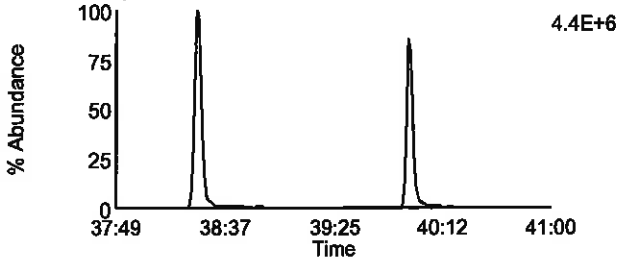


Homologue Group: Heptas

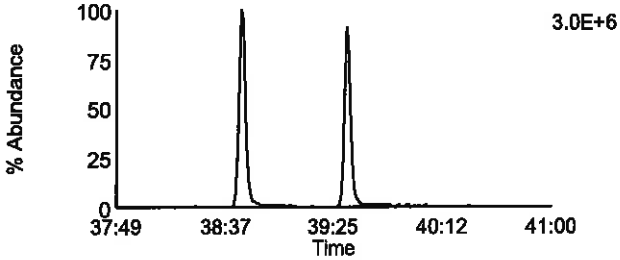
Data File Name: F130921A_16
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

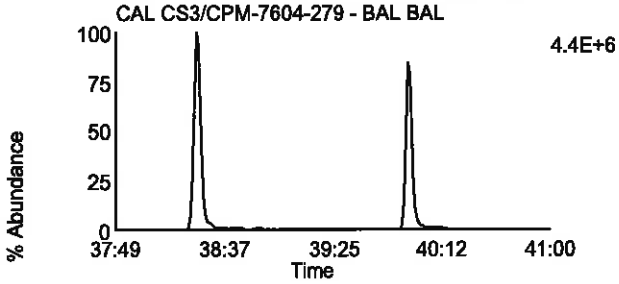
Data File: F130921A_16 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - BAL BAL



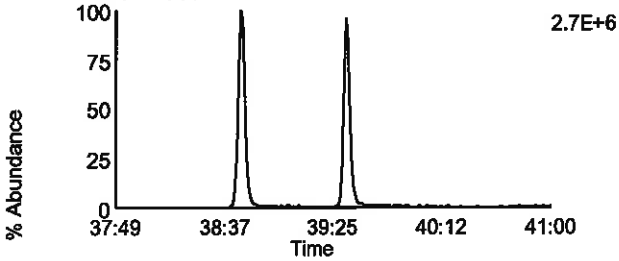
Data File: F130921A_16 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - BAL BAL



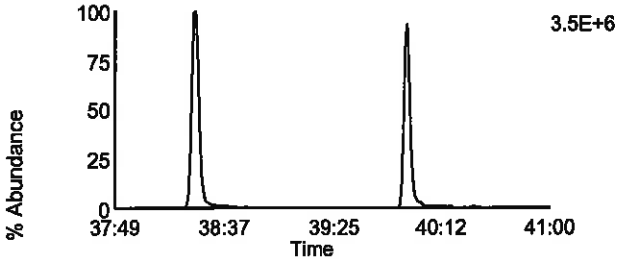
Data File: F130921A_16 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - BAL BAL



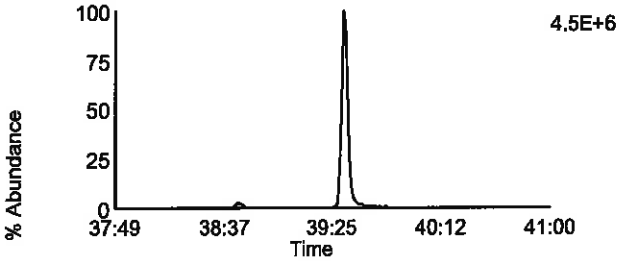
Data File: F130921A_16 G4 C9 - 425.7737
CAL CS3/CPM-7604-279 - BAL BAL



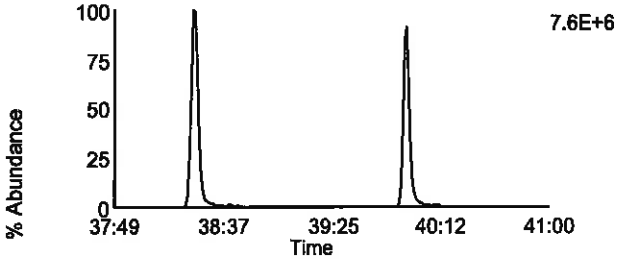
Data File: F130921A_16 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - BAL BAL



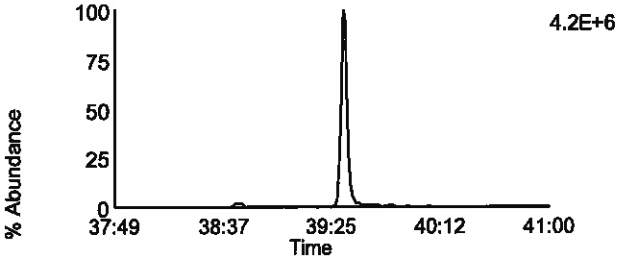
Data File: F130921A_16 G4 C11 - 435.8169
CAL CS3/CPM-7604-279 - BAL BAL



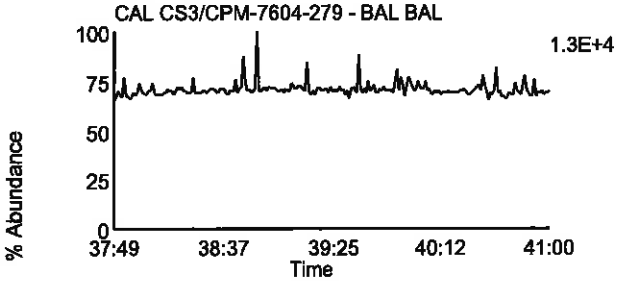
Data File: F130921A_16 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - BAL BAL



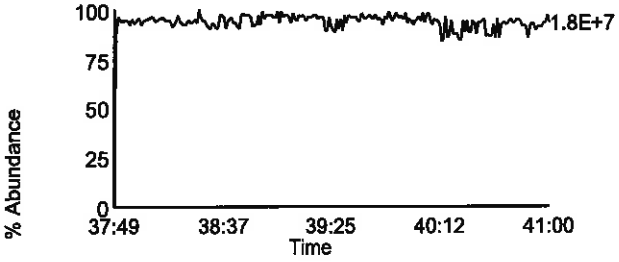
Data File: F130921A_16 G4 C12 - 437.814
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G4 C13 - 479.7165
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - BAL BAL

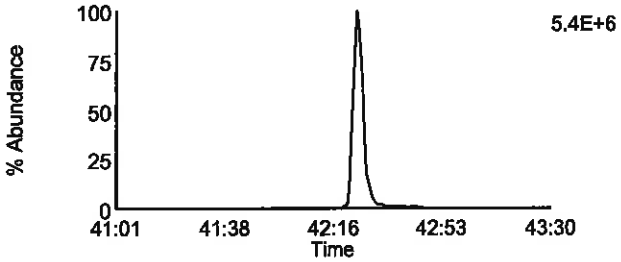


Homologue Group: Octas

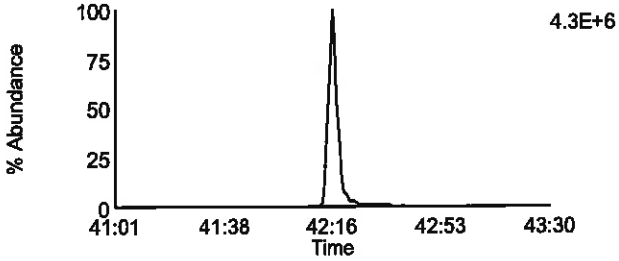
Data File Name: F130921A_16
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

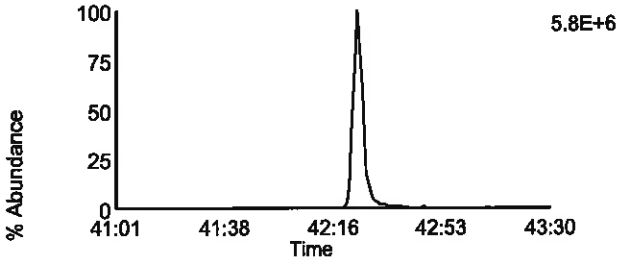
Data File: F130921A_16 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - BAL BAL



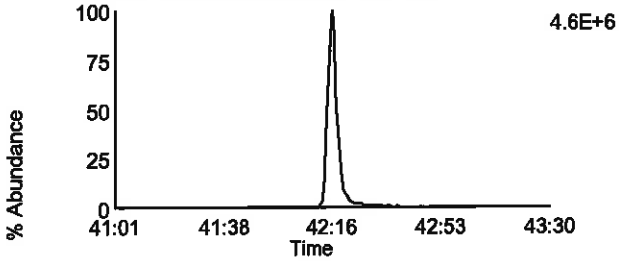
Data File: F130921A_16 G5 C8 - 457.7377
CAL CS3/CPM-7604-279 - BAL BAL



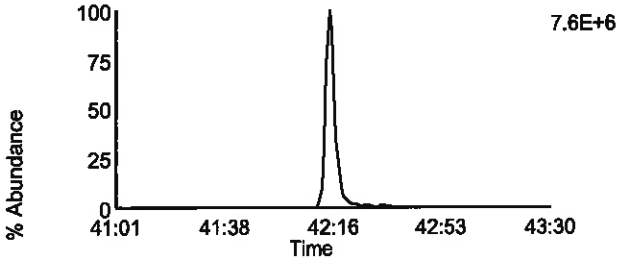
Data File: F130921A_16 G5 C5 - 443.7398
CAL CS3/CPM-7604-279 - BAL BAL



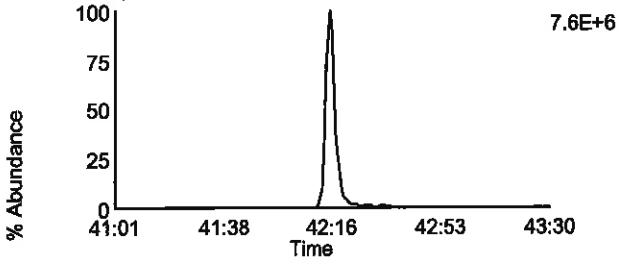
Data File: F130921A_16 G5 C9 - 459.7347
CAL CS3/CPM-7604-279 - BAL BAL



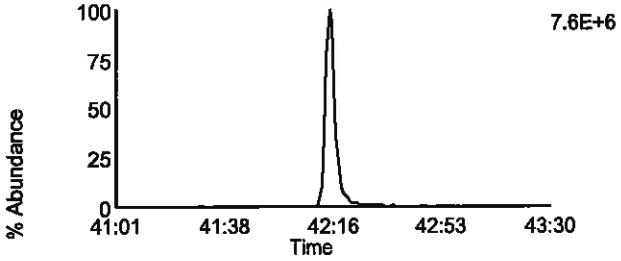
Data File: F130921A_16 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - BAL BAL



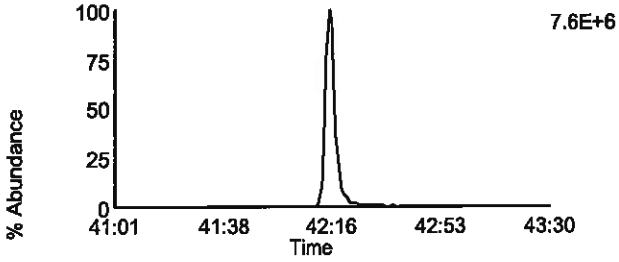
Data File: F130921A_16 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - BAL BAL



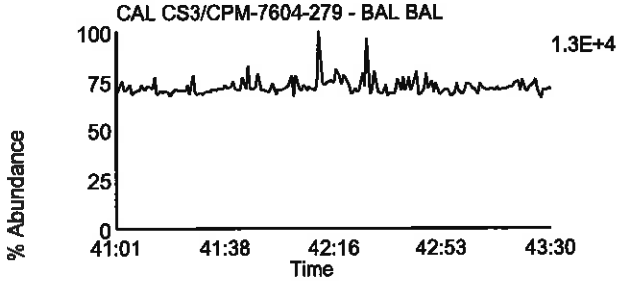
Data File: F130921A_16 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - BAL BAL



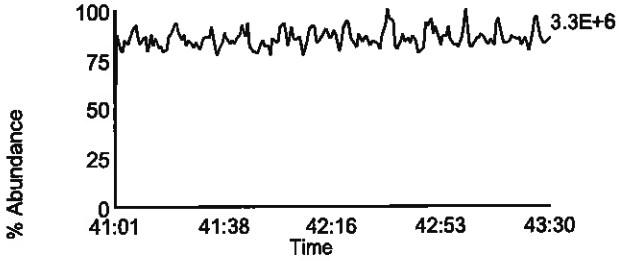
Data File: F130921A_16 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G5 C2 - 430.9728
CAL CS3/CPM-7604-279 - BAL BAL

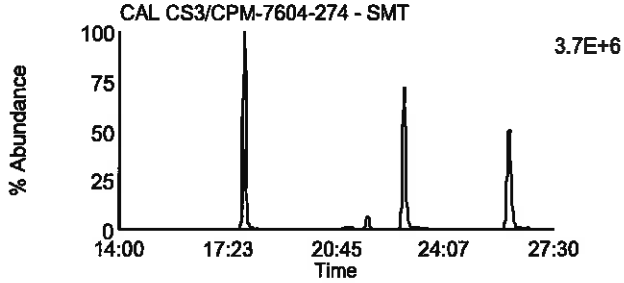


Homologue Group: Tetras

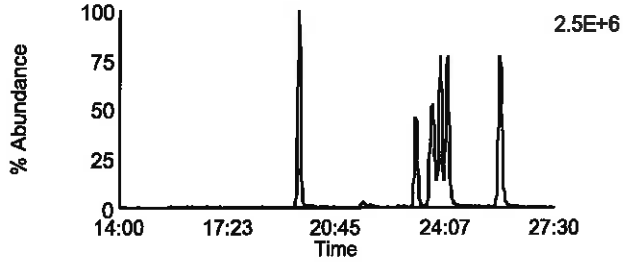
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

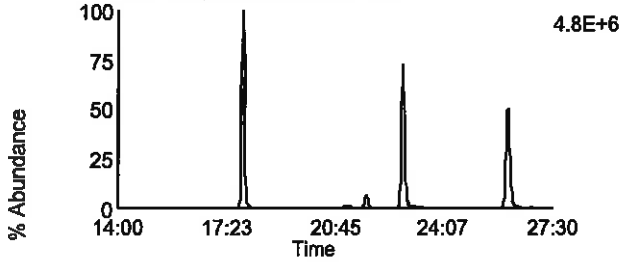
Data File: U130729B_09 G1 C1 - 303.9016
CAL CS3/CPM-7604-274 - SMT



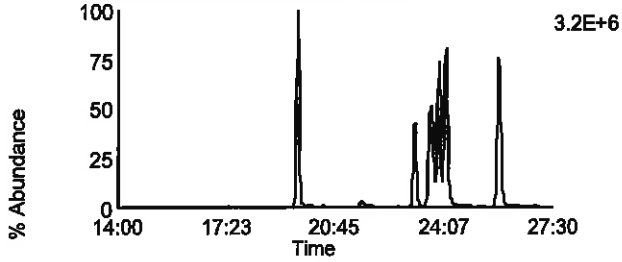
Data File: U130729B_09 G1 C7 - 319.8965
CAL CS3/CPM-7604-274 - SMT



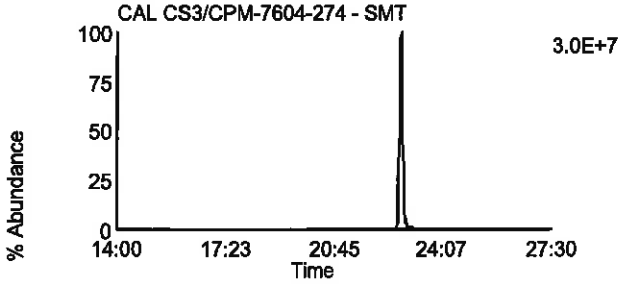
Data File: U130729B_09 G1 C2 - 305.8987
CAL CS3/CPM-7604-274 - SMT



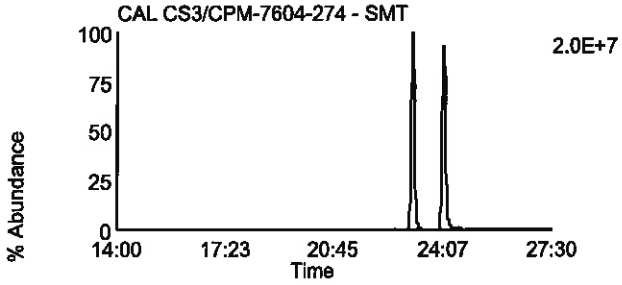
Data File: U130729B_09 G1 C8 - 321.8936
CAL CS3/CPM-7604-274 - SMT



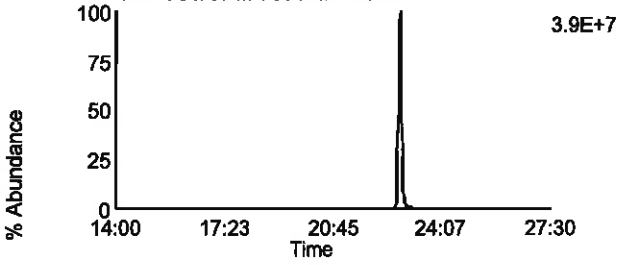
Data File: U130729B_09 G1 C3 - 315.9418
CAL CS3/CPM-7604-274 - SMT



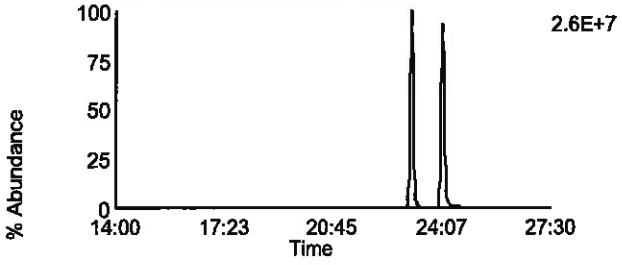
Data File: U130729B_09 G1 C10 - 331.9367
CAL CS3/CPM-7604-274 - SMT



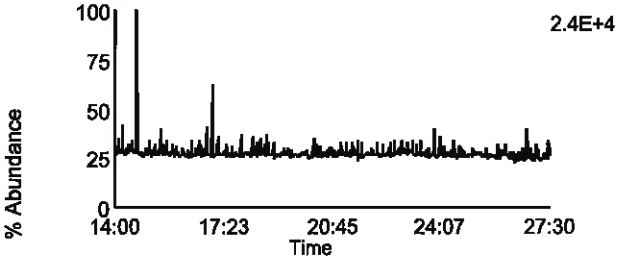
Data File: U130729B_09 G1 C4 - 317.9389
CAL CS3/CPM-7604-274 - SMT



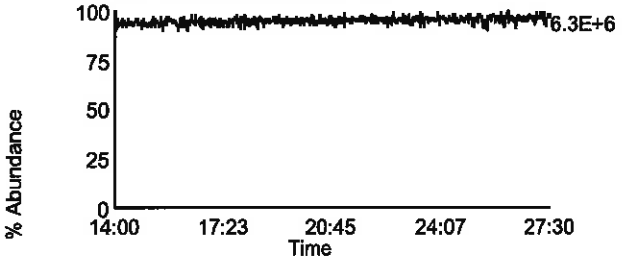
Data File: U130729B_09 G1 C11 - 333.9338
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C14 - 375.8364
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C5 - 318.9792
CAL CS3/CPM-7604-274 - SMT

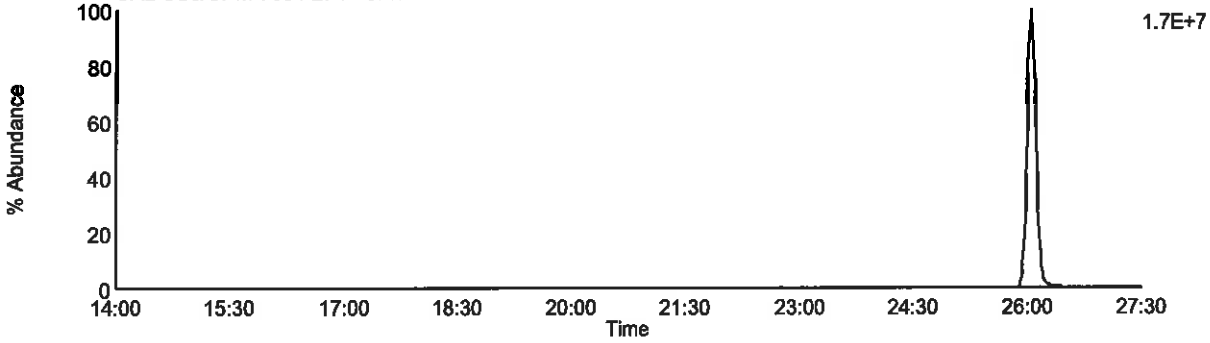


Homologue Group: Penta & Cleanup

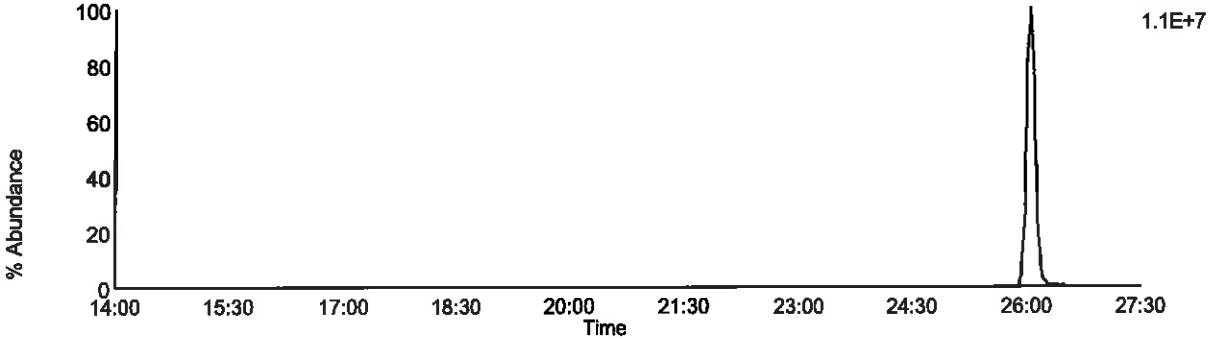
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

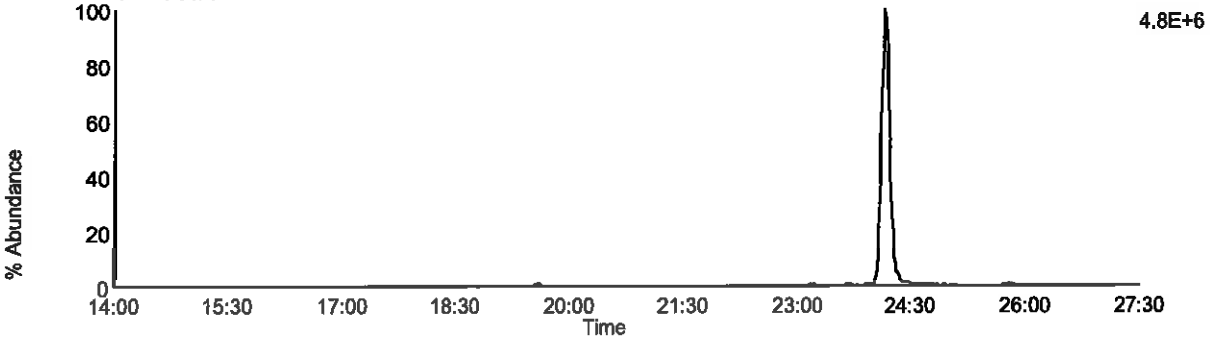
Data File: U130729B_09 G1 C12 - 339.8597
CAL CS3/CPM-7604-274 - SMT



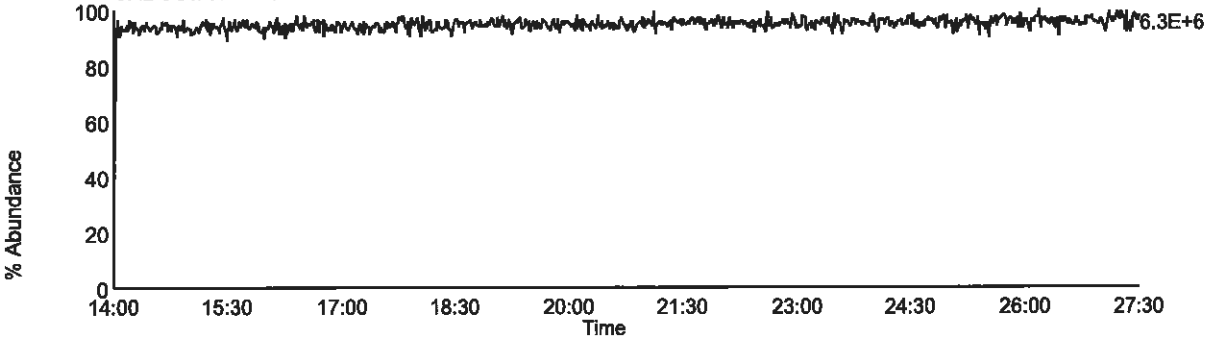
Data File: U130729B_09 G1 C13 - 341.8567
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C9 - 327.8847
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C5 - 318.9792
CAL CS3/CPM-7604-274 - SMT

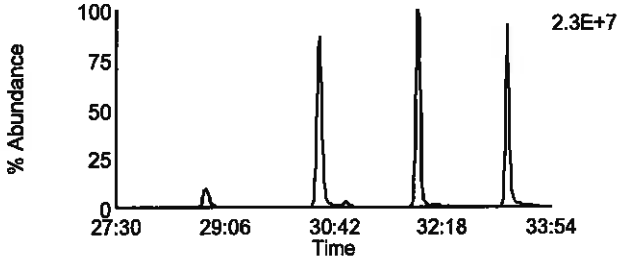


Homologue Group: Pentas

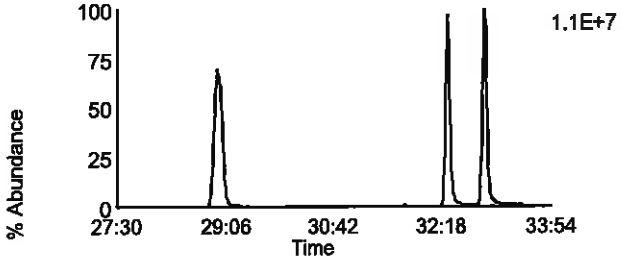
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

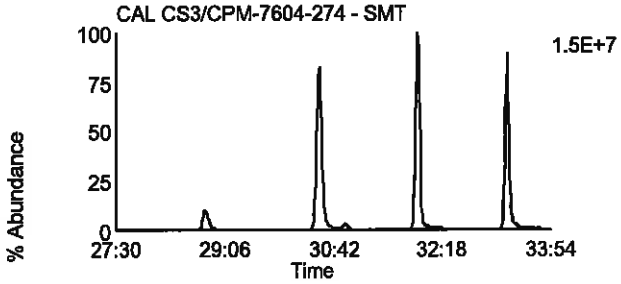
Data File: U130729B_09 G2 C1 - 339.8597
CAL CS3/CPM-7604-274 - SMT



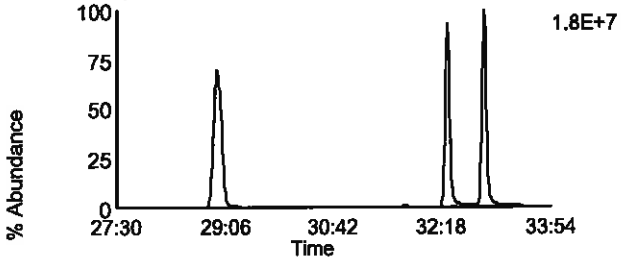
Data File: U130729B_09 G2 C4 - 353.8576
CAL CS3/CPM-7604-274 - SMT



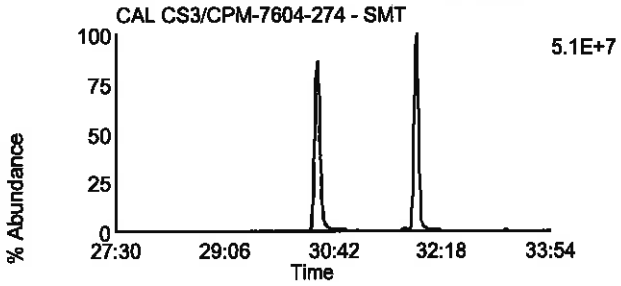
Data File: U130729B_09 G2 C2 - 341.8567
CAL CS3/CPM-7604-274 - SMT



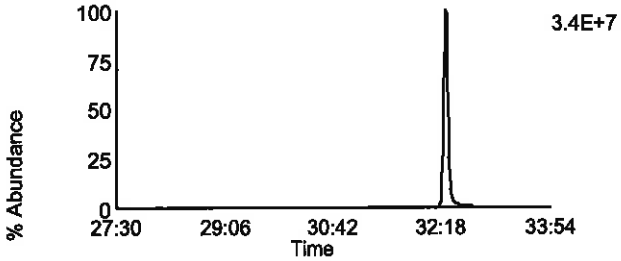
Data File: U130729B_09 G2 C8 - 355.8546
CAL CS3/CPM-7604-274 - SMT



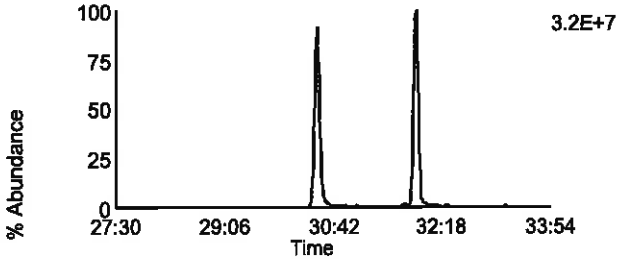
Data File: U130729B_09 G2 C3 - 351.8999
CAL CS3/CPM-7604-274 - SMT



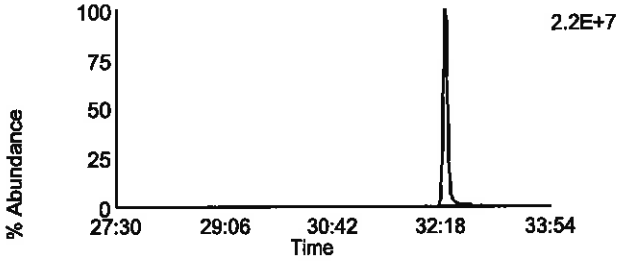
Data File: U130729B_09 G2 C10 - 367.8948
CAL CS3/CPM-7604-274 - SMT



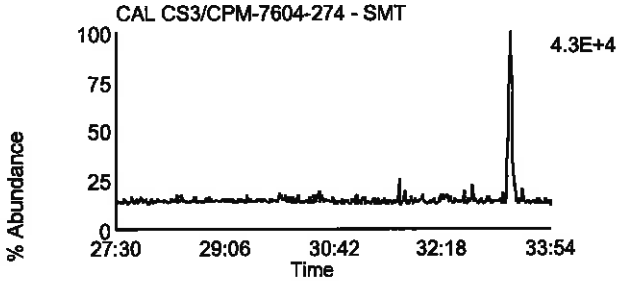
Data File: U130729B_09 G2 C5 - 353.8969
CAL CS3/CPM-7604-274 - SMT



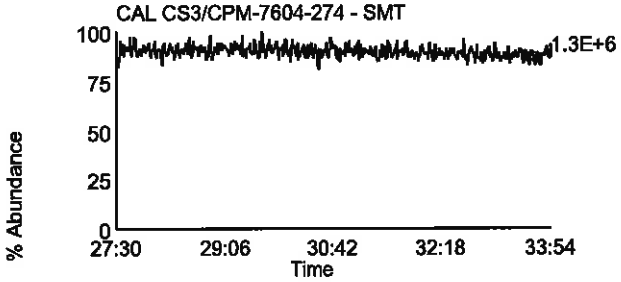
Data File: U130729B_09 G2 C11 - 369.8918
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G2 C12 - 409.7974
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G2 C6 - 354.9792
CAL CS3/CPM-7604-274 - SMT

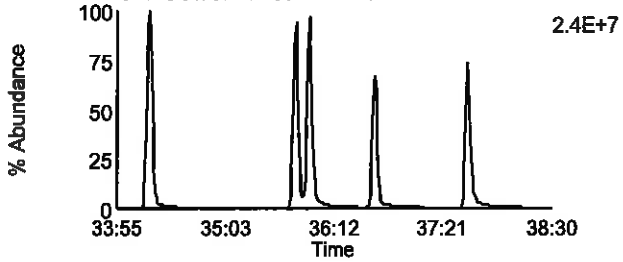


Homologue Group: Hexas

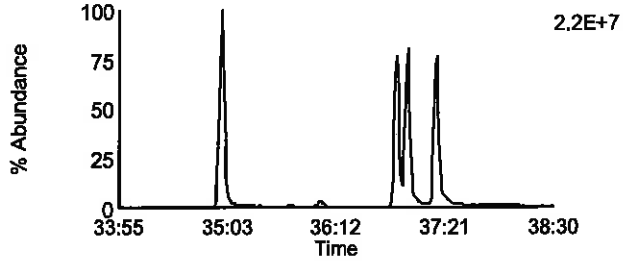
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

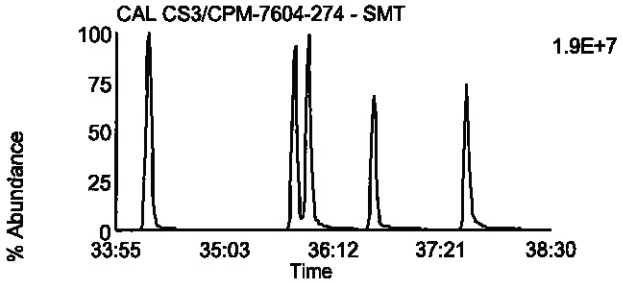
Data File: U130729B_09 G3 C1 - 373.8207
CAL CS3/CPM-7604-274 - SMT



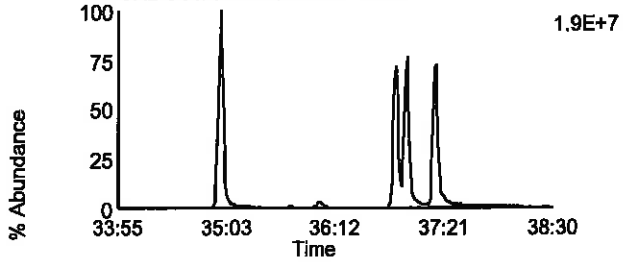
Data File: U130729B_09 G3 C7 - 389.8156
CAL CS3/CPM-7604-274 - SMT



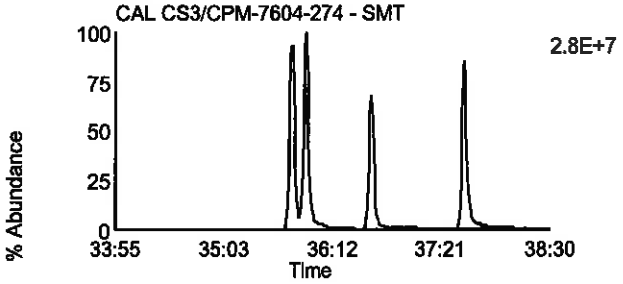
Data File: U130729B_09 G3 C2 - 375.8178
CAL CS3/CPM-7604-274 - SMT



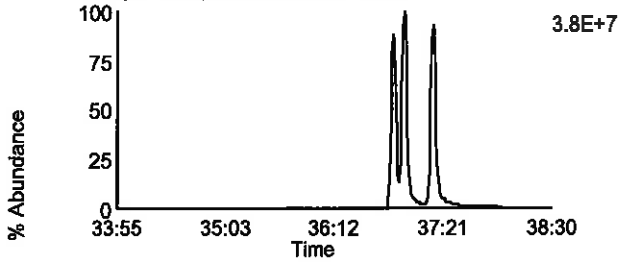
Data File: U130729B_09 G3 C8 - 391.8127
CAL CS3/CPM-7604-274 - SMT



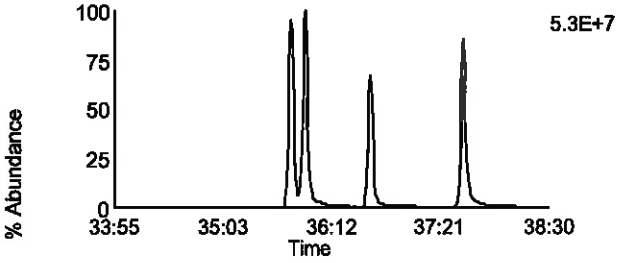
Data File: U130729B_09 G3 C5 - 383.8639
CAL CS3/CPM-7604-274 - SMT



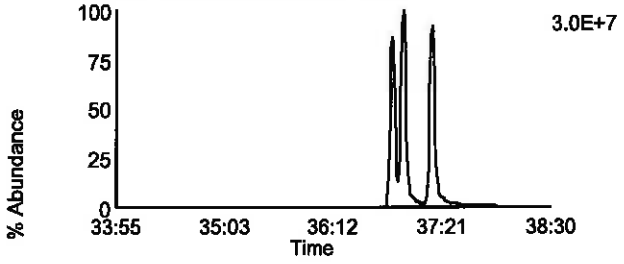
Data File: U130729B_09 G3 C9 - 401.8559
CAL CS3/CPM-7604-274 - SMT



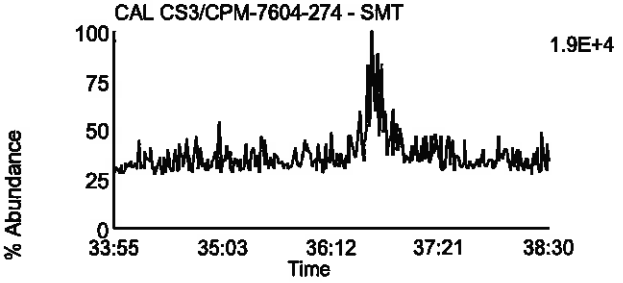
Data File: U130729B_09 G3 C6 - 385.861
CAL CS3/CPM-7604-274 - SMT



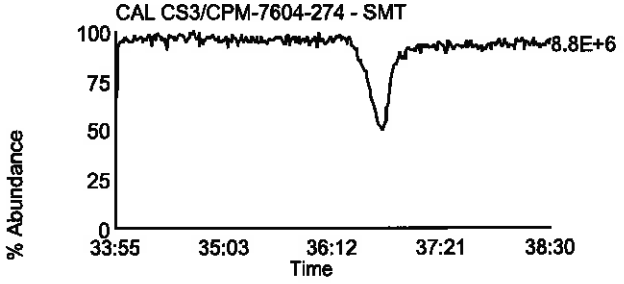
Data File: U130729B_09 G3 C10 - 403.8529
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G3 C11 - 445.7555
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G3 C3 - 380.976
CAL CS3/CPM-7604-274 - SMT

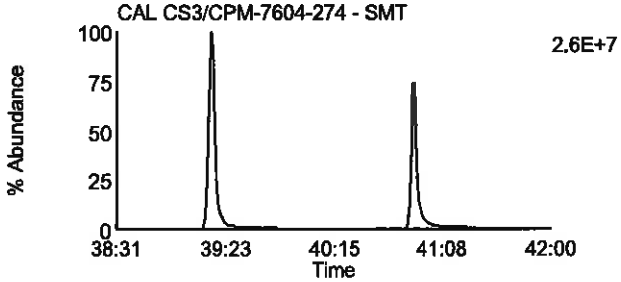


Homologue Group: Heptas

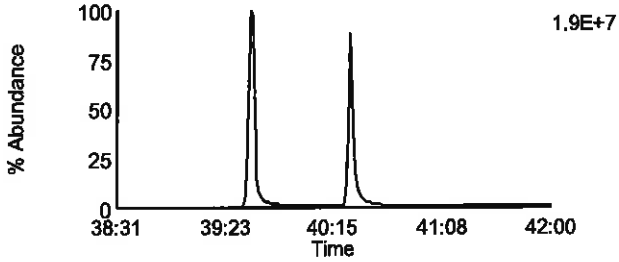
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

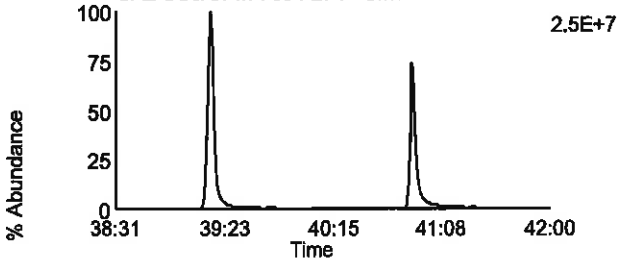
Data File: U130729B_09 G4 C3 - 407.7818
CAL CS3/CPM-7604-274 - SMT



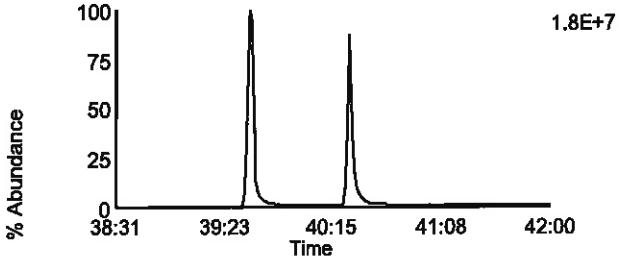
Data File: U130729B_09 G4 C8 - 423.7767
CAL CS3/CPM-7604-274 - SMT



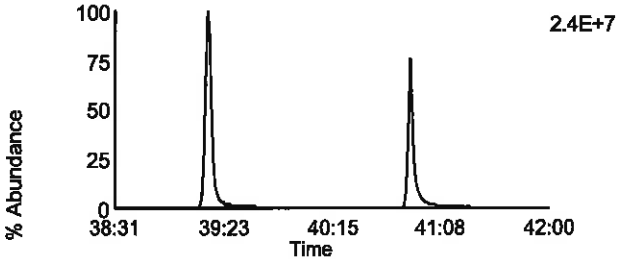
Data File: U130729B_09 G4 C4 - 409.7788
CAL CS3/CPM-7604-274 - SMT



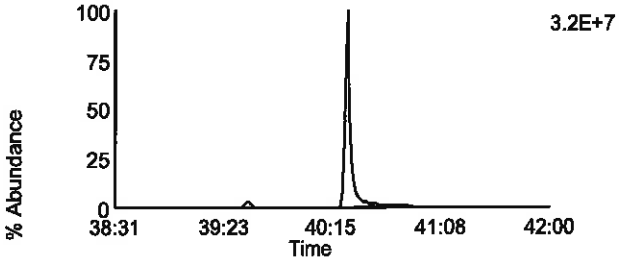
Data File: U130729B_09 G4 C9 - 425.7737
CAL CS3/CPM-7604-274 - SMT



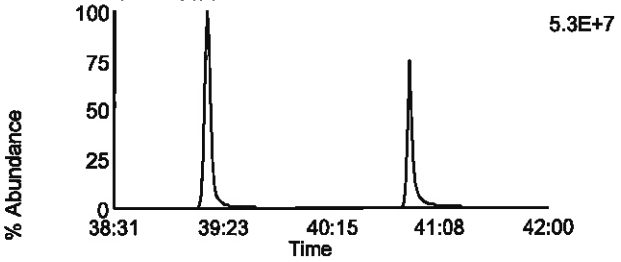
Data File: U130729B_09 G4 C6 - 417.825
CAL CS3/CPM-7604-274 - SMT



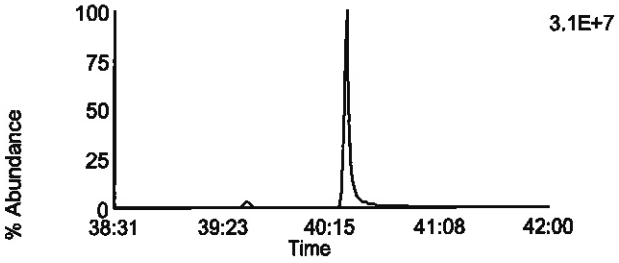
Data File: U130729B_09 G4 C11 - 435.8169
CAL CS3/CPM-7604-274 - SMT



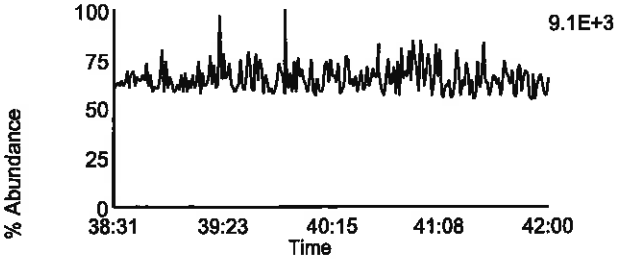
Data File: U130729B_09 G4 C7 - 419.822
CAL CS3/CPM-7604-274 - SMT



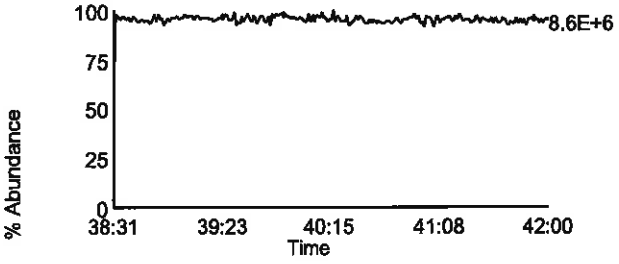
Data File: U130729B_09 G4 C12 - 437.814
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G4 C13 - 479.7165
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G4 C1 - 380.976
CAL CS3/CPM-7604-274 - SMT

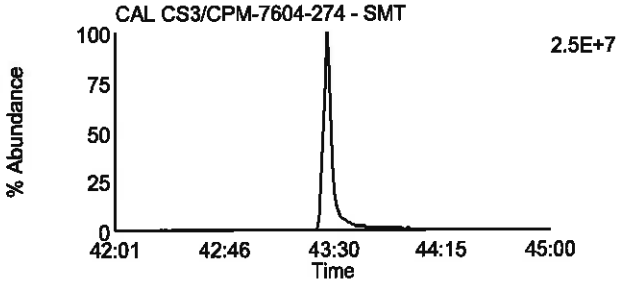


Homologue Group: Octas

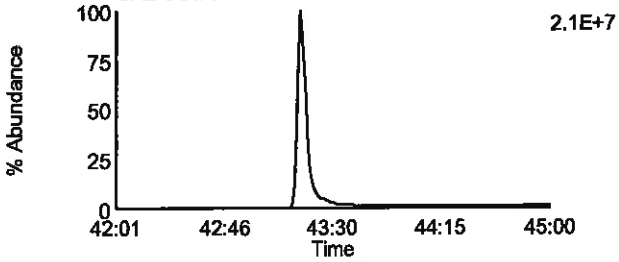
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

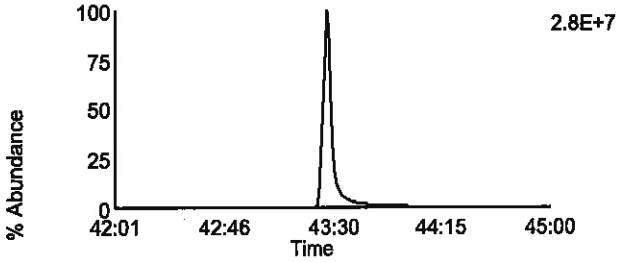
Data File: U130729B_09 G5 C4 - 441.7428
CAL CS3/CPM-7604-274 - SMT



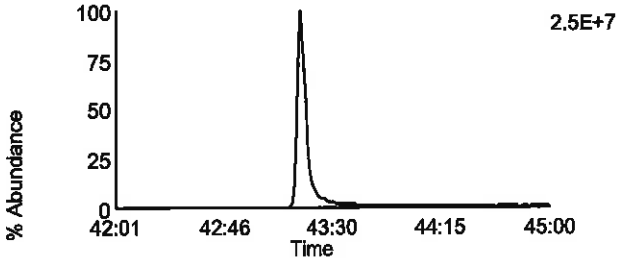
Data File: U130729B_09 G5 C8 - 457.7377
CAL CS3/CPM-7604-274 - SMT



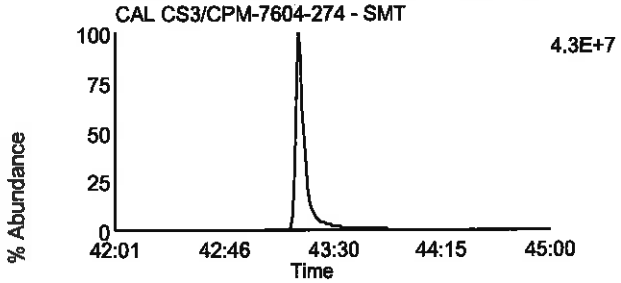
Data File: U130729B_09 G5 C5 - 443.7398
CAL CS3/CPM-7604-274 - SMT



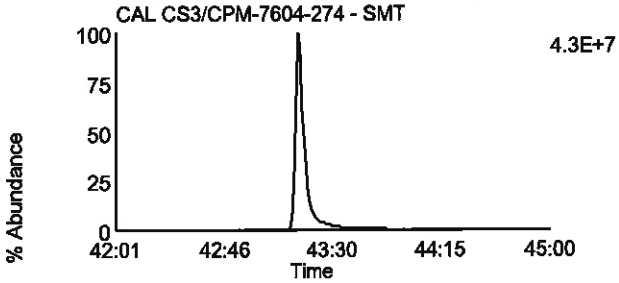
Data File: U130729B_09 G5 C9 - 459.7347
CAL CS3/CPM-7604-274 - SMT



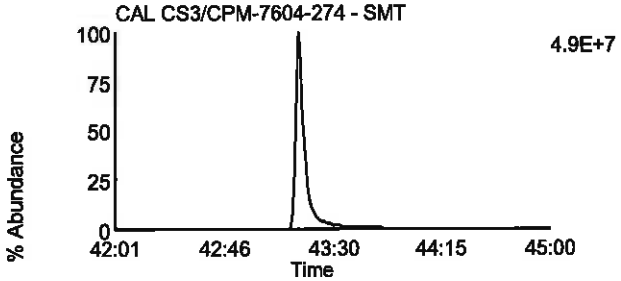
Data File: U130729B_09 G5 C11 - 469.7779
CAL CS3/CPM-7604-274 - SMT



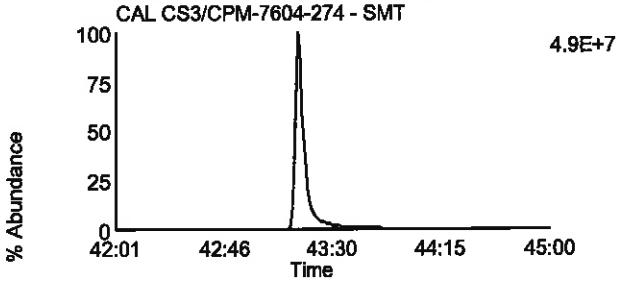
Data File: U130729B_09 G5 C11 - 469.7779
CAL CS3/CPM-7604-274 - SMT



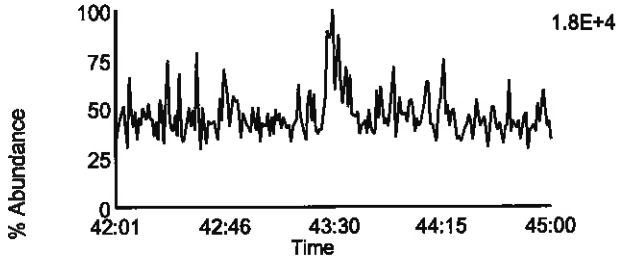
Data File: U130729B_09 G5 C12 - 471.7749
CAL CS3/CPM-7604-274 - SMT



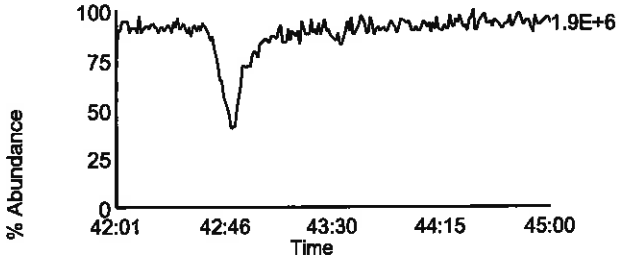
Data File: U130729B_09 G5 C12 - 471.7749
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G5 C13 - 513.6775
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G5 C2 - 430.9728
CAL CS3/CPM-7604-274 - SMT

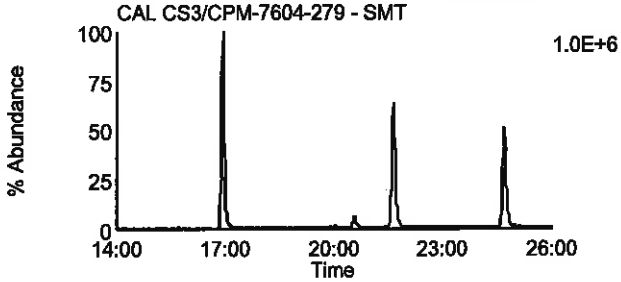


Homologue Group: Tetras

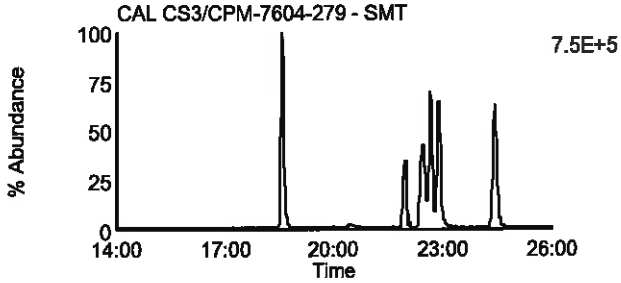
Data File Name: U130917A_06
Date Acquired: 9/17/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

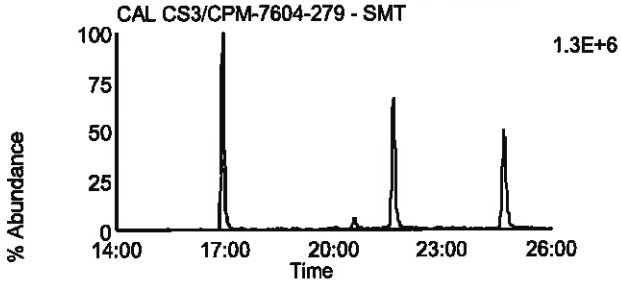
Data File: U130917A_06 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - SMT



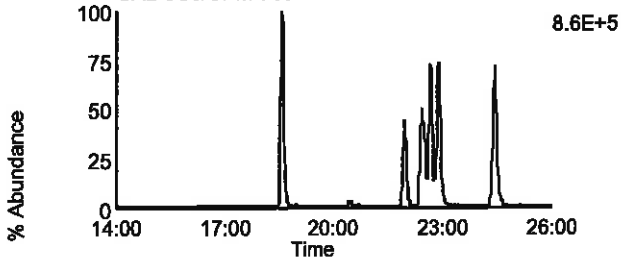
Data File: U130917A_06 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - SMT



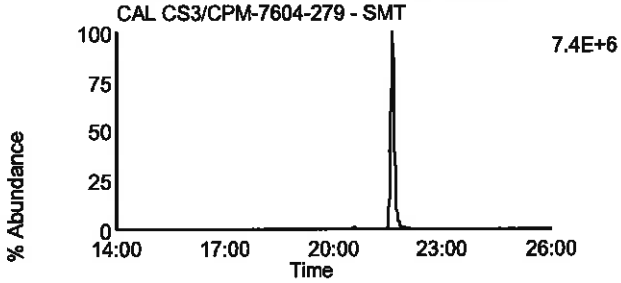
Data File: U130917A_06 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - SMT



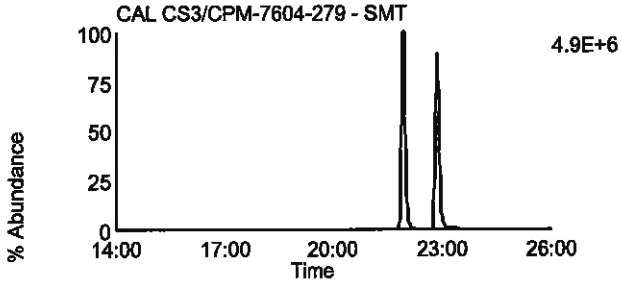
Data File: U130917A_06 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - SMT



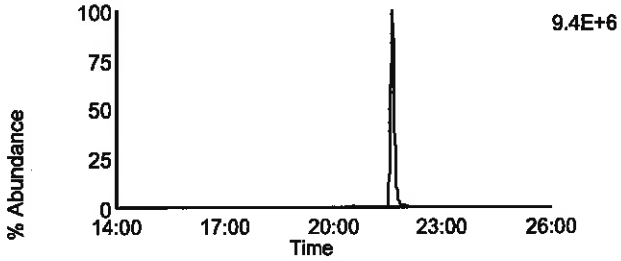
Data File: U130917A_06 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - SMT



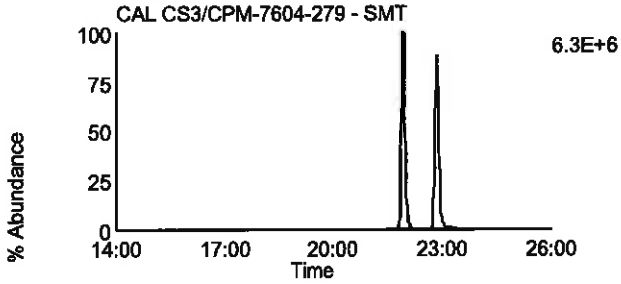
Data File: U130917A_06 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - SMT



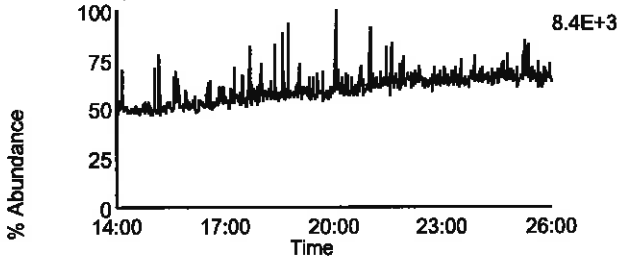
Data File: U130917A_06 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - SMT



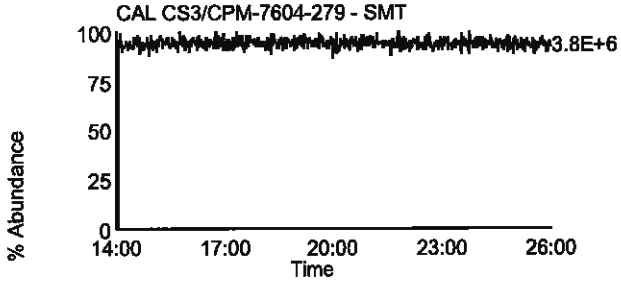
Data File: U130917A_06 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT

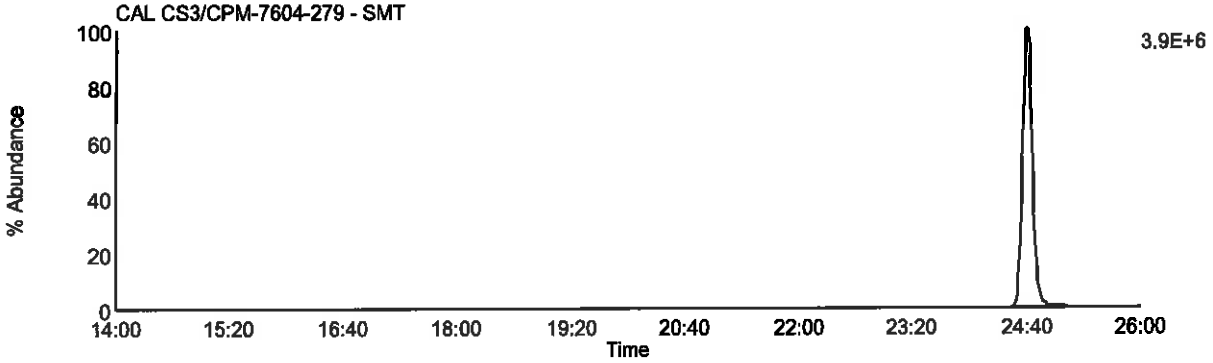


Homologue Group: Penta & Cleanup

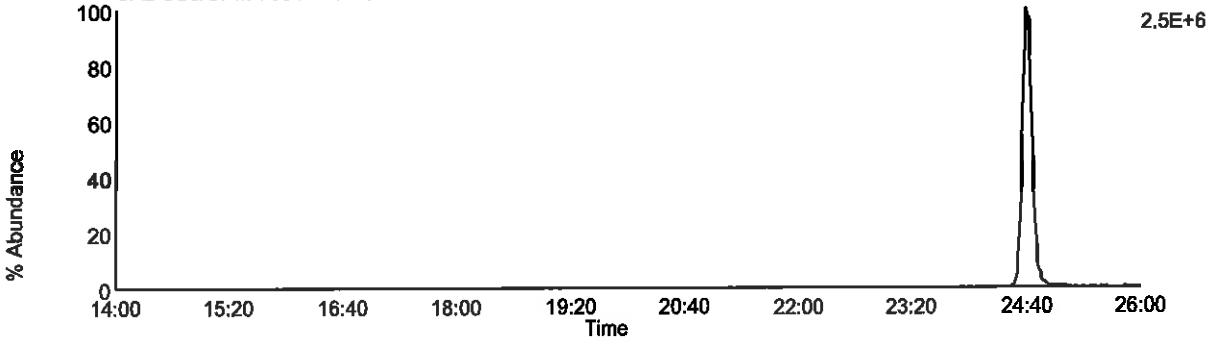
Data File Name: U130917A_06
Date Acquired: 9/17/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

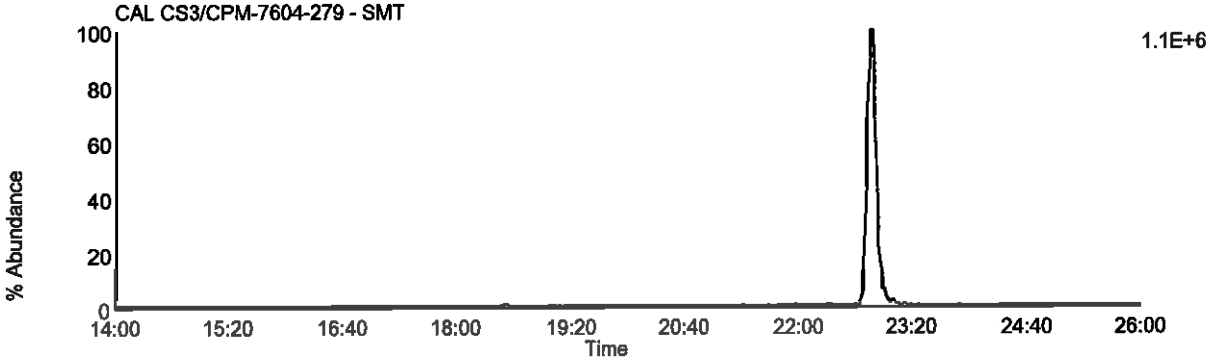
Data File: U130917A_06 G1 C12 - 339.8597
CAL CS3/CPM-7604-279 - SMT



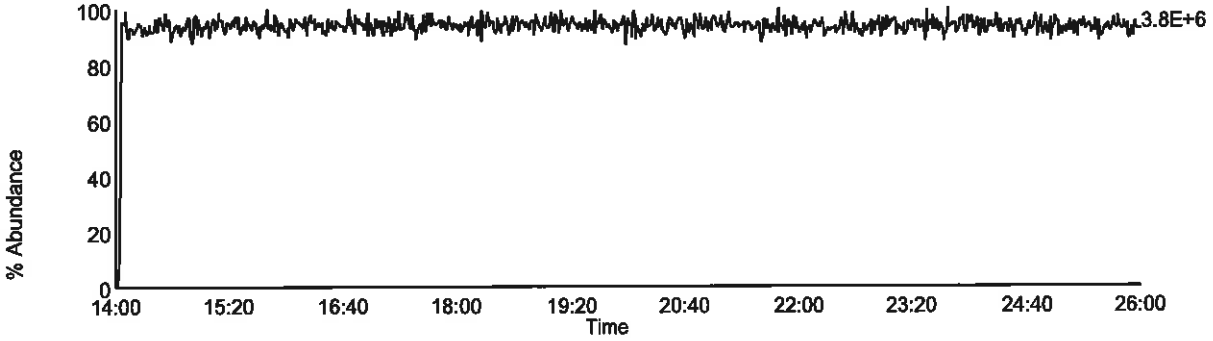
Data File: U130917A_06 G1 C13 - 341.8567
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G1 C9 - 327.8847
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT

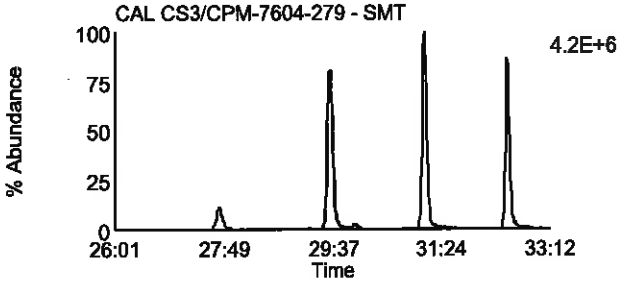


Homologue Group: Pentas

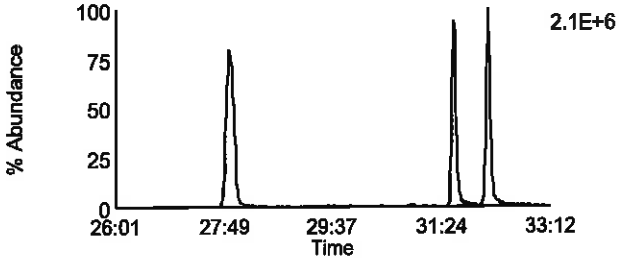
Data File Name: U130917A_06
Date Acquired: 9/17/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

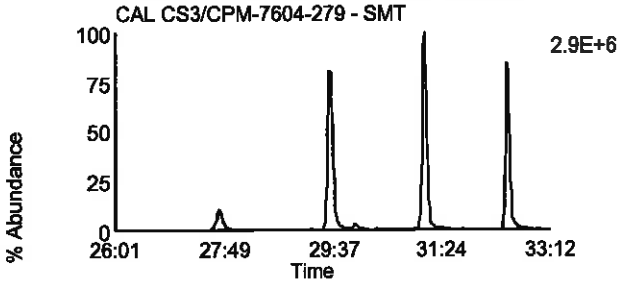
Data File: U130917A_06 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - SMT



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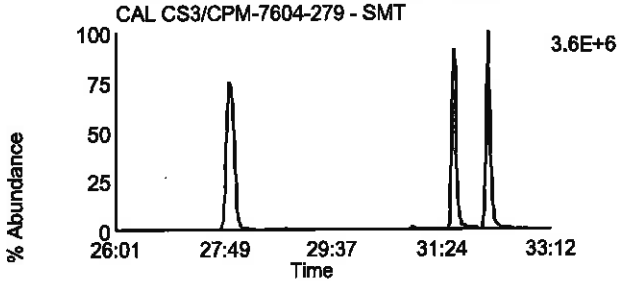
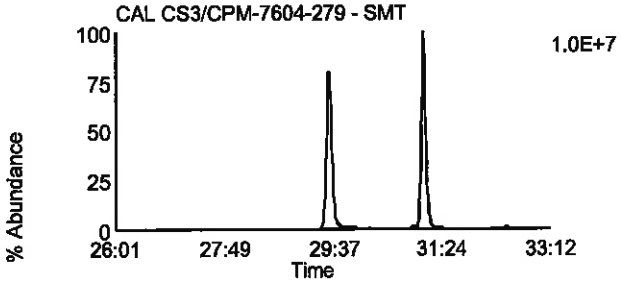
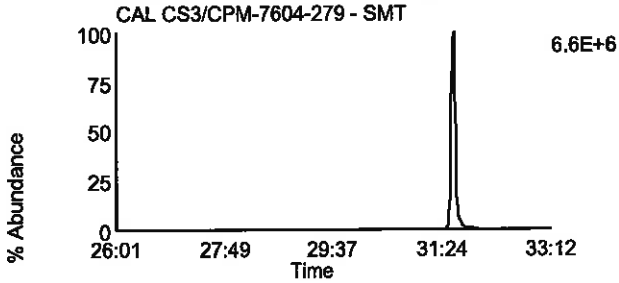
CAL CS3/CPM-7604-279 - SMT



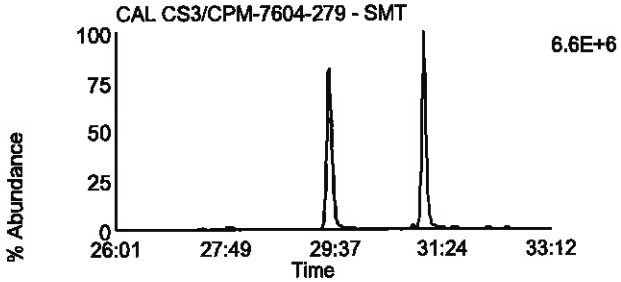
Data File: U130917A_06 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - SMT



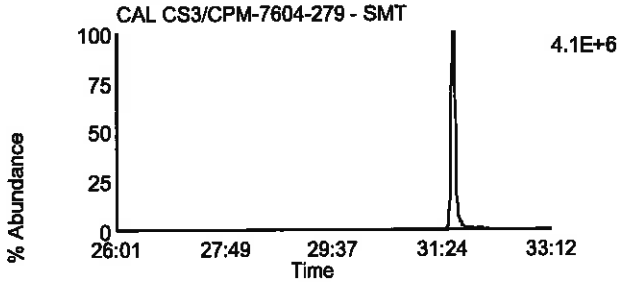
Data File: U130917A_06 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - SMT



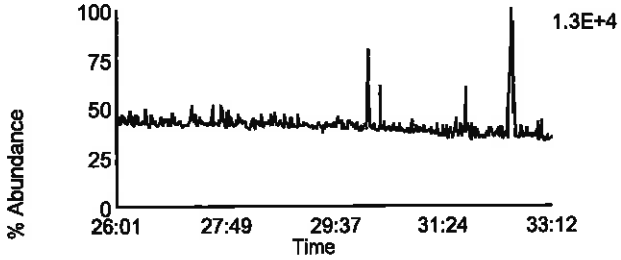
Data File: U130917A_06 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - SMT



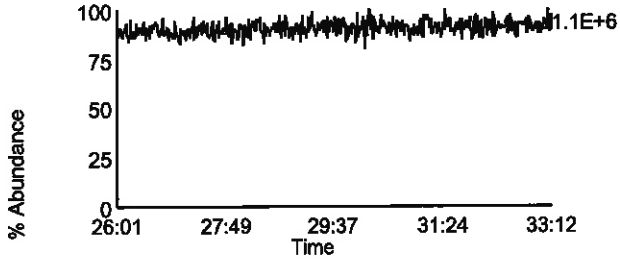
Data File: U130917A_06 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - SMT

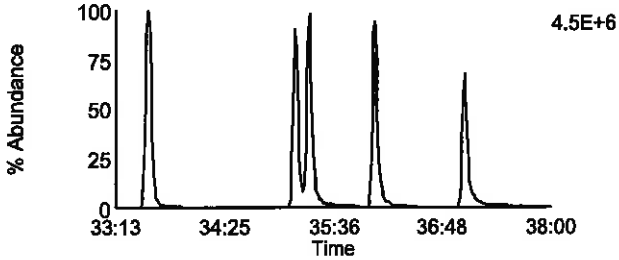


Homologue Group: Hexas

Data File Name: U130917A_06
Date Acquired: 9/17/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

Data File: U130917A_06 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - SMT



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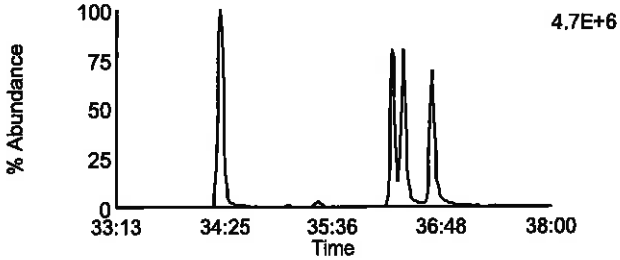
CAL CS3/CPM-7604-279 - SMT



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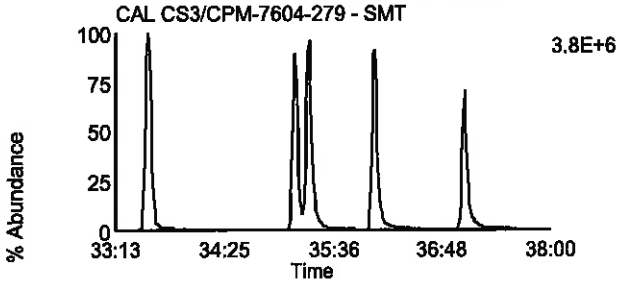
CAL CS3/CPM-7604-279 - SMT



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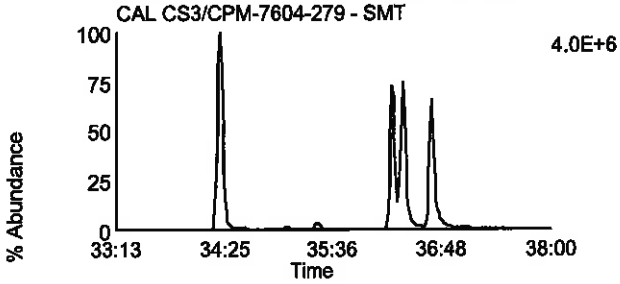
CAL CS3/CPM-7604-279 - SMT



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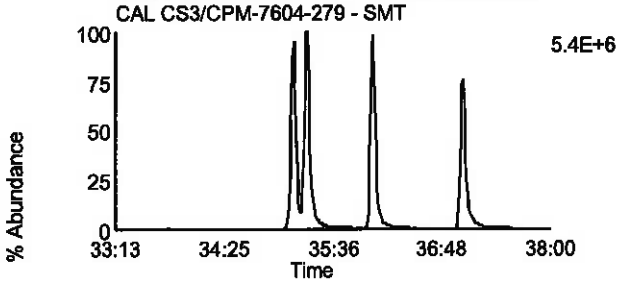
CAL CS3/CPM-7604-279 - SMT



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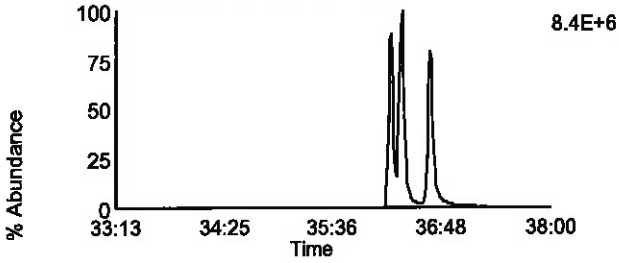
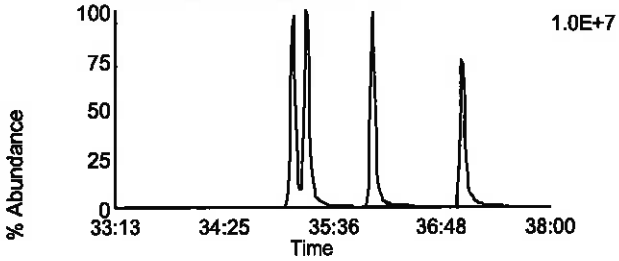
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - SMT



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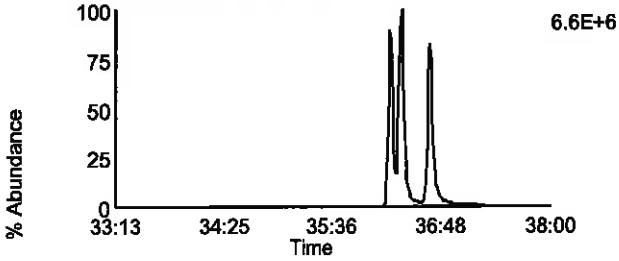
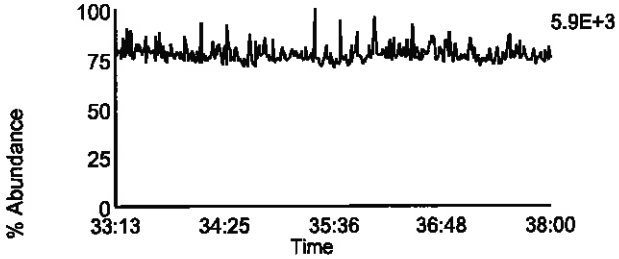
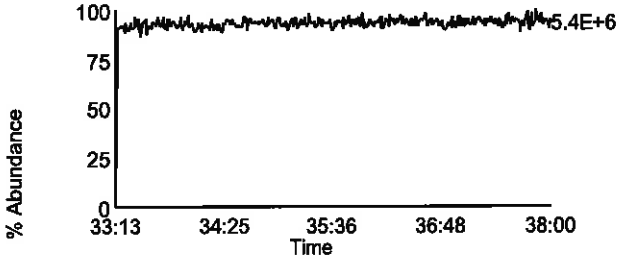
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - SMT

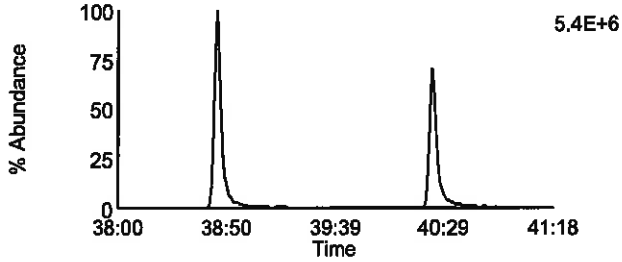


Homologue Group: Heptas

Data File Name: U130917A_06
Date Acquired: 9/17/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

Data File: U130917A_06 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - SMT



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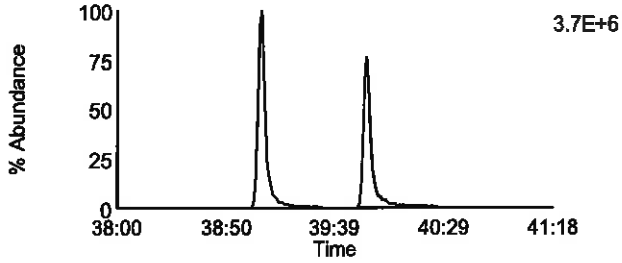
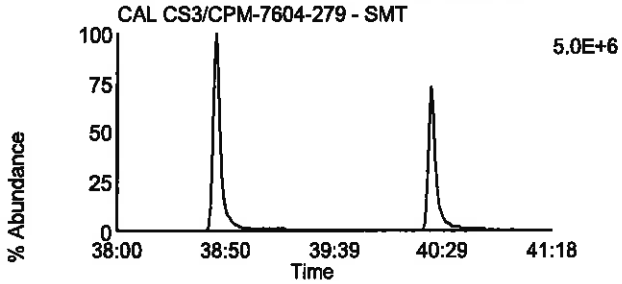
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - SMT



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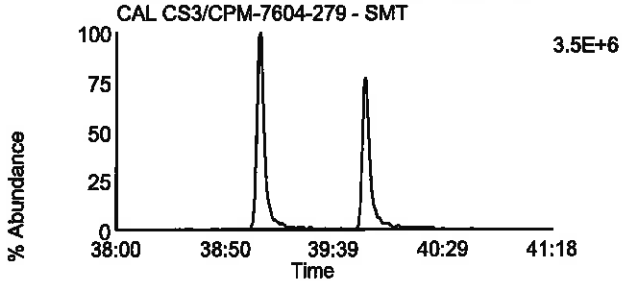
CAL CS3/CPM-7604-279 - SMT



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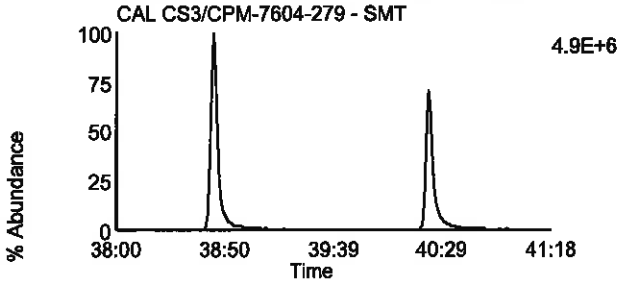
CAL CS3/CPM-7604-279 - SMT



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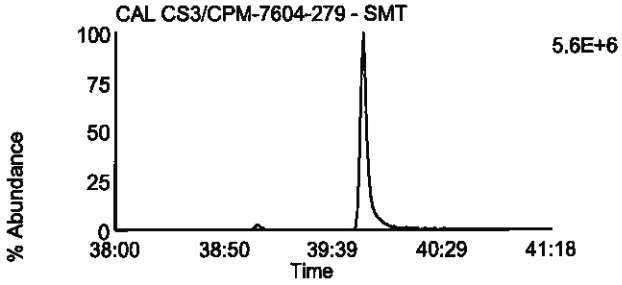
CAL CS3/CPM-7604-279 - SMT



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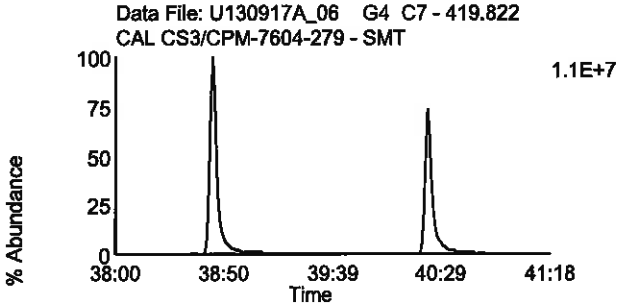
CAL CS3/CPM-7604-279 - SMT



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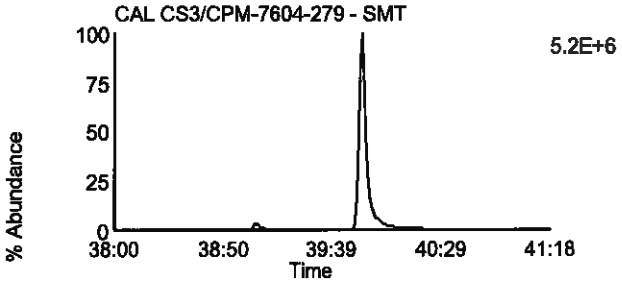
CAL CS3/CPM-7604-279 - SMT



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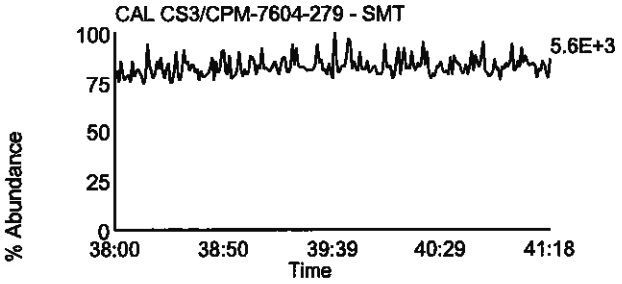
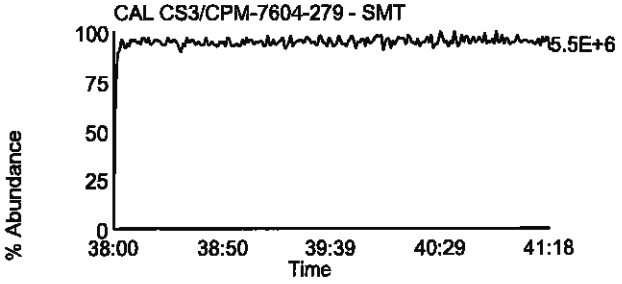
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - SMT

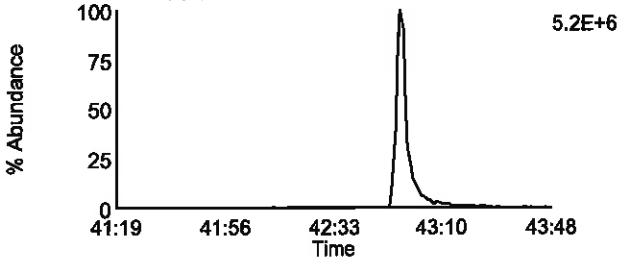


Homologue Group: Octas

Data File Name: U130917A_06
Date Acquired: 9/17/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

Data File: U130917A_06 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - SMT



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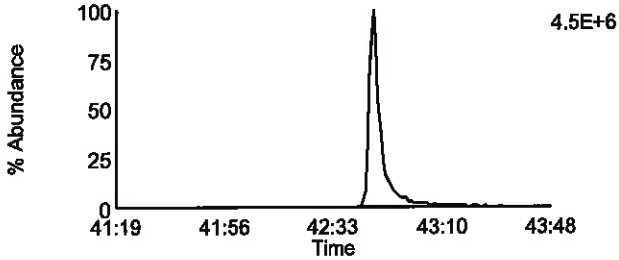
CAL CS3/CPM-7604-279 - SMT



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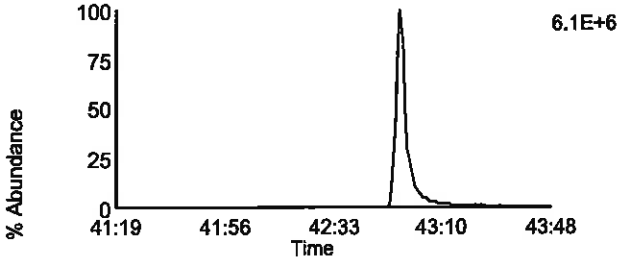

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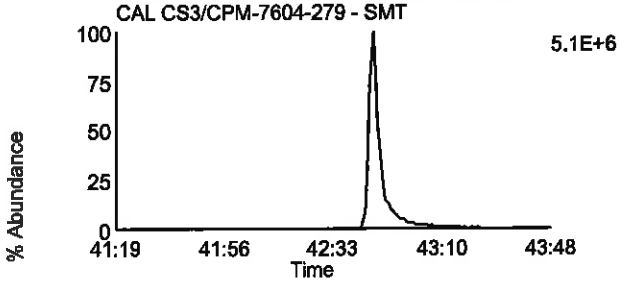
CAL CS3/CPM-7604-279 - SMT



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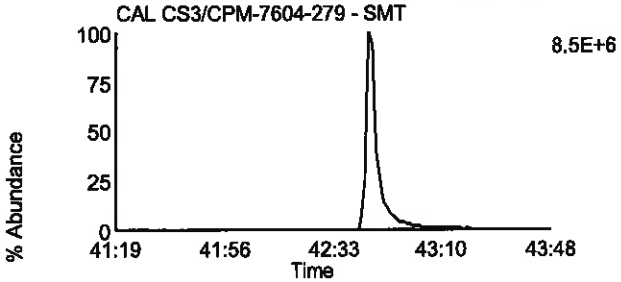
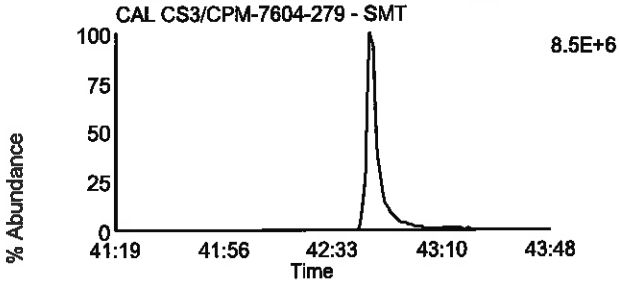
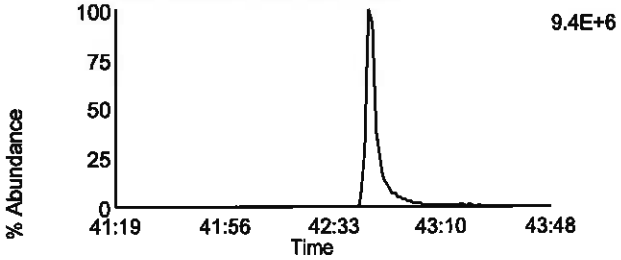
CAL CS3/CPM-7604-279 - SMT



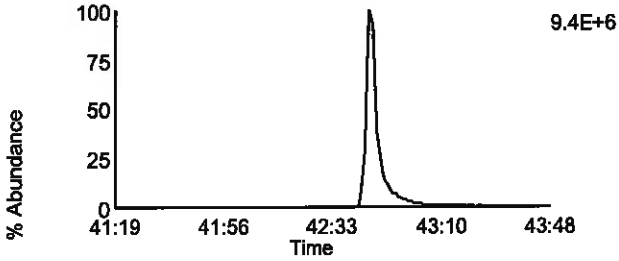
Data File: U130917A_06 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT



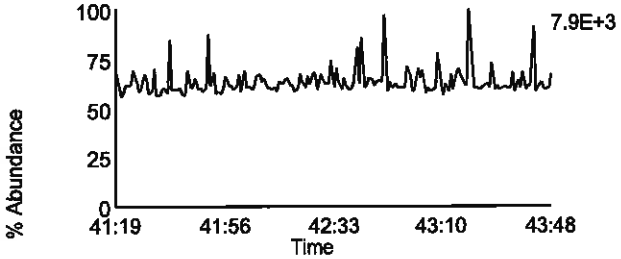
Data File: U130917A_06 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_06 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - SMT



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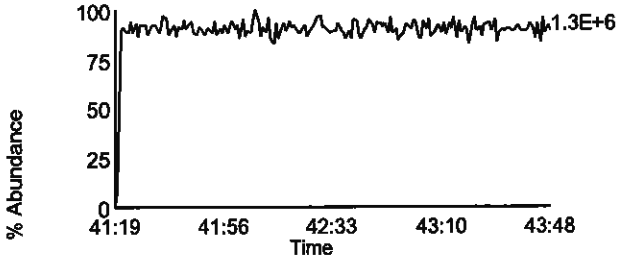
CAL CS3/CPM-7604-279 - SMT



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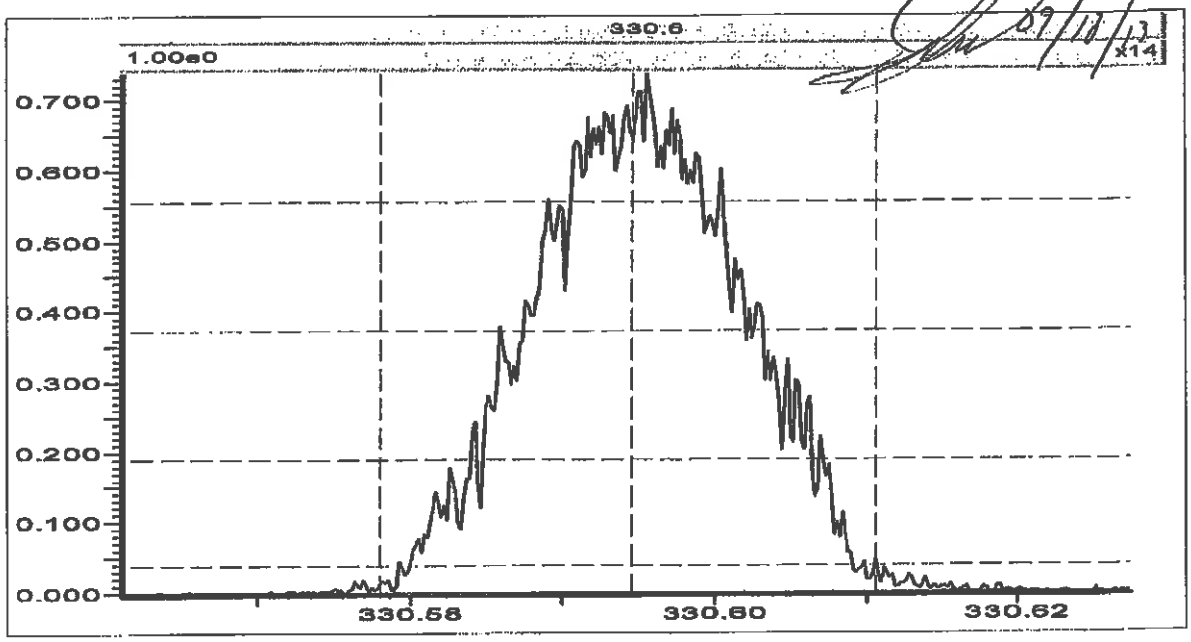
Printed: Wednesday, September 18, 2013 15:55:03 Central Daylight Time



Source (EI+)

Ion Repeller (V)	-13.66
Focus 1	983
Beam Centre	-25.8
Focus 2	3925
Temperature (C)	280
Elec Energy (eV)	36.0
Trap Current (uA)	500.0
Y Deflect 1	-97.6
Z Deflect 1	87.6
Z Deflect 2	31.3
Z Focus 2	2298
Z Focus 3	0
Z Deflect 3	22.0
Y Focus	3484
Rotate 2	-8.6
Curve 2	13.3
Curve 3	-1.2
Rotate 3	-26.2
Rotate 4	-8.2
V Acc (V)	7989.48
Magnet Mass	330.6
Source Slit	25.66
Collector Slit	15.94
MIKES Slit	100.00
Alpha	60.00
Detector Voltage	350
Ion Energy	-4.00
Z4 Restrictor	Off
Vacc Limit	8000

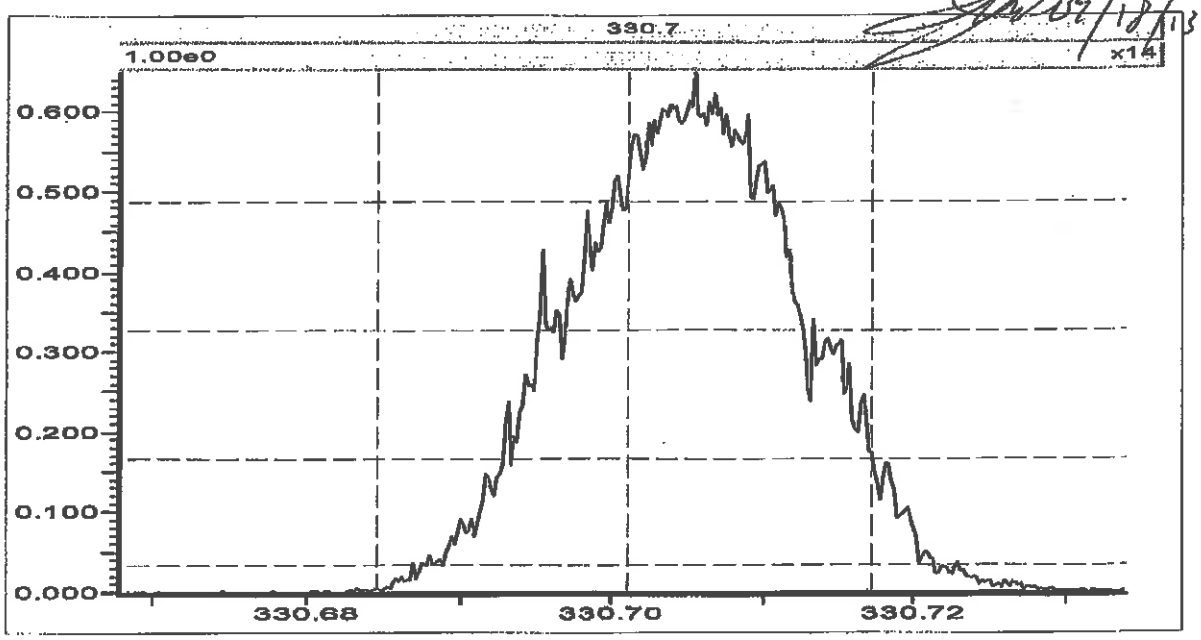
Analyser
No information

Engineer
No information

AutoSpec Tune Parameters **MassLynx 4.0 SCN480 SCN533**

File: C:\MassLynx\Default.pro\Acqudb\M488MW1_10K.ipr

Printed: Thursday, September 19, 2013 11:43:46 Central Daylight Time



Source (EI+)

Ion Repeller (V)	-13.66
Focus 1	983
Beam Centre	-25.8
Focus 2	3925
Temperature (C)	280
Elec Energy (eV)	36.0
Trap Current (uA)	500.0
Y Deflect 1	-97.6
Z Deflect 1	87.6
Z Deflect 2	31.3
Z Focus 2	2298
Z Focus 3	0
Z Deflect 3	22.0
Y Focus	3484
Rotate 2	-8.6
Curve 2	13.3
Curve 3	-1.2
Rotate 3	-26.2
Rotate 4	-8.2
V Acc (V)	7986.92
Magnet Mass	330.7
Source Slit	25.66
Collector Slit	15.94
MIKES Slit	100.00
Alpha	60.00
Detector Voltage	350
Ion Energy	-4.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No information

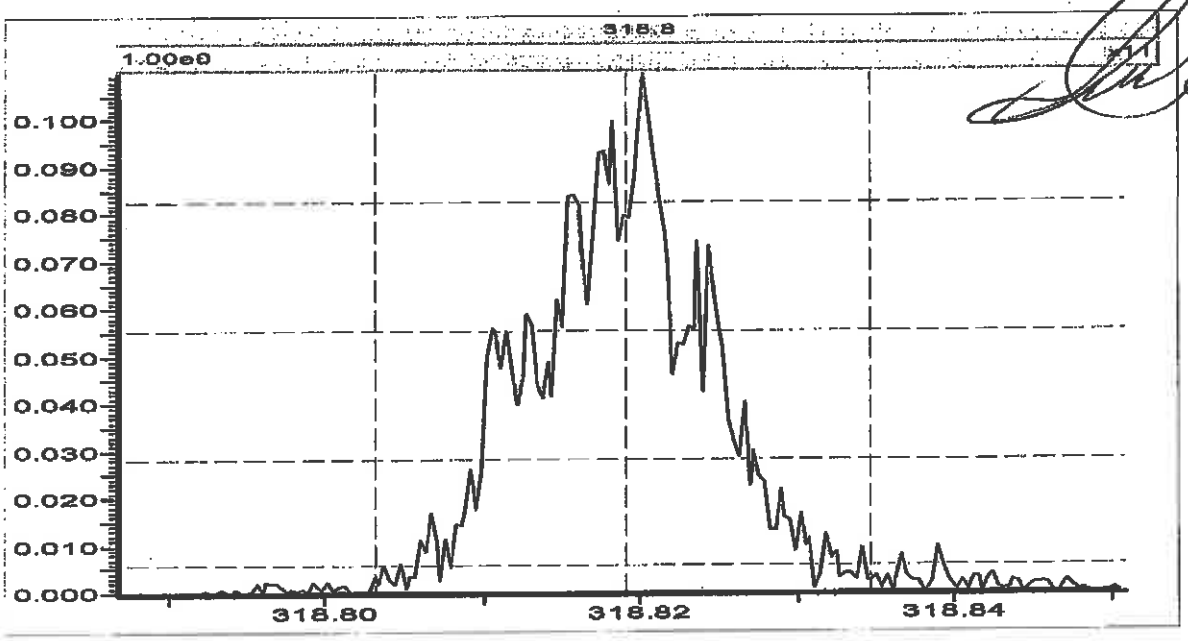
Engineer
No information

File: C:\MassLynx\Default.pro\Acqudb\F10MSHR05.ipr

Printed: Saturday, September 21, 2013 11:50:35 Central Daylight Time

BAC 9/21/13

09/23/13



Source (EI+)

Ion Repeller (V)	-12.29
Focus 1	908
Beam Centre	-22.1
Focus 2	3926
Temperature (C)	280
Elec Energy (eV)	36.0
Trap Current (uA)	500.0
Y Deflect 1	-86.5
Z Deflect 1	81.8
Z Deflect 2	37.4
Z Focus 2	2297
Z Focus 3	0
Z Deflect 3	21.3
Y Focus	3541
Rotate 2	-7.3
Curve 2	14.3
Curve 3	0.0
Rotate 3	-24.2
Rotate 4	-1.2
V Acc (V)	7991.73
Magnet Mass	330.8
Source Slit	26.18
Collector Slit	13.64
MIKES Slit	100.00
Alpha	70.00
Detector Voltage	350
Ion Energy	-4.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No information

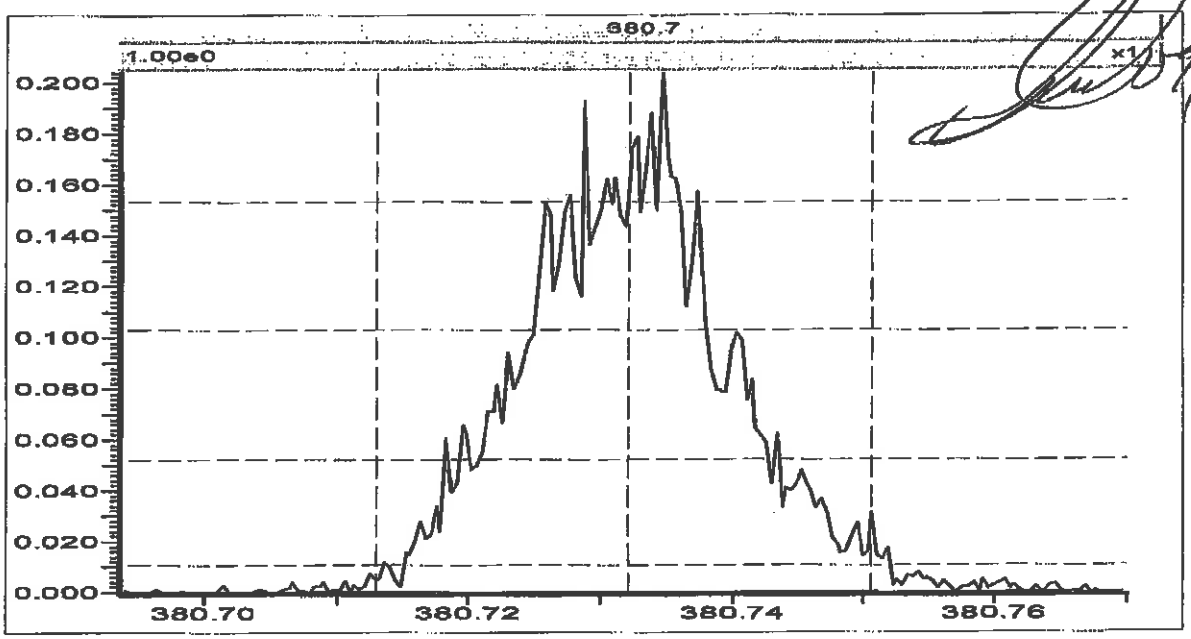
Engineer
No information

File: C:\MassLynx\Default.pro\Acqudb\F10MSHR05.ipr

Printed: Sunday, September 22, 2013 11:44:52 Central Daylight Time

BAL 9/22/13

9/23/13



Source (EI+)

Ion Repeller (V)	-12.29
Focus 1	908
Beam Centre	-22.1
Focus 2	3926
Temperature (C)	280
Elec Energy (eV)	36.0
Trap Current (uA)	500.0
Y Deflect 1	-86.5
Z Deflect 1	81.8
Z Deflect 2	37.4
Z Focus 2	2297
Z Focus 3	0
Z Deflect 3	21.3
Y Focus	3541
Rotate 2	-7.3
Curve 2	14.3
Curve 3	0.0
Rotate 3	-24.2
Rotate 4	-1.2
V Acc (V)	7991.73
Magnet Mass	330.8
Source Slit	26.18
Collector Slit	13.64
MIKES Slit	100.00
Alpha	70.00
Detector Voltage	350
Ion Energy	-4.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No information

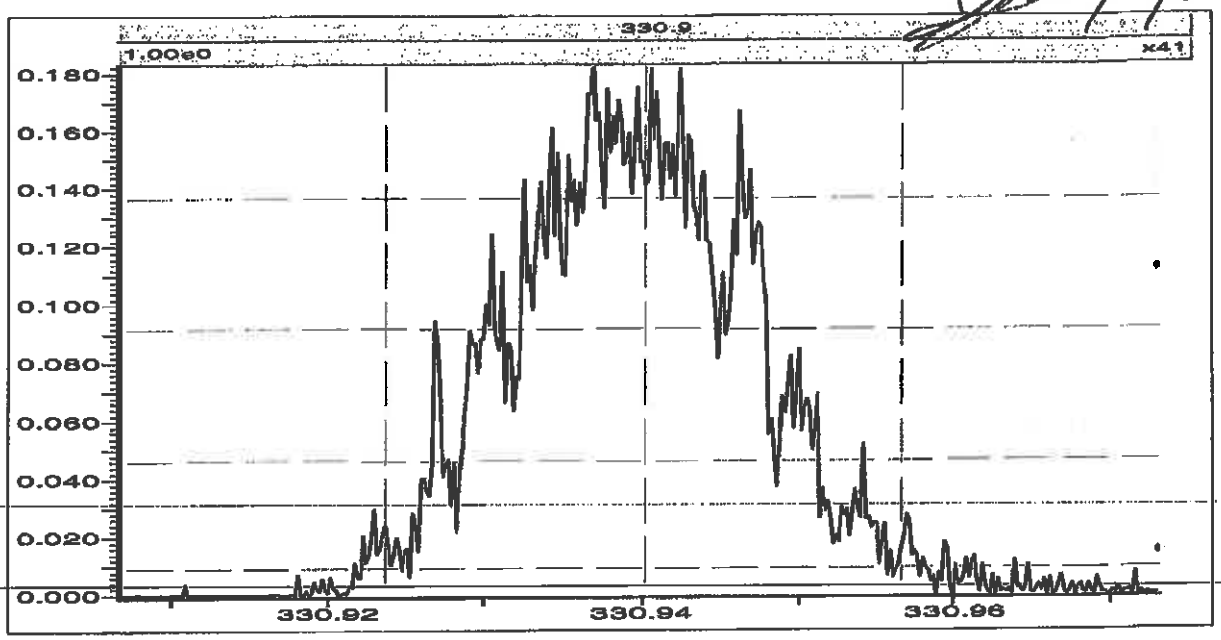
Engineer
No information

AutoSpec Tune Parameters , **MassLynx 4.1 SCN 881**

File: C:\MassLynx\Default.pro\Acqudb\U10MSHR06.IPR

Printed: Monday, July 29, 2013 14:55:25 Central Daylight Time

7/29/13 Sum 7/29/13



Source (EI+)

Ion Repeller (V)	-10.87
Focus 1	686
Beam Centre	8.2
Focus 2	3986
Temperature (C)	280
Elec Energy (eV)	34.3
Trap Current (uA)	500.0
Y Deflect 1	46.4
Z Deflect 1	-43.2
Z Deflect 2	-5.0
Z Focus 2	2204
Z Focus 3	0
Z Deflect 3	13.6
Y Focus	4352
Rotate 2	-13.0
Curve 2	14.0
Curve 3	-1.1
Rotate 3	-1.1
Rotate 4	3.5
V Acc (V)	7987.17
Magnet Mass	330.9
Source Slit	23.08
Collector Slit	36.22
MIKES Slit	100.00
Alpha	70.00
Detector Voltage	350
Ion Energy	-7.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No information

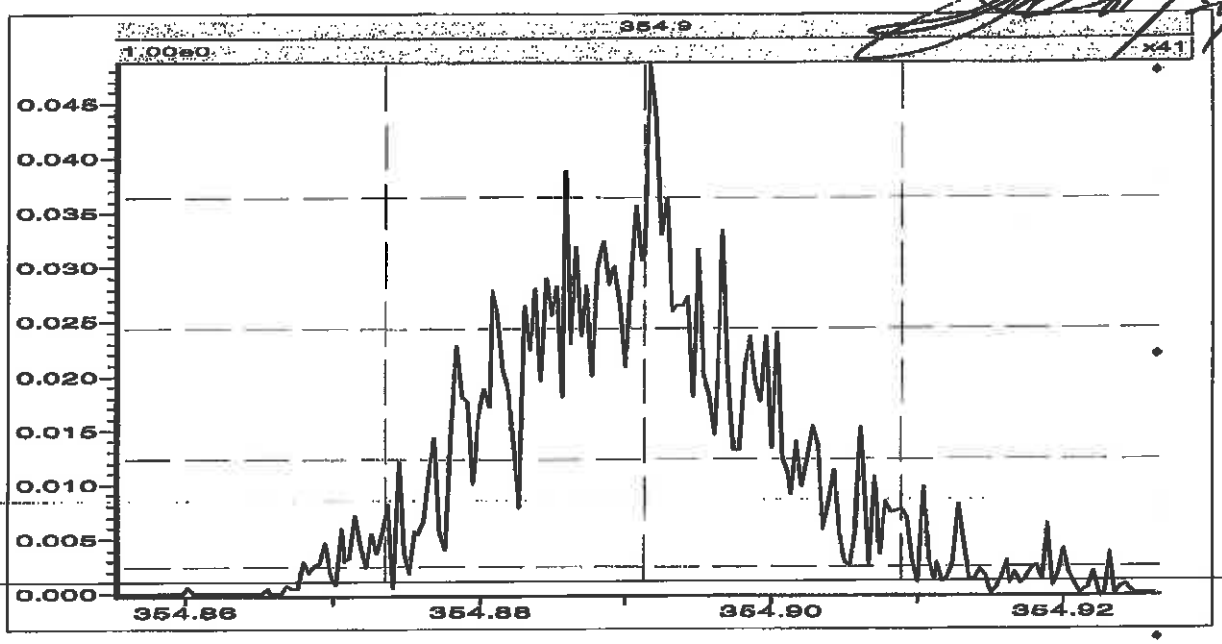
Engineer
No information

File: C:\MassLynx\Default.PRO\ACQUDB\U10MSHR06.IPR

Printed: Tuesday, July 30, 2013 06:47:24 Central Daylight Time

7/30/13

BAL 7/30/13



Source (EI+)

Ion Repeller (V)	-10.87
Focus 1	686
Beam Centre	8.2
Focus 2	3986
Temperature (C)	280
Elec Energy (eV)	34.3
Trap Current (uA)	500.0
Y Deflect 1	46.4
Z Deflect 1	-43.2
Z Deflect 2	-5.0
Z Focus 2	2204
Z Focus 3	0
Z Deflect 3	13.6
Y Focus	4352
Rotate 2	-13.0
Curve 2	14.0
Curve 3	-1.1
Rotate 3	-1.1
Rotate 4	3.5
V Acc (V)	7987.17
Magnet Mass	330.9
Source Slit	23.08
Collector Slit	36.22
MIKES Slit	100.00
Alpha	70.00
Detector Voltage	350
Ion Energy	-7.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No information

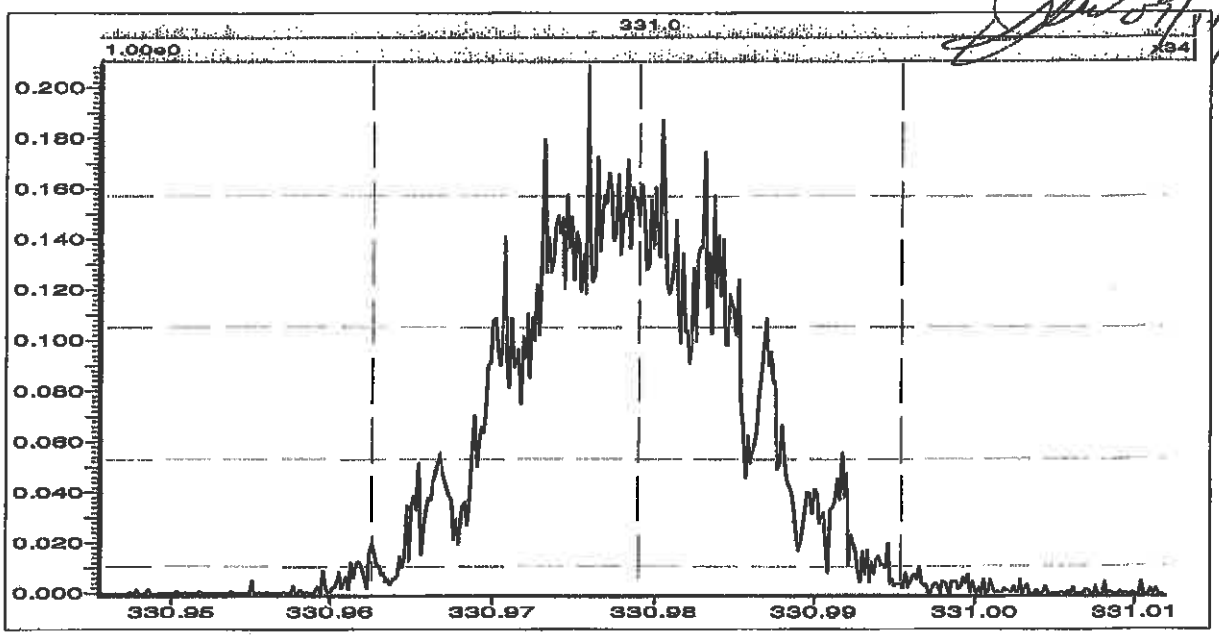
Engineer
No information

File: C:\MassLynx\Default.pro\Acqudb\U10MSHR06.IPR

Printed: Tuesday, September 17, 2013 08:56:55 Central Daylight Time

09/17/13

BAL 9/17/13



Source (EI+)

Ion Repeller (V)	-11.12
Focus 1	764
Beam Centre	71.9
Focus 2	3888
Temperature (C)	280
Elec Energy (eV)	35.0
Trap Current (uA)	500.0
Y Deflect 1	-115.1
Z Deflect 1	25.7
Z Deflect 2	-6.1
Z Focus 2	2577
Z Focus 3	0
Z Deflect 3	-27.2
Y Focus	4400
Rotate 2	-12.2
Curve 2	-8.8
Curve 3	1.0
Rotate 3	3.6
Rotate 4	17.0
V Acc (V)	7991.45
Magnet Mass	331.0
Source Slit	19.44
Collector Slit	36.00
MIKES Slit	100.00
Alpha	65.00
Detector Voltage	350
Ion Energy	-5.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No Information

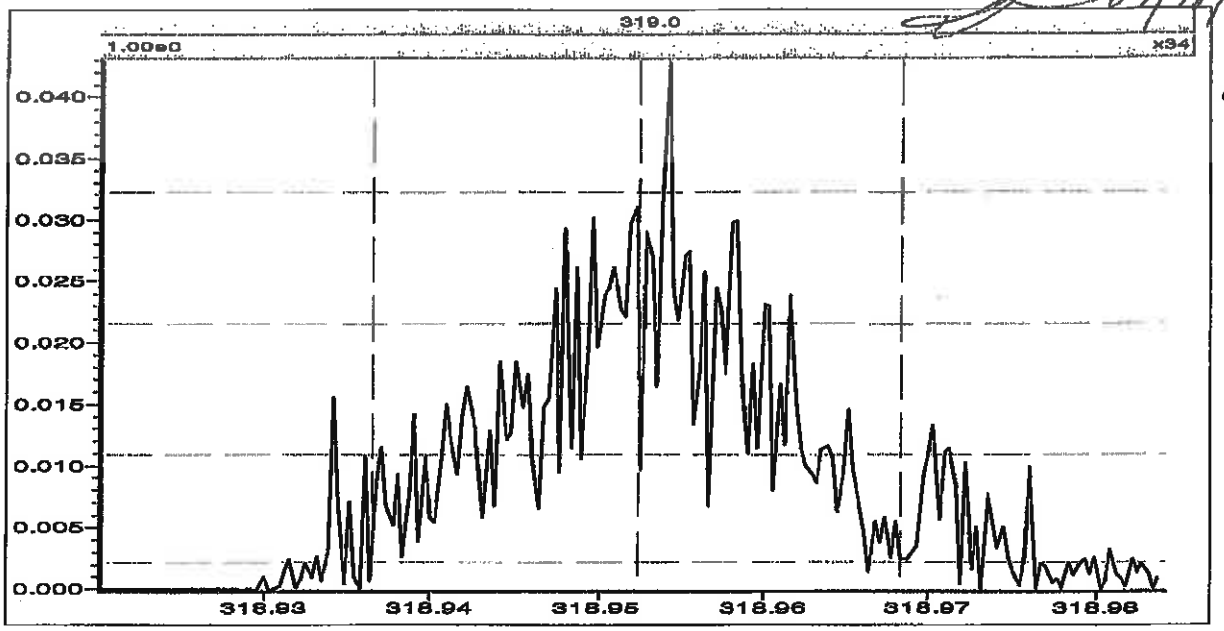
Engineer
No Information

File: C:\MassLynx\Default.PRO\ACQUDB\U10MSHR06.IPR

Printed: Wednesday, September 18, 2013 07:04:31 Central Daylight Time

09/12/13

9/18/13



Source (EI+)

Ion Repeller (V)	-11.12
Focus 1	764
Beam Centre	71.9
Focus 2	3888
Temperature (C)	280
Elec Energy (eV)	35.0
Trap Current (uA)	500.0
Y Deflect 1	-115.1
Z Deflect 1	25.7
Z Deflect 2	-6.1
Z Focus 2	2577
Z Focus 3	0
Z Deflect 3	-27.2
Y Focus	4400
Rotate 2	-12.2
Curve 2	-8.8
Curve 3	1.0
Rotate 3	3.6
Rotate 4	17.0
V Acc (V)	7991.34
Magnet Mass	331.0
Source Slit	19.44
Collector Slit	36.00
MIKES Slit	100.00
Alpha	65.00
Detector Voltage	350
Ion Energy	-5.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No information

Engineer
No information

Appendix F

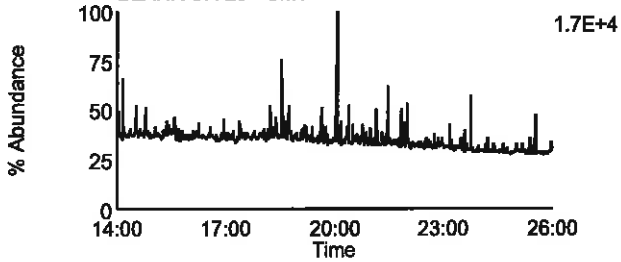
QC Raw Data

Homologue Group: Tetras

Data File Name: U130917A_10
Date Acquired: 9/17/2013
Sample Description: BLANK-37723 - SMT

Lab Sample ID: BLANK-37723
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U130917A_10 G1 C1 - 303.9016
BLANK-37723 - SMT



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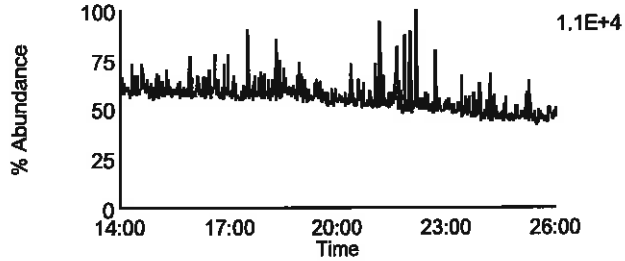
BLANK-37723 - SMT



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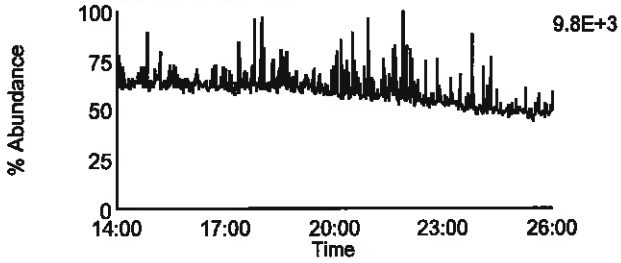
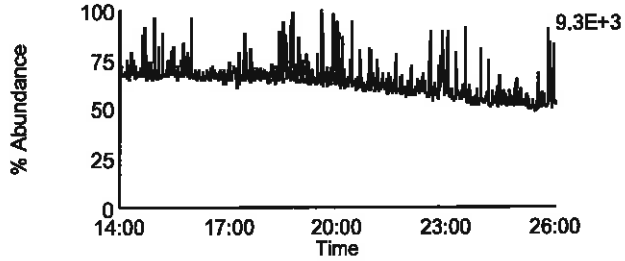
BLANK-37723 - SMT



Data File: U130917A_10 G1 C8 - 321.8936
BLANK-37723 - SMT



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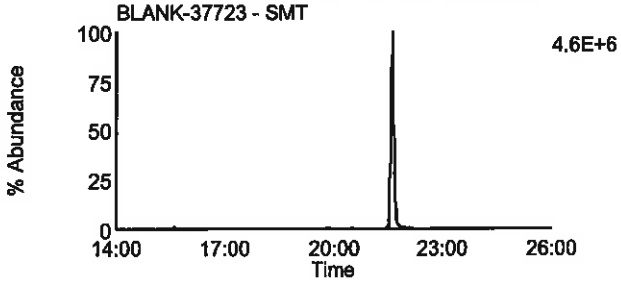
BLANK-37723 - SMT



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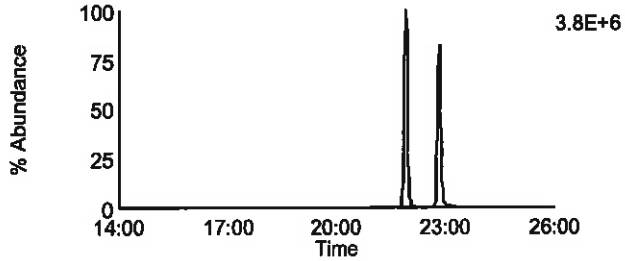
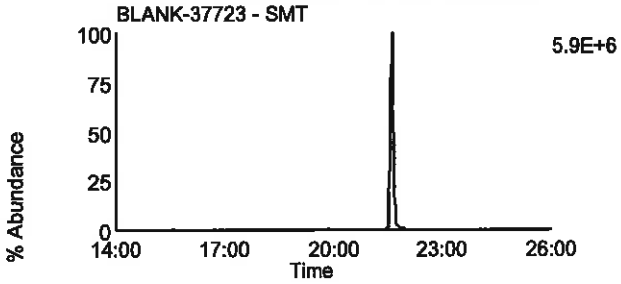
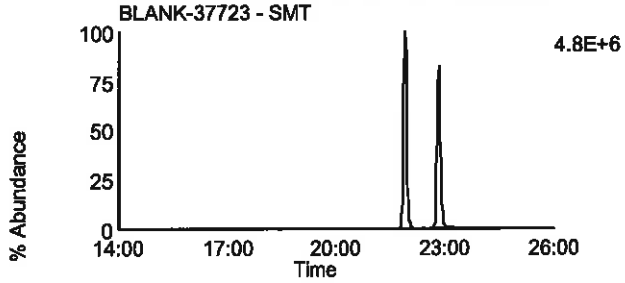
BLANK-37723 - SMT



Data File: U130917A_10 G1 C4 - 317.9389
BLANK-37723 - SMT



Data File: U130917A_10 G1 C11 - 333.9338
BLANK-37723 - SMT



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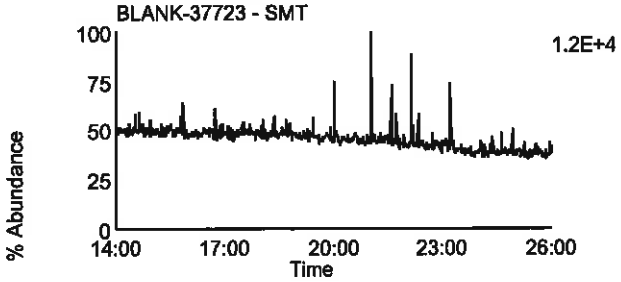
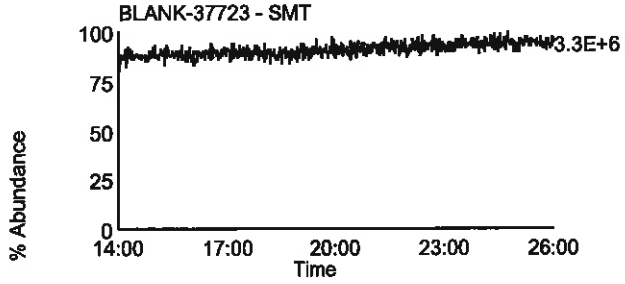
BLANK-37723 - SMT



Data File: U130917A_10 G1 C5 - 318.9792
BLANK-37723 - SMT

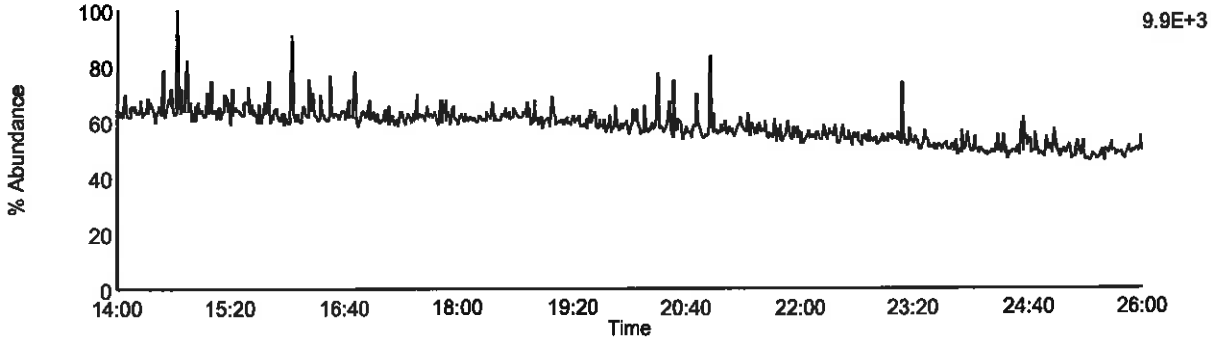


Homologue Group: Penta & Cleanup

Data File Name: U130917A_10
Date Acquired: 9/17/2013
Sample Description: BLANK-37723 - SMT

Lab Sample ID: BLANK-37723
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U130917A_10 G1 C12 - 339.8597
BLANK-37723 - SMT



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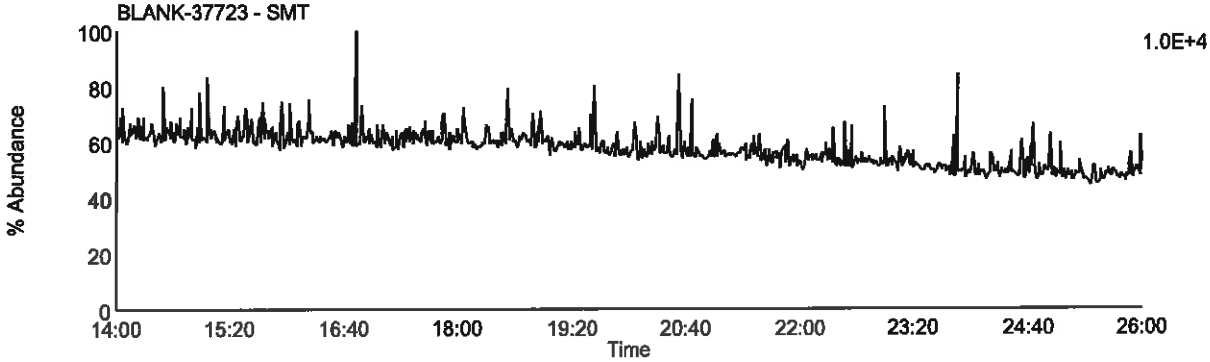
BLANK-37723 - SMT



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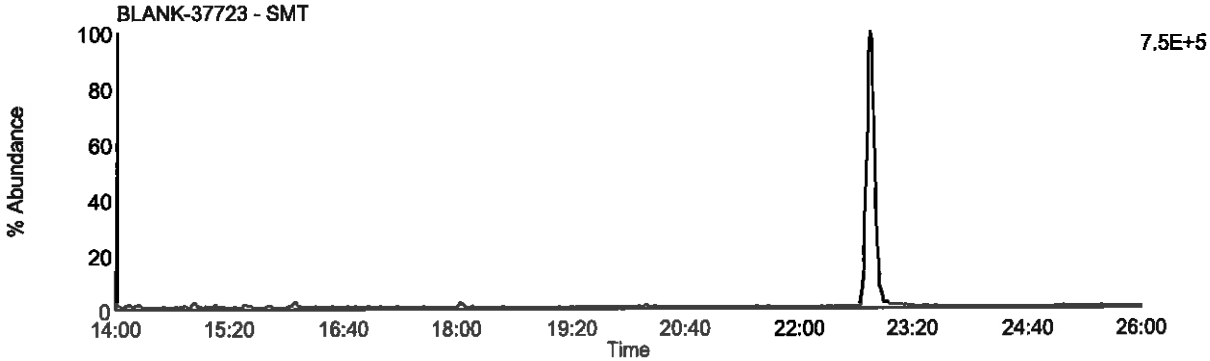

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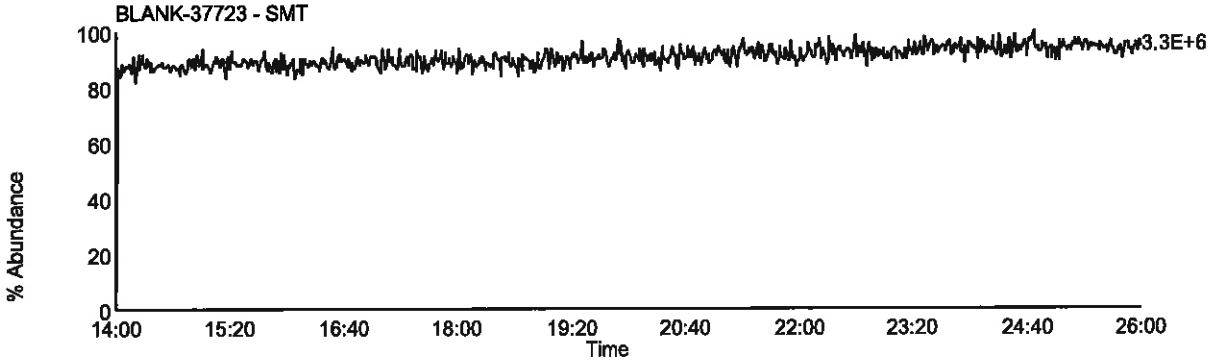
BLANK-37723 - SMT

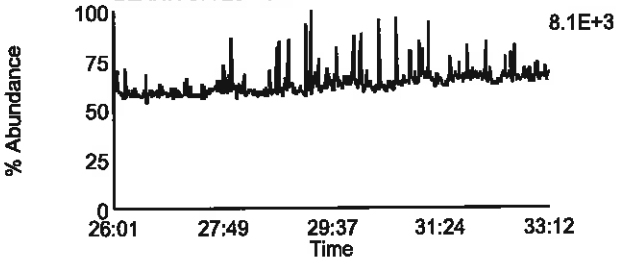


Homologue Group: Pentas

Data File Name: U130917A_10
Date Acquired: 9/17/2013
Sample Description: BLANK-37723 - SMT

Lab Sample ID: BLANK-37723
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U130917A_10 G2 C1 - 339.8597
BLANK-37723 - SMT



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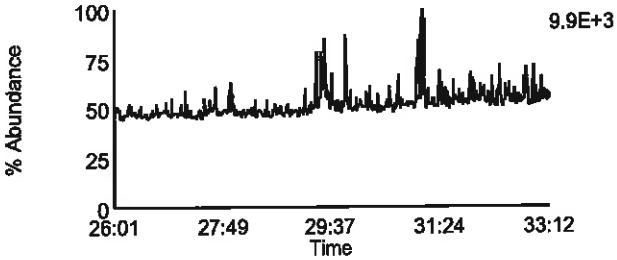

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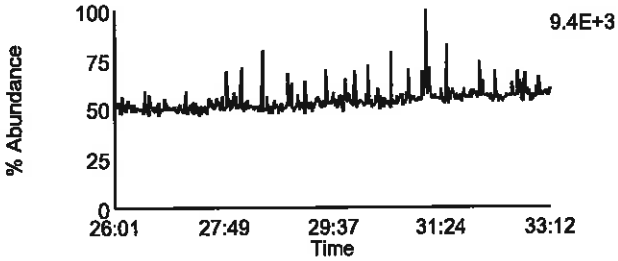

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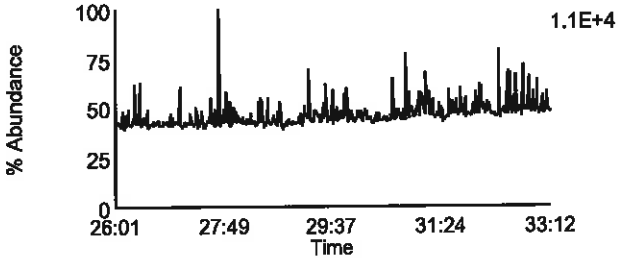
BLANK-37723 - SMT



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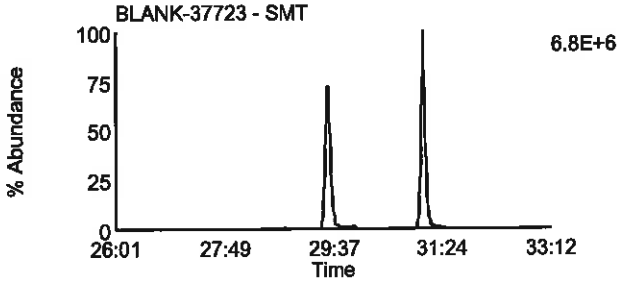

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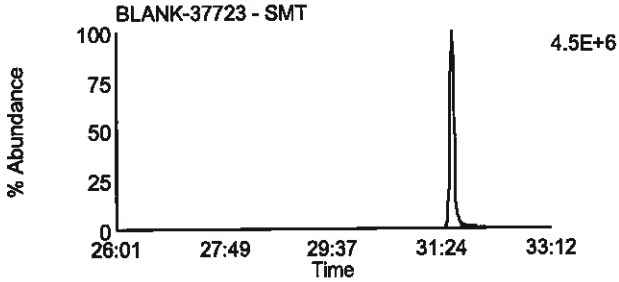

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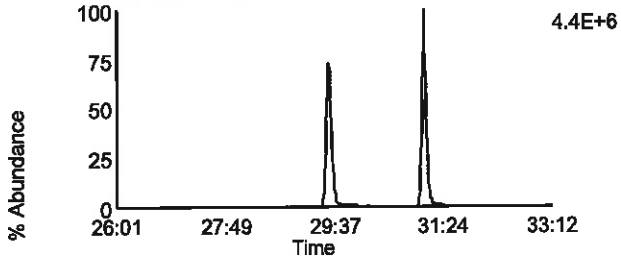
BLANK-37723 - SMT



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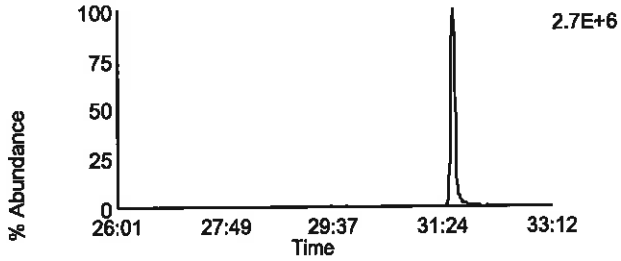

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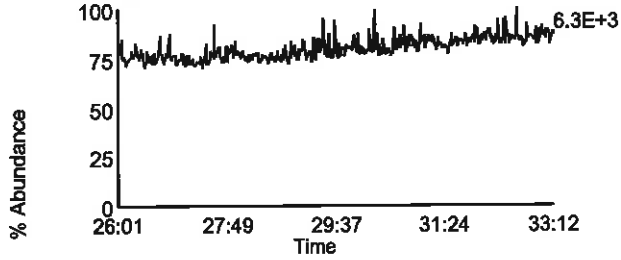

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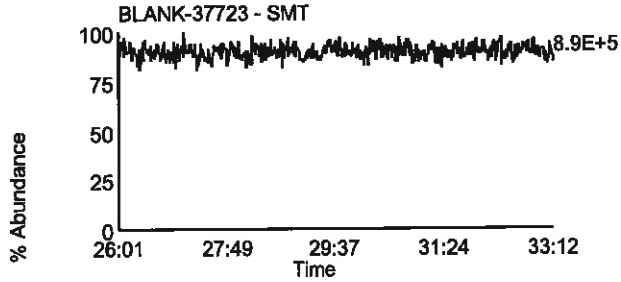

Homologue Group: Hexas

Data File Name: U130917A_10
Date Acquired: 9/17/2013
Sample Description: BLANK-37723 - SMT

Lab Sample ID: BLANK-37723
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U130917A_10 G3 C1 - 373.8207
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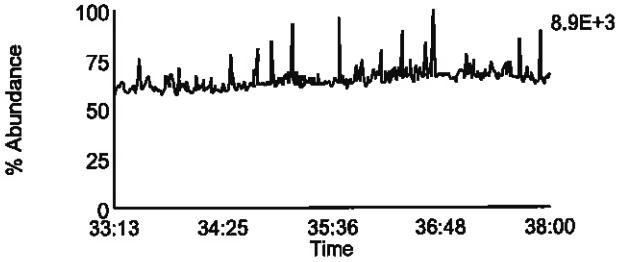

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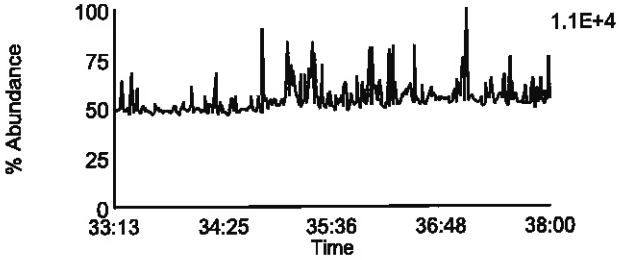

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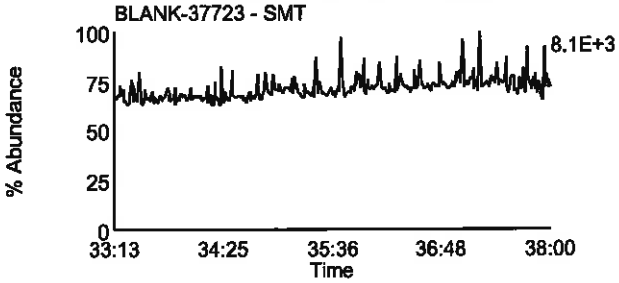
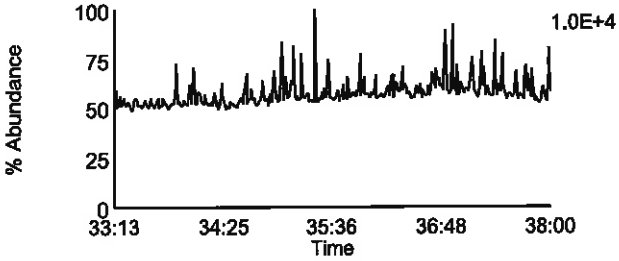
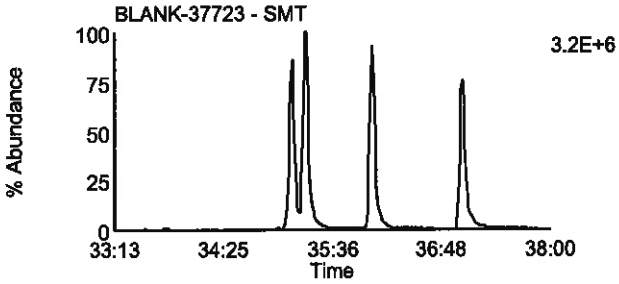


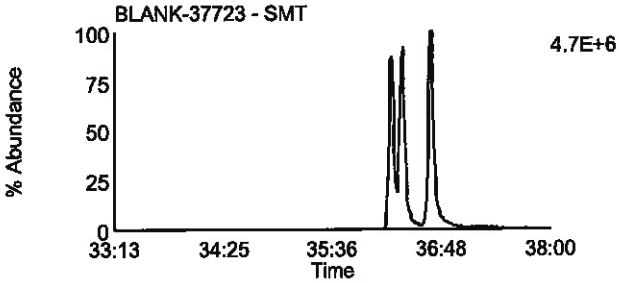
Data File: U130917A_10 G3 C8 - 391.8127
BLANK-37723 - SMT



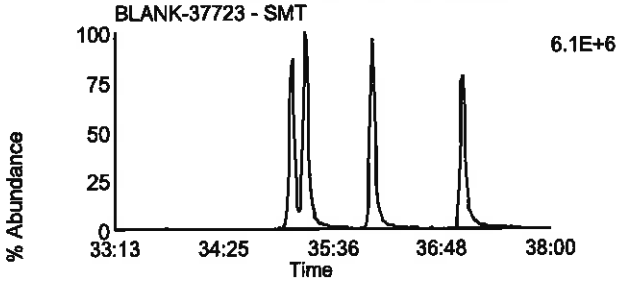
Data File: U130917A_10 G3 C5 - 383.8639
BLANK-37723 - SMT



Data File: U130917A_10 G3 C9 - 401.8559
BLANK-37723 - SMT



Data File: U130917A_10 G3 C6 - 385.861
BLANK-37723 - SMT



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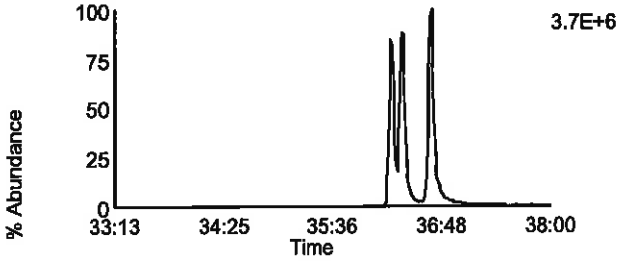
BLANK-37723 - SMT



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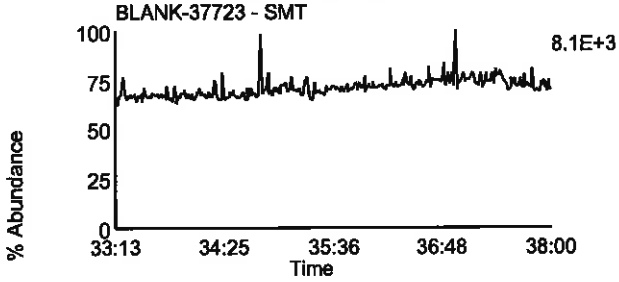
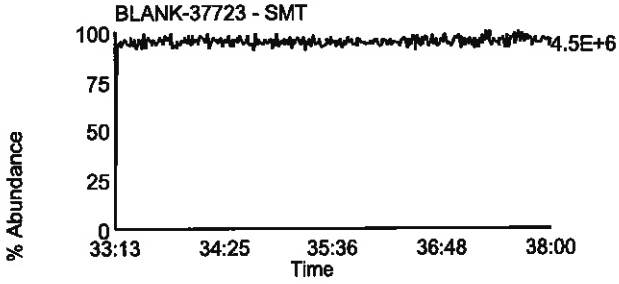
BLANK-37723 - SMT



Data File: U130917A_10 G3 C3 - 380.976
BLANK-37723 - SMT

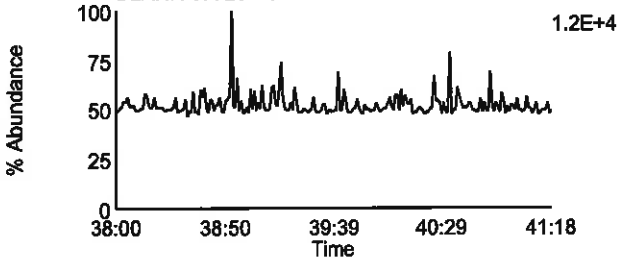


Homologue Group: Heptas

Data File Name: U130917A_10
Date Acquired: 9/17/2013
Sample Description: BLANK-37723 - SMT

Lab Sample ID: BLANK-37723
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U130917A_10 G4 C3 - 407.7818
BLANK-37723 - SMT



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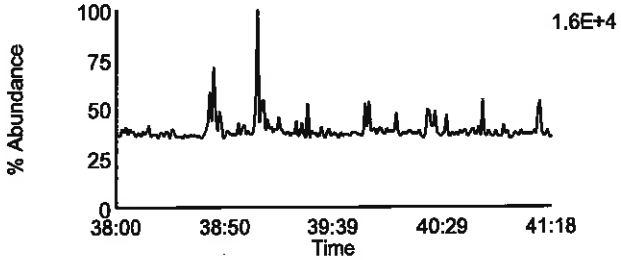
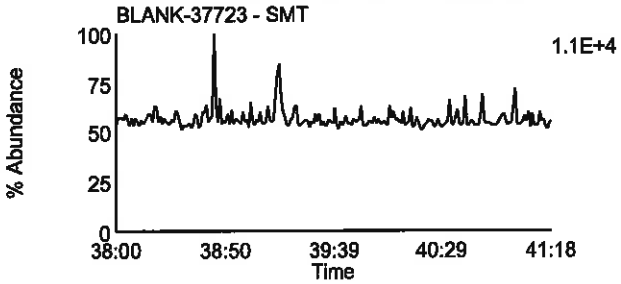
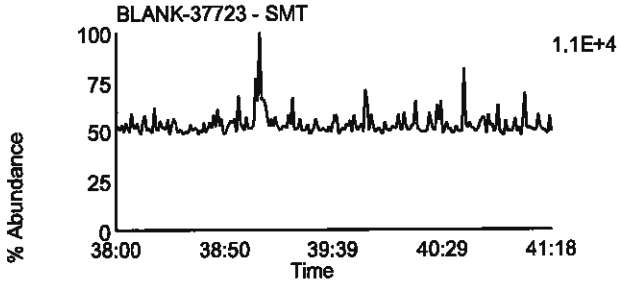
BLANK-37723 - SMT



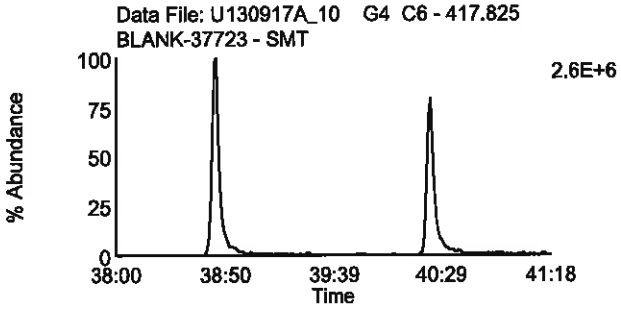
Data File: U130917A_10 G4 C4 - 409.7788
BLANK-37723 - SMT



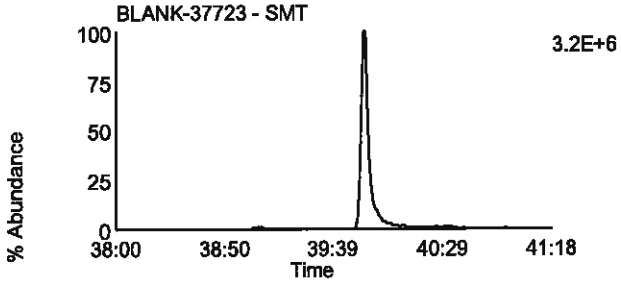
Data File: U130917A_10 G4 C9 - 425.7737
BLANK-37723 - SMT



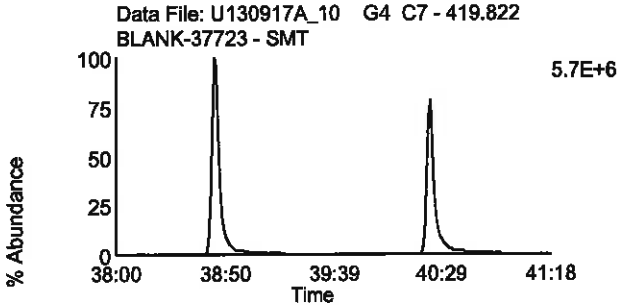
Data File: U130917A_10 G4 C6 - 417.825
BLANK-37723 - SMT



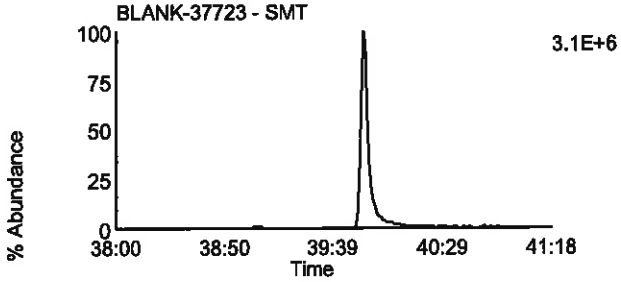
Data File: U130917A_10 G4 C11 - 435.8169
BLANK-37723 - SMT



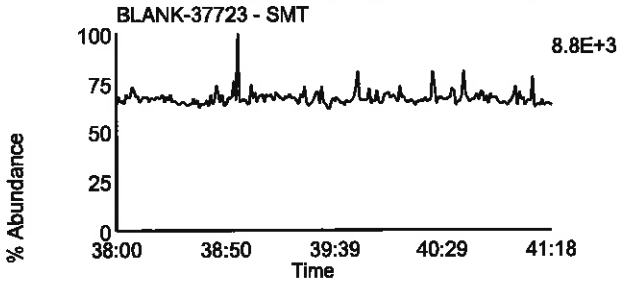
Data File: U130917A_10 G4 C7 - 419.822
BLANK-37723 - SMT



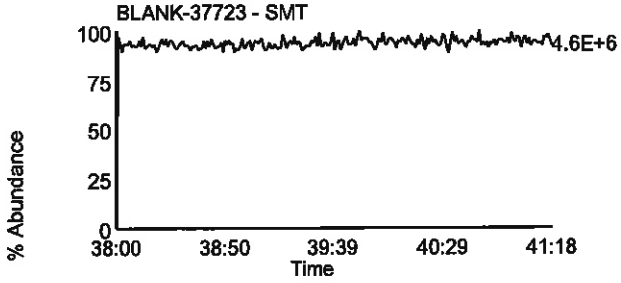
Data File: U130917A_10 G4 C12 - 437.814
BLANK-37723 - SMT



Data File: U130917A_10 G4 C13 - 479.7165
BLANK-37723 - SMT



Data File: U130917A_10 G4 C1 - 380.976
BLANK-37723 - SMT

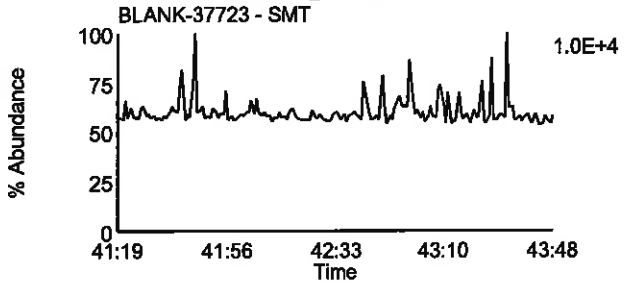


Homologue Group: Octas

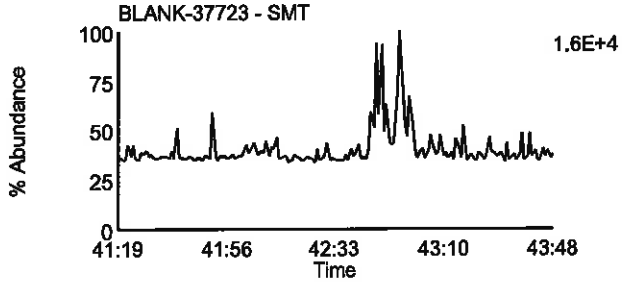
Data File Name: U130917A_10
Date Acquired: 9/17/2013
Sample Description: BLANK-37723 - SMT

Lab Sample ID: BLANK-37723
Client Sample ID:
Instrument: 10MSHR06 (U)

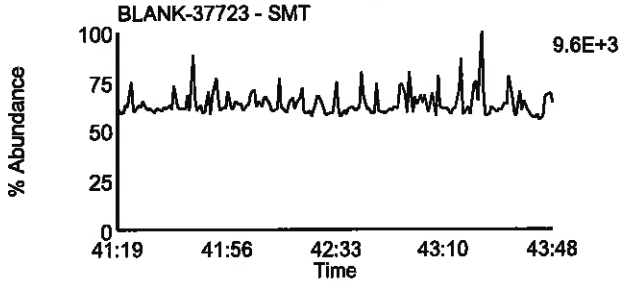
Data File: U130917A_10 G5 C4 - 441.7428
BLANK-37723 - SMT



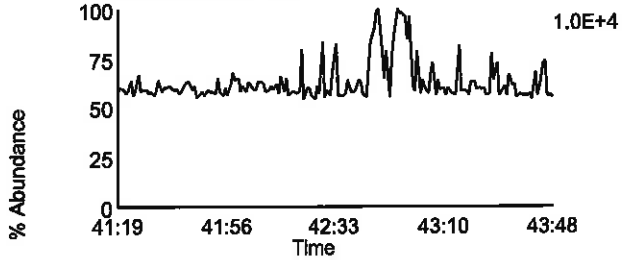
Data File: U130917A_10 G5 C8 - 457.7377
BLANK-37723 - SMT



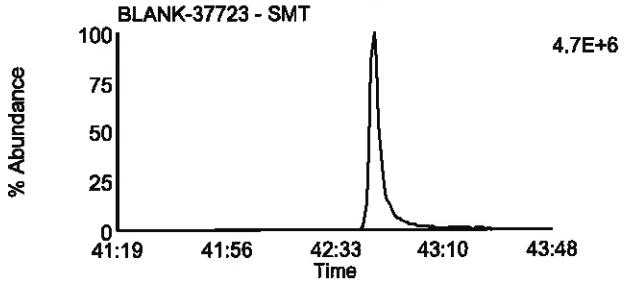
Data File: U130917A_10 G5 C5 - 443.7398
BLANK-37723 - SMT



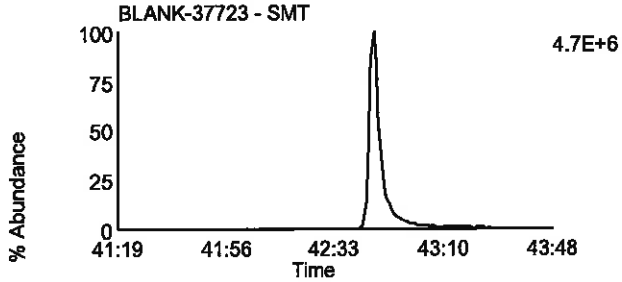
Data File: U130917A_10 G5 C9 - 459.7347
BLANK-37723 - SMT



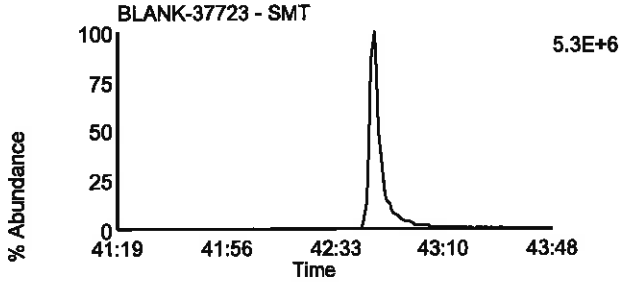
Data File: U130917A_10 G5 C11 - 469.7779
BLANK-37723 - SMT



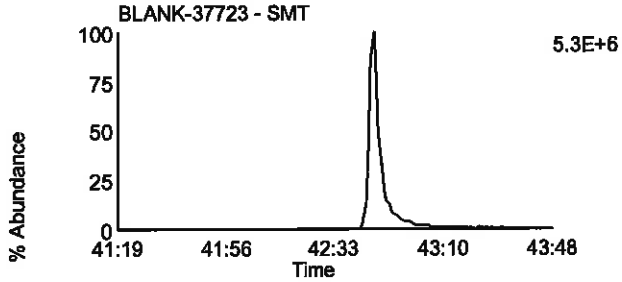
Data File: U130917A_10 G5 C11 - 469.7779
BLANK-37723 - SMT



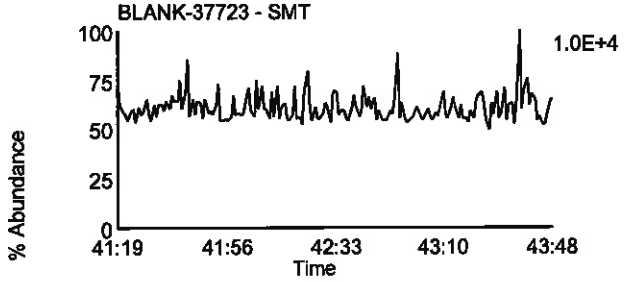
Data File: U130917A_10 G5 C12 - 471.7749
BLANK-37723 - SMT



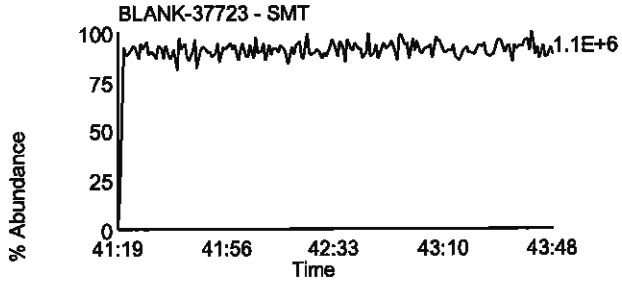
Data File: U130917A_10 G5 C12 - 471.7749
BLANK-37723 - SMT



Data File: U130917A_10 G5 C13 - 513.6775
BLANK-37723 - SMT



Data File: U130917A_10 G5 C2 - 430.9728
BLANK-37723 - SMT

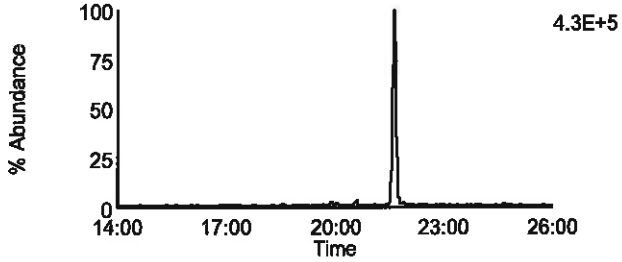


Homologue Group: Tetras

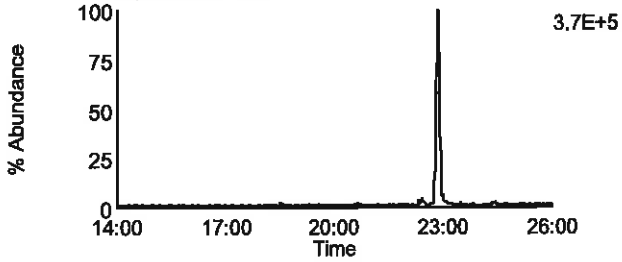
Data File Name: U130917A_07
Date Acquired: 9/17/2013
Sample Description: LCS-37724 - SMT

Lab Sample ID: LCS-37724
Client Sample ID: LCSFM
Instrument: 10MSHR06 (U)

Data File: U130917A_07 G1 C1 - 303.9016
LCS-37724 - SMT



Data File: U130917A_07 G1 C7 - 319.8965
LCS-37724 - SMT



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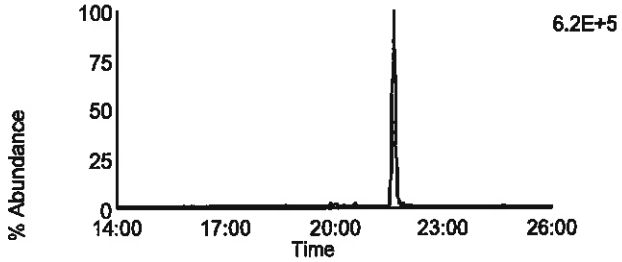
LCS-37724 - SMT



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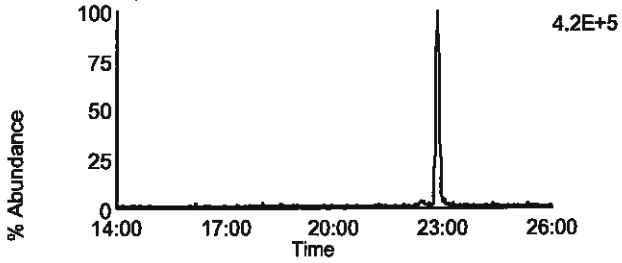
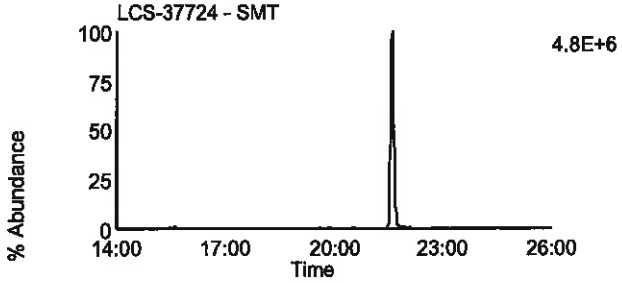
LCS-37724 - SMT



Data File: U130917A_07 G1 C3 - 315.9418
LCS-37724 - SMT



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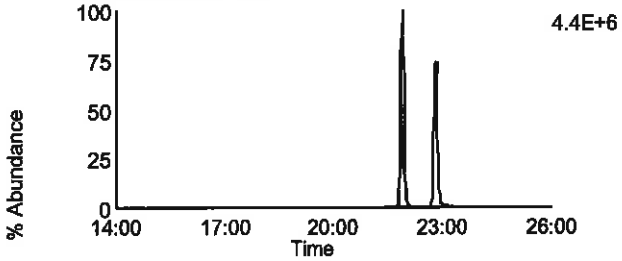
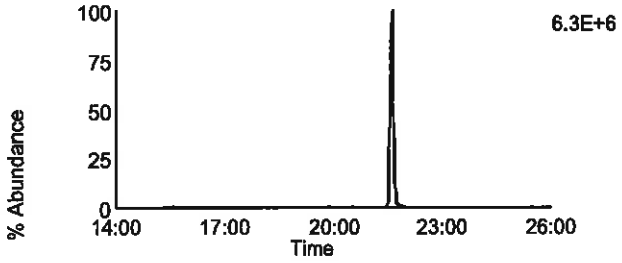
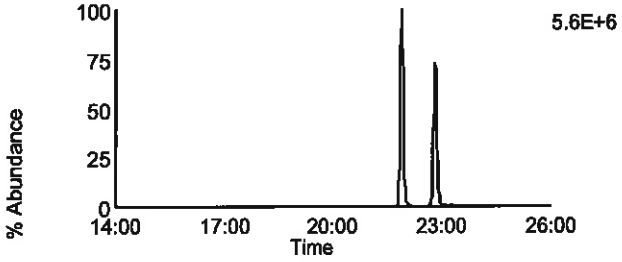
LCS-37724 - SMT



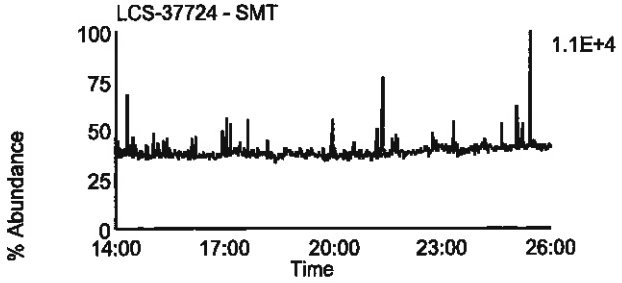
Data File: U130917A_07 G1 C4 - 317.9389
LCS-37724 - SMT



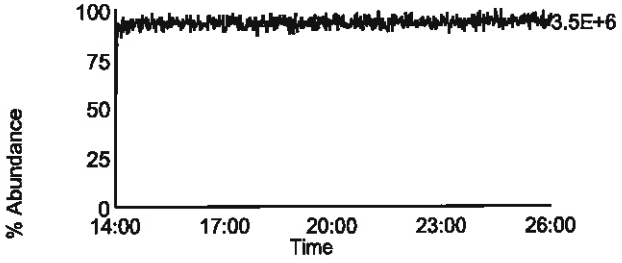
Data File: U130917A_07 G1 C11 - 333.9338
LCS-37724 - SMT



Data File: U130917A_07 G1 C14 - 375.8364
LCS-37724 - SMT



Data File: U130917A_07 G1 C5 - 318.9792
LCS-37724 - SMT

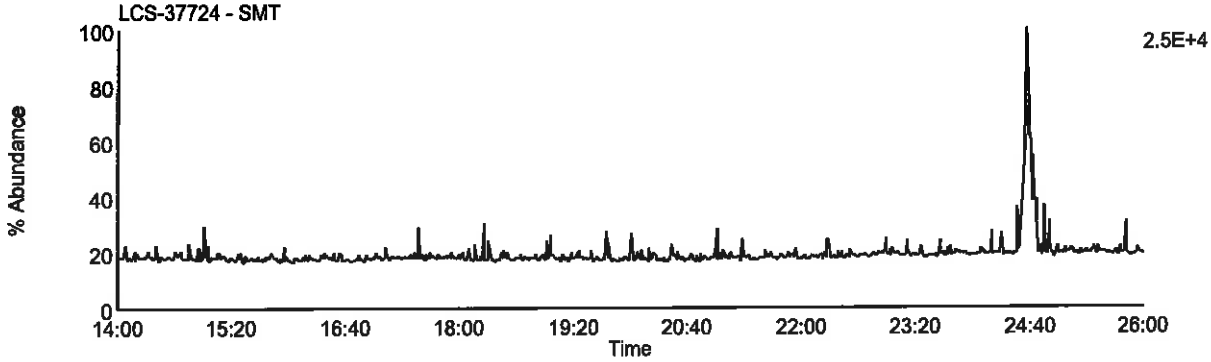


Homologue Group: Penta & Cleanup

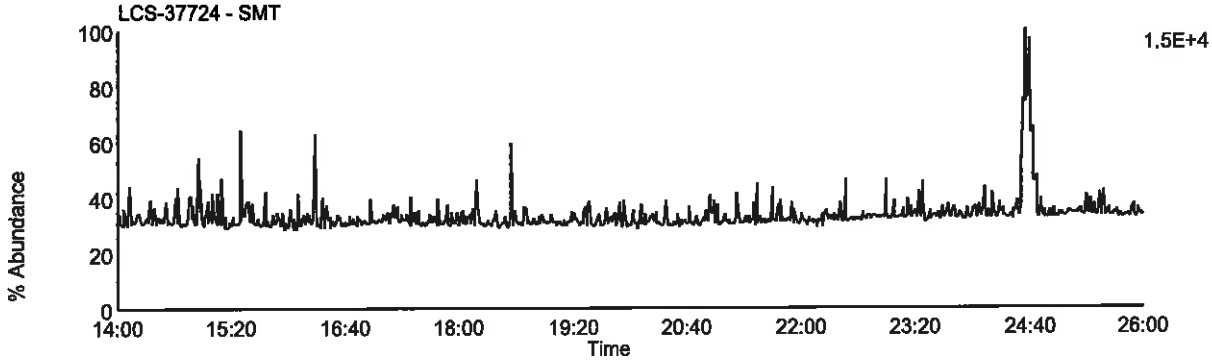
Data File Name: U130917A_07
Date Acquired: 9/17/2013
Sample Description: LCS-37724 - SMT

Lab Sample ID: LCS-37724
Client Sample ID: LCSFM
Instrument: 10MSHR06 (U)

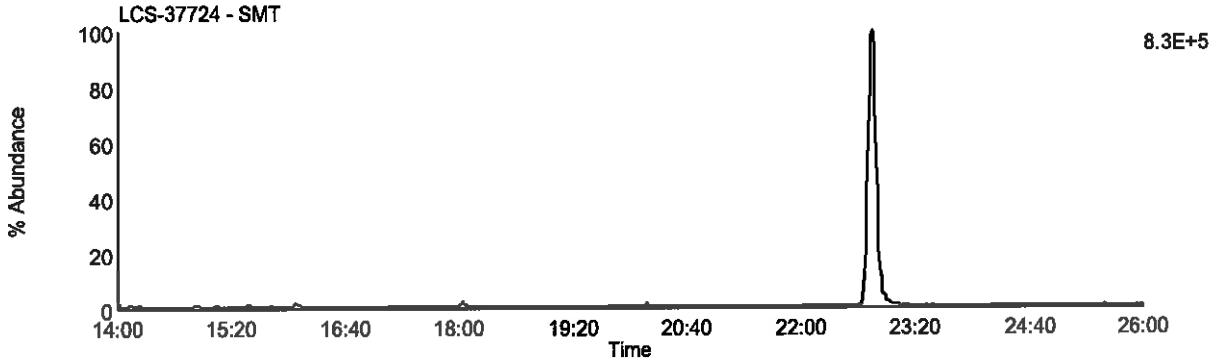
Data File: U130917A_07 G1 C12 - 339.8597
LCS-37724 - SMT



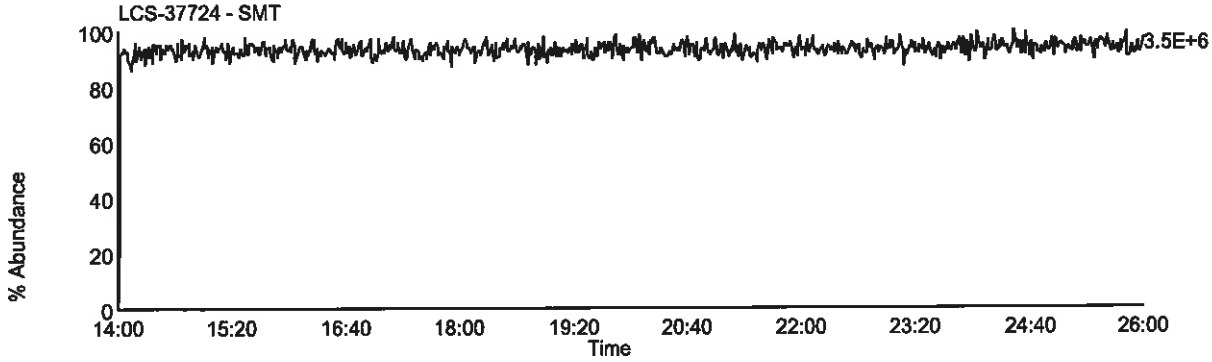
Data File: U130917A_07 G1 C13 - 341.8567
LCS-37724 - SMT



Data File: U130917A_07 G1 C9 - 327.8847
LCS-37724 - SMT



Data File: U130917A_07 G1 C5 - 318.9792
LCS-37724 - SMT

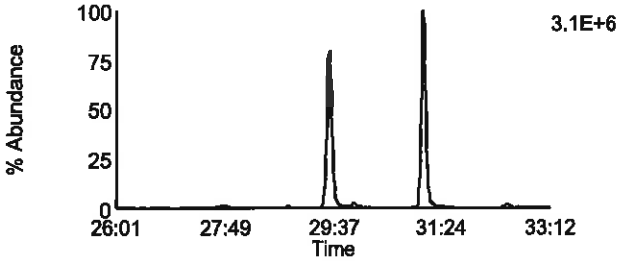


Homologue Group: Pentas

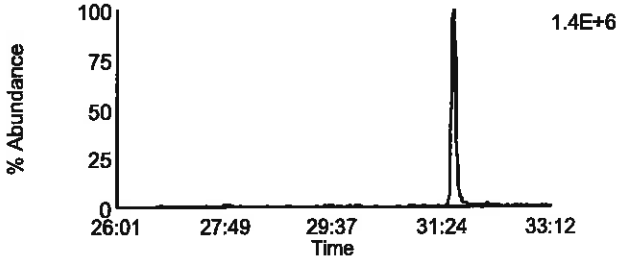
Data File Name: U130917A_07
Date Acquired: 9/17/2013
Sample Description: LCS-37724 - SMT

Lab Sample ID: LCS-37724
Client Sample ID: LCSFM
Instrument: 10MSHR06 (U)

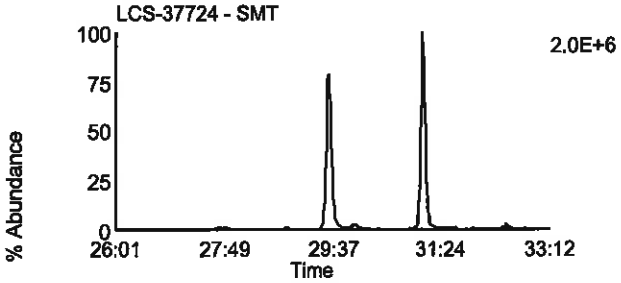
Data File: U130917A_07 G2 C1 - 339.8597
LCS-37724 - SMT



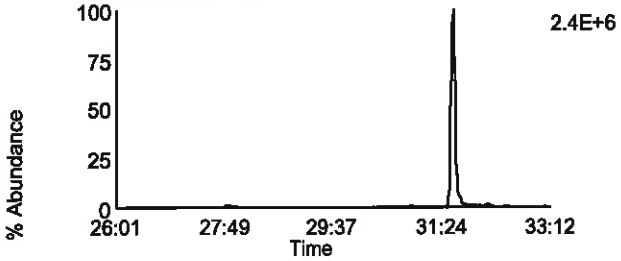
Data File: U130917A_07 G2 C4 - 353.8576
LCS-37724 - SMT



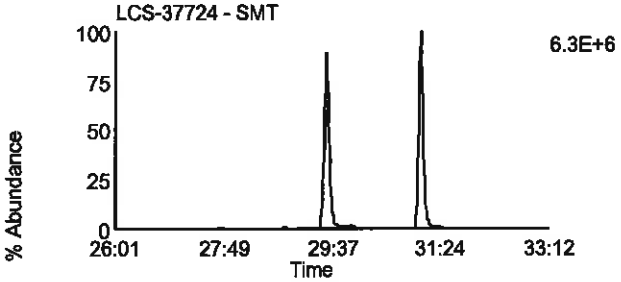
Data File: U130917A_07 G2 C2 - 341.8567
LCS-37724 - SMT



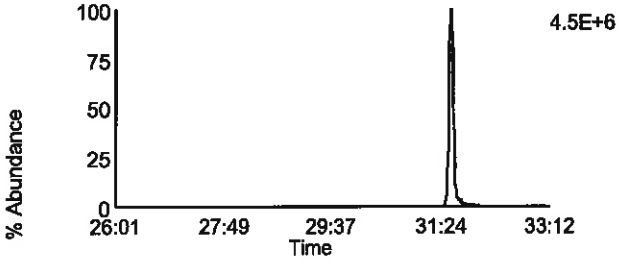
Data File: U130917A_07 G2 C8 - 355.8546
LCS-37724 - SMT



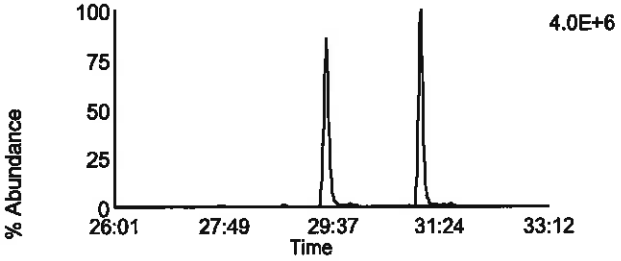
Data File: U130917A_07 G2 C3 - 351.8999
LCS-37724 - SMT



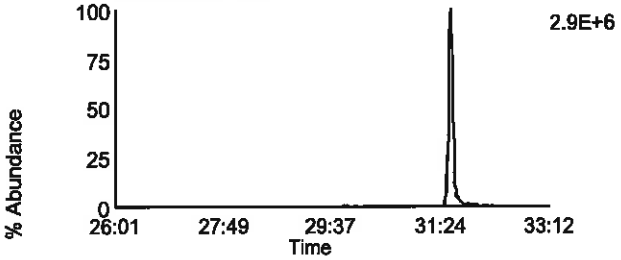
Data File: U130917A_07 G2 C10 - 367.8948
LCS-37724 - SMT



Data File: U130917A_07 G2 C5 - 353.8969
LCS-37724 - SMT



Data File: U130917A_07 G2 C11 - 369.8918
LCS-37724 - SMT



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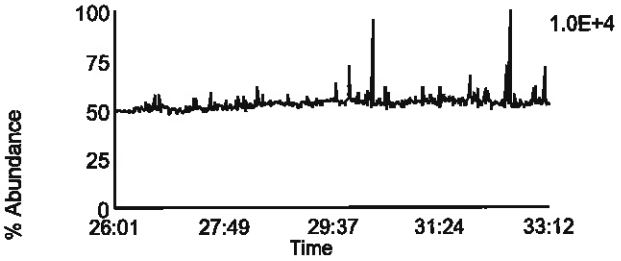
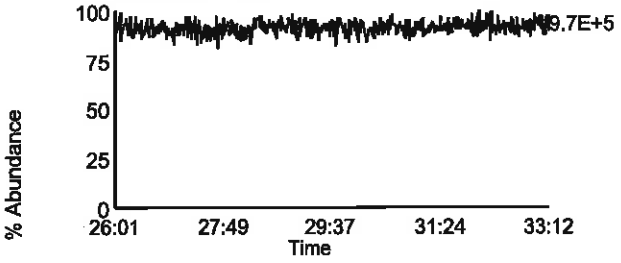
LCS-37724 - SMT



Data File: U130917A_07 G2 C6 - 354.9792
LCS-37724 - SMT

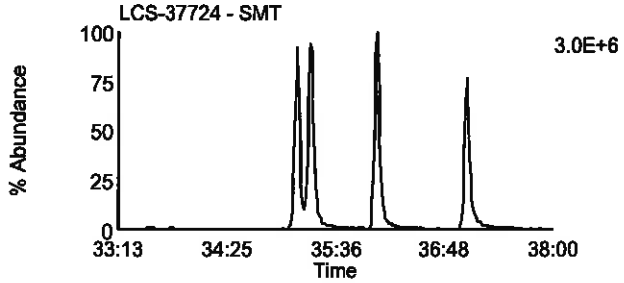


Homologue Group: Hexas

Data File Name: U130917A_07
Date Acquired: 9/17/2013
Sample Description: LCS-37724 - SMT

Lab Sample ID: LCS-37724
Client Sample ID: LCSFM
Instrument: 10MSHR06 (U)

Data File: U130917A_07 G3 C1 - 373.8207
LCS-37724 - SMT



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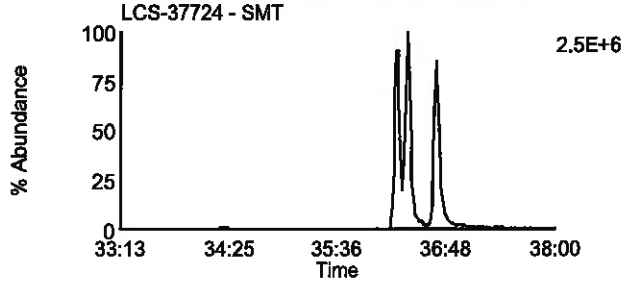
LCS-37724 - SMT



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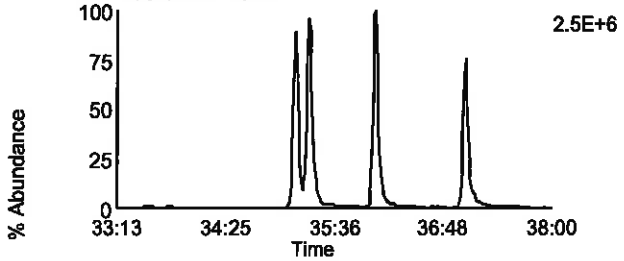
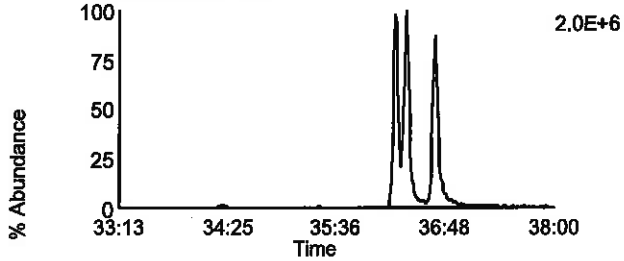
LCS-37724 - SMT



Data File: U130917A_07 G3 C8 - 391.8127
LCS-37724 - SMT



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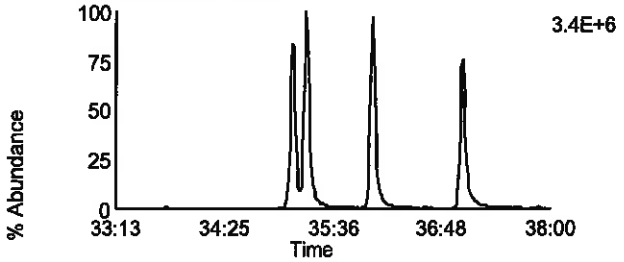
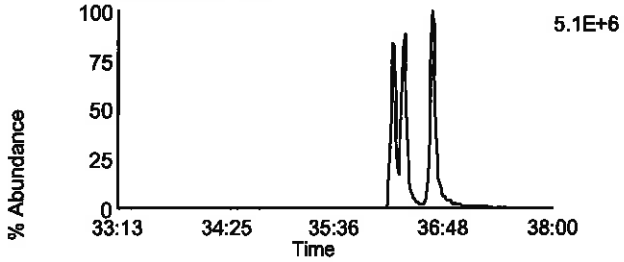
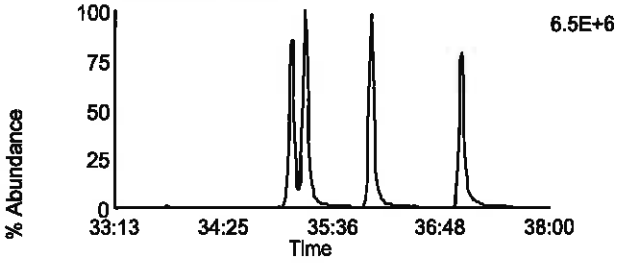
LCS-37724 - SMT



Data File: U130917A_07 G3 C9 - 401.8559
LCS-37724 - SMT



Data File: U130917A_07 G3 C6 - 385.861
LCS-37724 - SMT



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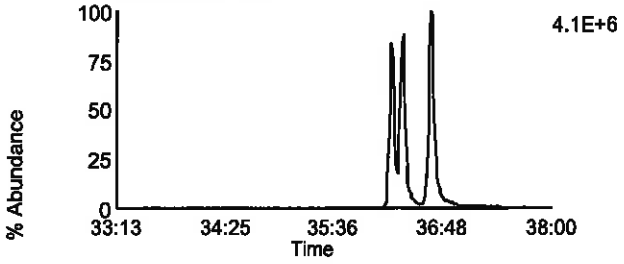
LCS-37724 - SMT



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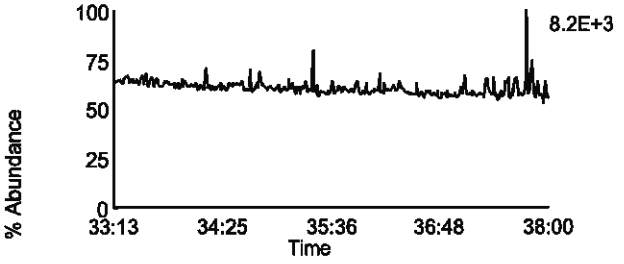
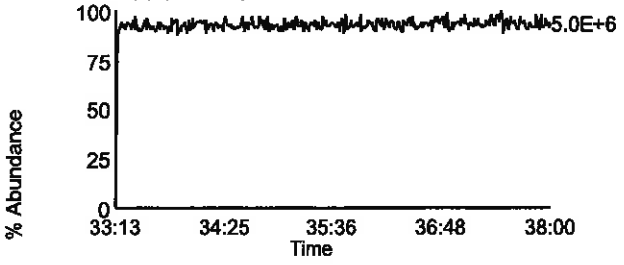
LCS-37724 - SMT



Data File: U130917A_07 G3 C3 - 380.976
LCS-37724 - SMT

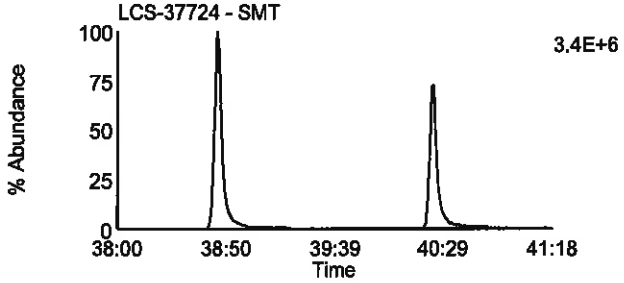


Homologue Group: Heptas

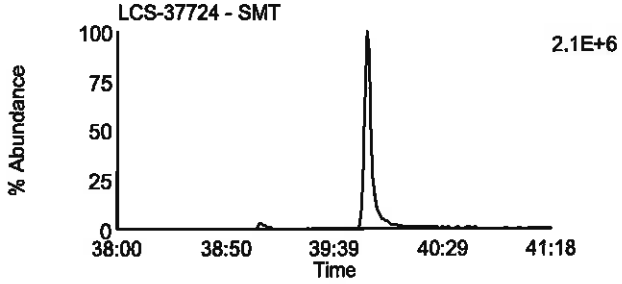
Data File Name: U130917A_07
Date Acquired: 9/17/2013
Sample Description: LCS-37724 - SMT

Lab Sample ID: LCS-37724
Client Sample ID: LCSFM
Instrument: 10MSHR06 (U)

Data File: U130917A_07 G4 C3 - 407.7818
LCS-37724 - SMT



Data File: U130917A_07 G4 C8 - 423.7767
LCS-37724 - SMT



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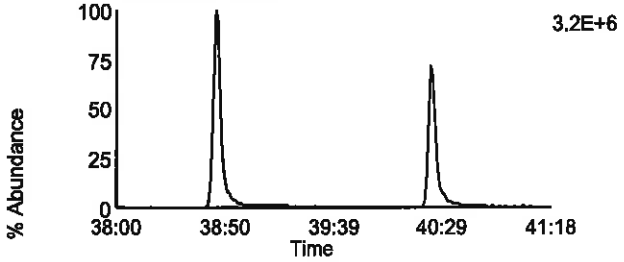
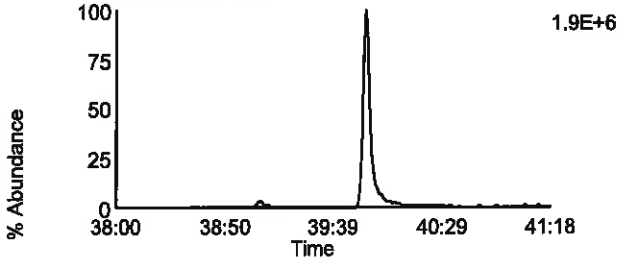
LCS-37724 - SMT



Data File: U130917A_07 G4 C9 - 425.7737
LCS-37724 - SMT



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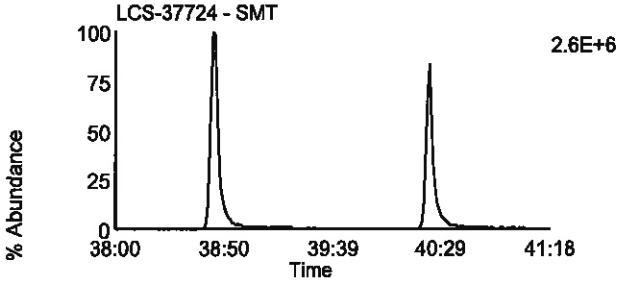
LCS-37724 - SMT



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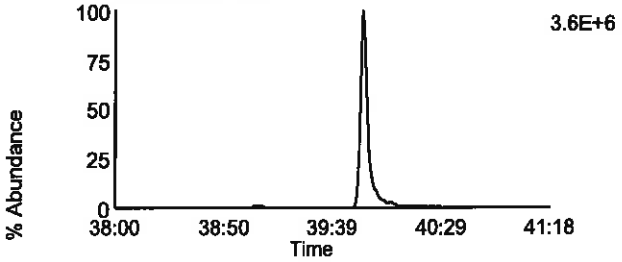
LCS-37724 - SMT



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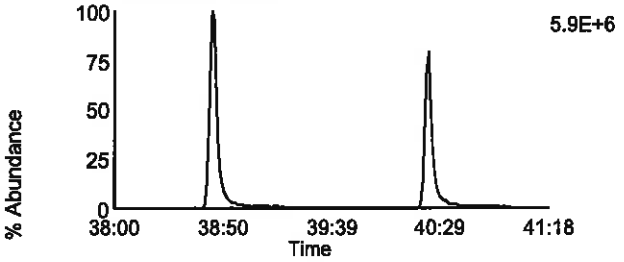
LCS-37724 - SMT



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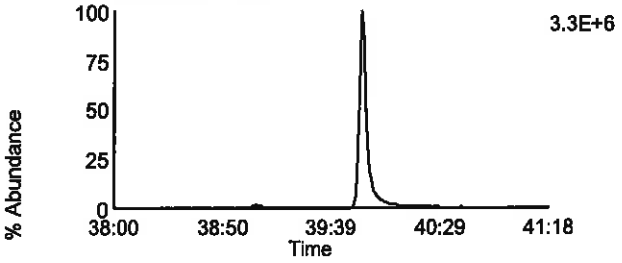
LCS-37724 - SMT



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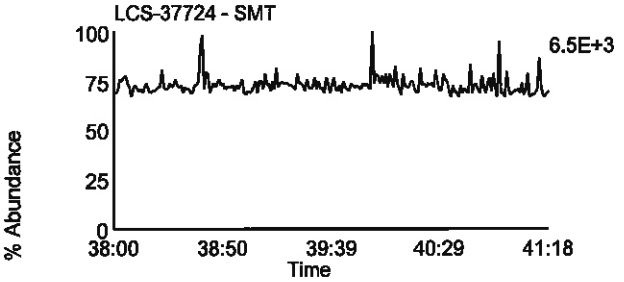
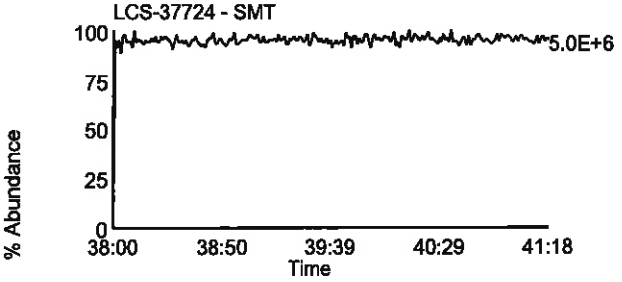
LCS-37724 - SMT



Data File: U130917A_07 G4 C1 - 380.976
LCS-37724 - SMT

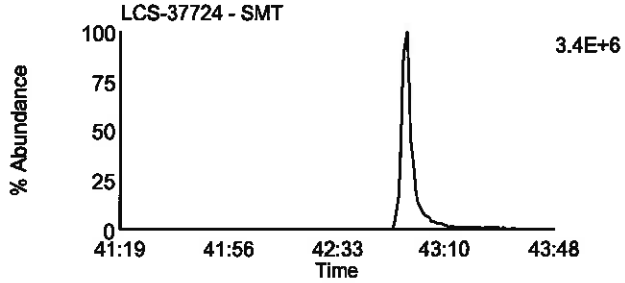


Homologue Group: Octas

Data File Name: U130917A_07
Date Acquired: 9/17/2013
Sample Description: LCS-37724 - SMT

Lab Sample ID: LCS-37724
Client Sample ID: LCSFM
Instrument: 10MSHR06 (U)

Data File: U130917A_07 G5 C4 - 441.7428
LCS-37724 - SMT



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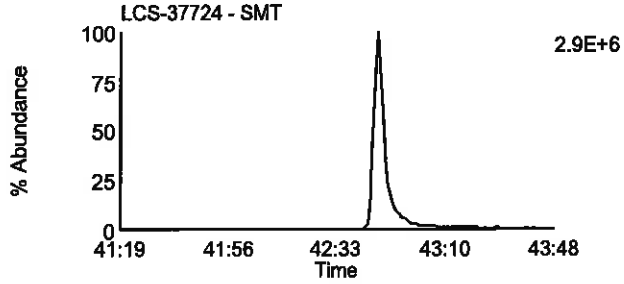
LCS-37724 - SMT



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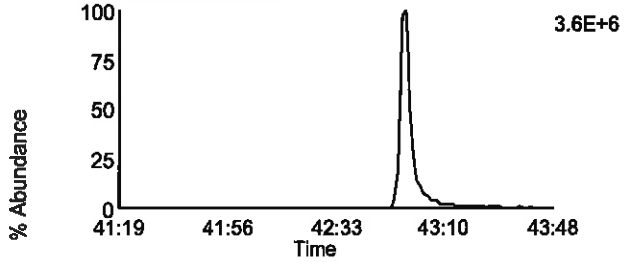
LCS-37724 - SMT



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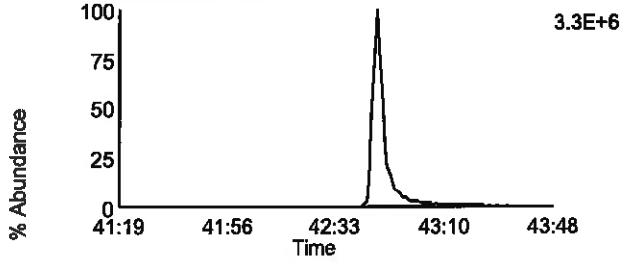
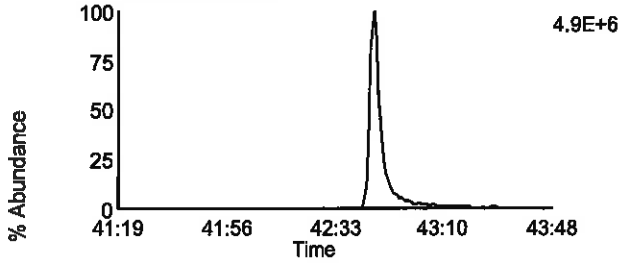
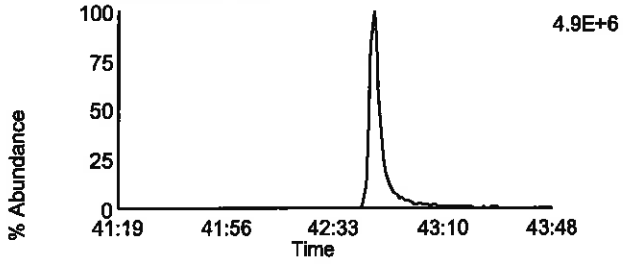
LCS-37724 - SMT



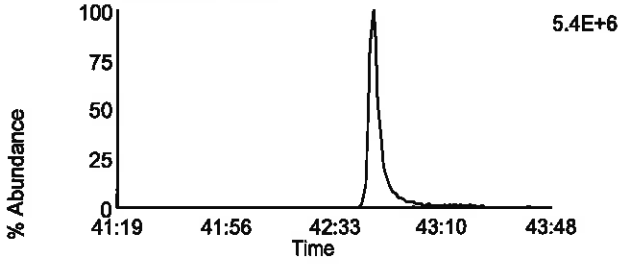
Data File: U130917A_07 G5 C11 - 469.7779
LCS-37724 - SMT



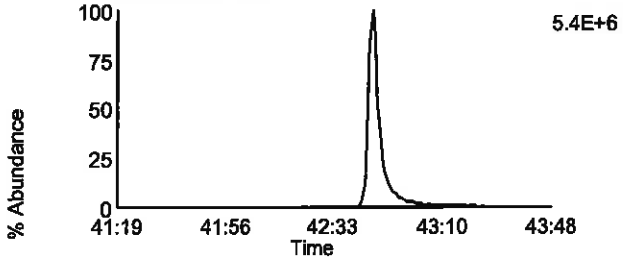
Data File: U130917A_07 G5 C11 - 469.7779
LCS-37724 - SMT



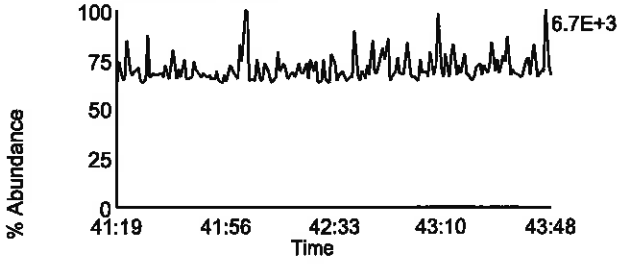
Data File: U130917A_07 G5 C12 - 471.7749
LCS-37724 - SMT



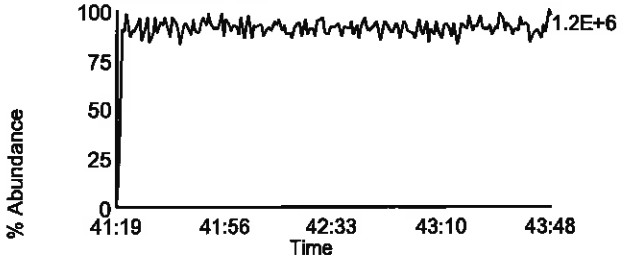
Data File: U130917A_07 G5 C12 - 471.7749
LCS-37724 - SMT



Data File: U130917A_07 G5 C13 - 513.6775
LCS-37724 - SMT



Data File: U130917A_07 G5 C2 - 430.9728
LCS-37724 - SMT

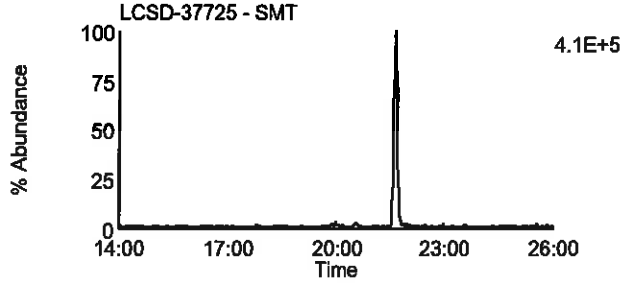


Homologue Group: Tetras

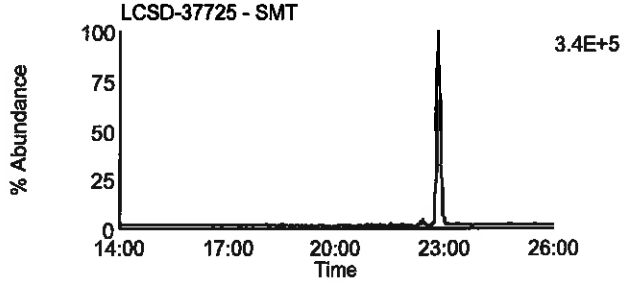
Data File Name: U130917A_08
Date Acquired: 9/17/2013
Sample Description: LCSD-37725 - SMT

Lab Sample ID: LCSD-37725
Client Sample ID: LCSFN
Instrument: 10MSHR06 (U)

Data File: U130917A_08 G1 C1 - 303.9016
LCSD-37725 - SMT



Data File: U130917A_08 G1 C7 - 319.8965
LCSD-37725 - SMT



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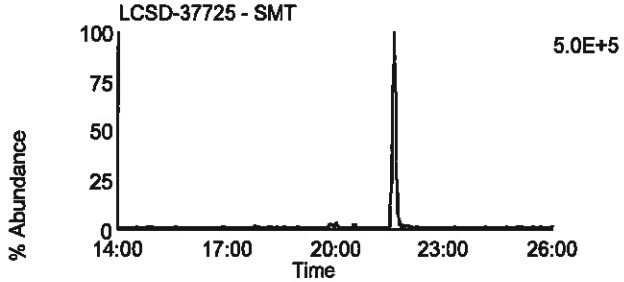
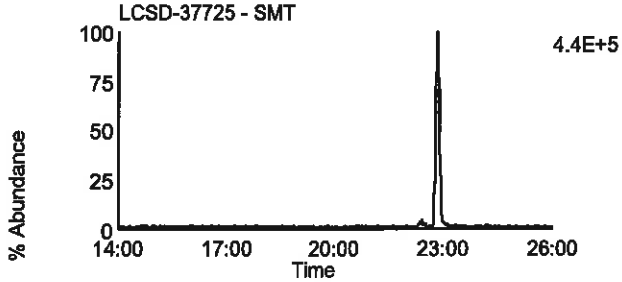
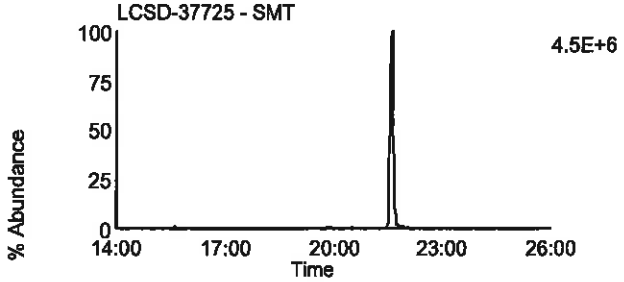
LCSD-37725 - SMT



Data File: U130917A_08 G1 C8 - 321.8936
LCSD-37725 - SMT



Data File: U130917A_08 G1 C3 - 315.9418
LCSD-37725 - SMT



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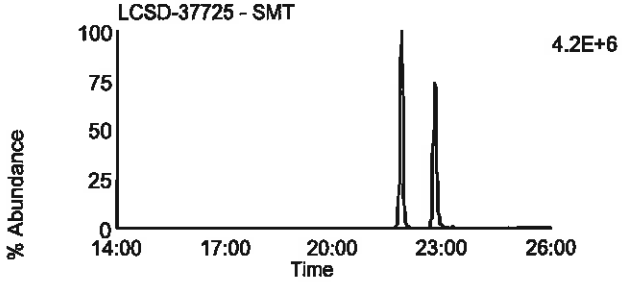
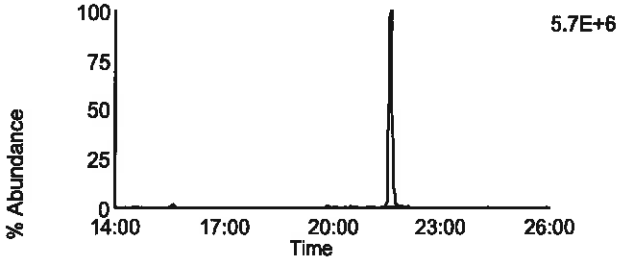
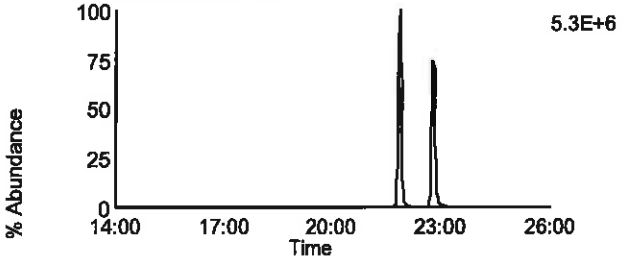
LCSD-37725 - SMT



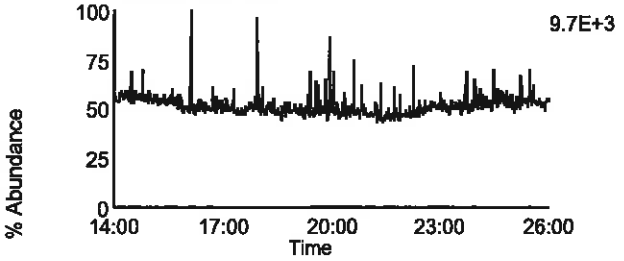
Data File: U130917A_08 G1 C4 - 317.9389
LCSD-37725 - SMT



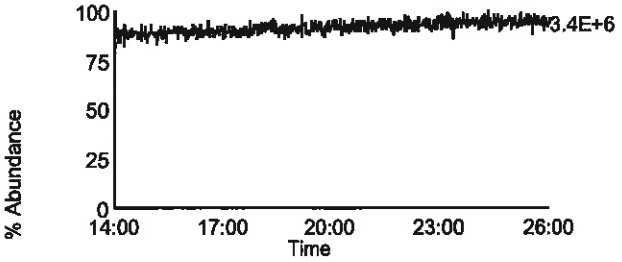
Data File: U130917A_08 G1 C11 - 333.9338
LCSD-37725 - SMT



Data File: U130917A_08 G1 C14 - 375.8364
LCSD-37725 - SMT

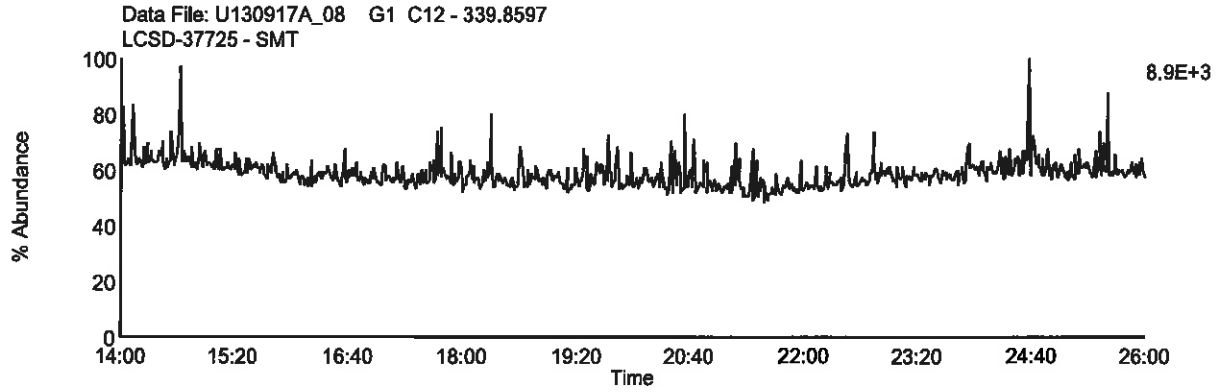


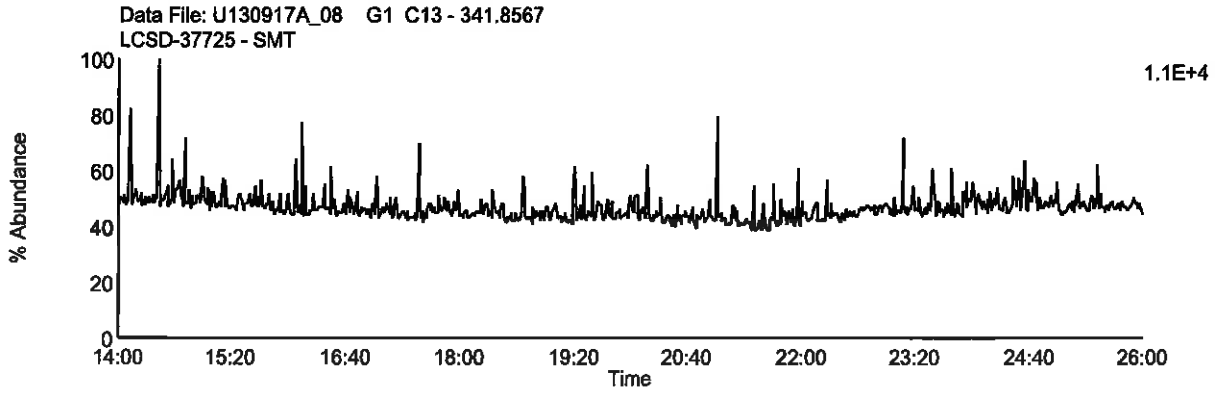
Data File: U130917A_08 G1 C5 - 318.9792
LCSD-37725 - SMT

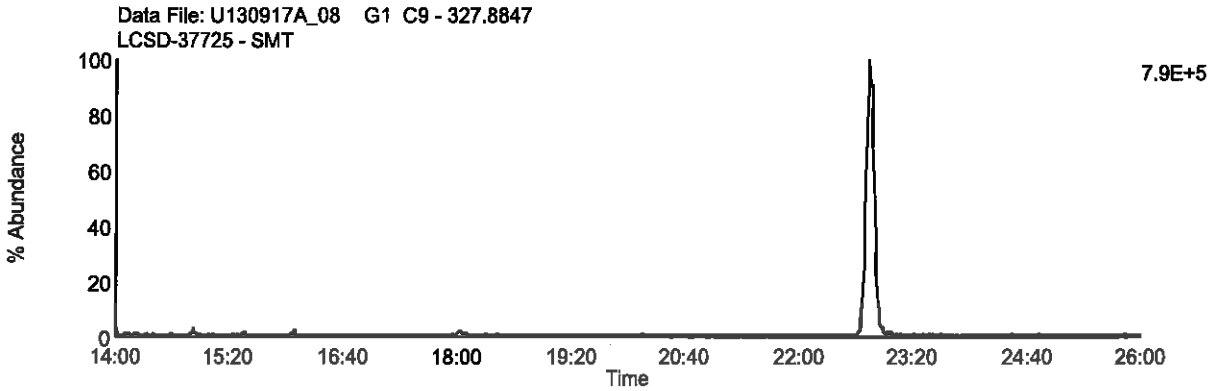


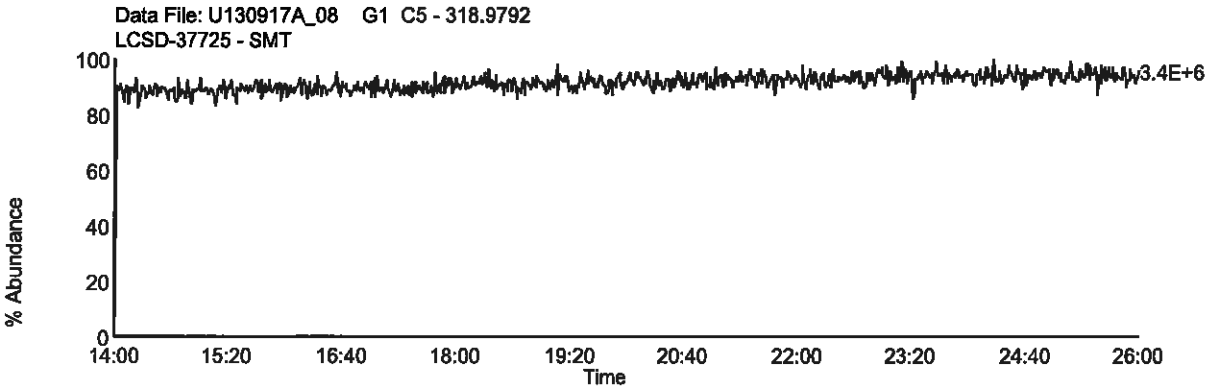
Homologue Group: Penta & Cleanup

Data File Name: U130917A_08	Lab Sample ID: LCSD-37725
Date Acquired: 9/17/2013	Client Sample ID: LCSFN
Sample Description: LCSD-37725 - SMT	Instrument: 10MSHR06 (U)







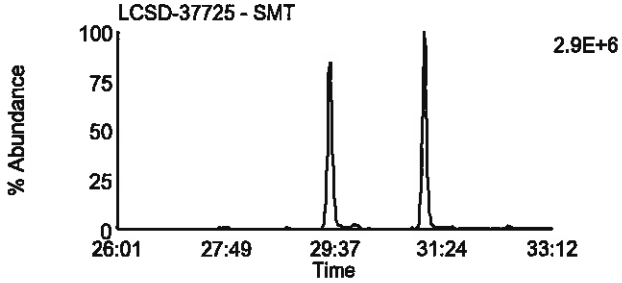


Homologue Group: Pentas

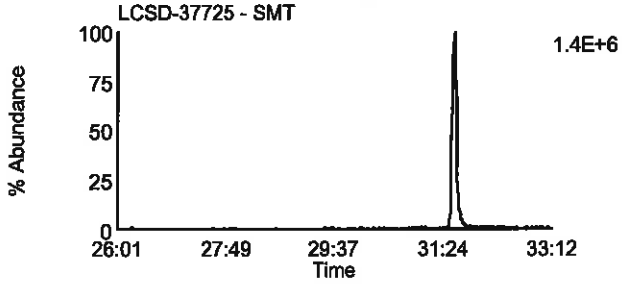
Data File Name: U130917A_08
Date Acquired: 9/17/2013
Sample Description: LCSD-37725 - SMT

Lab Sample ID: LCSD-37725
Client Sample ID: LCSFN
Instrument: 10MSHR06 (U)

Data File: U130917A_08 G2 C1 - 339.8597
LCSD-37725 - SMT



Data File: U130917A_08 G2 C4 - 353.8576
LCSD-37725 - SMT



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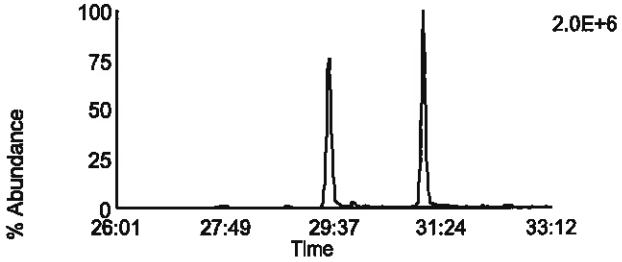
LCSD-37725 - SMT



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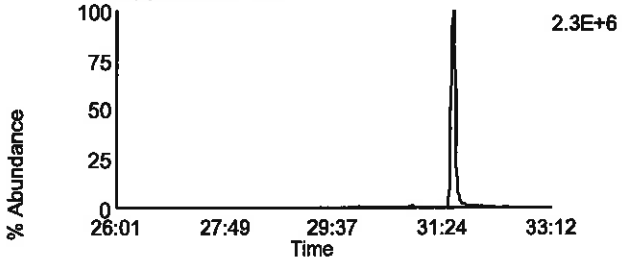
LCSD-37725 - SMT



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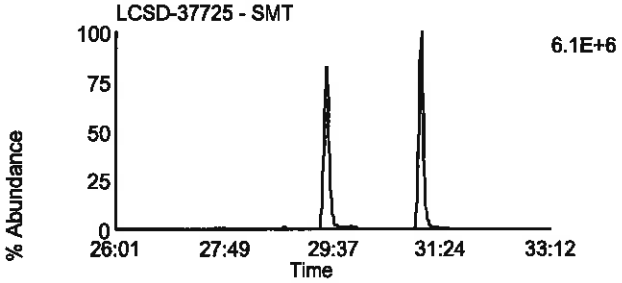
LCSD-37725 - SMT



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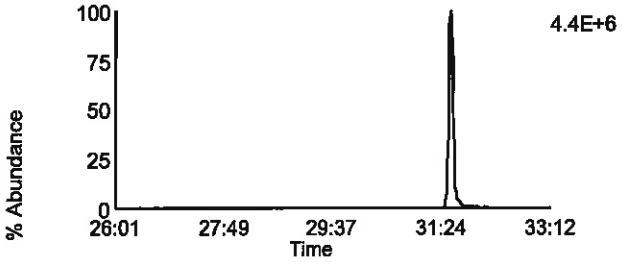
LCSD-37725 - SMT



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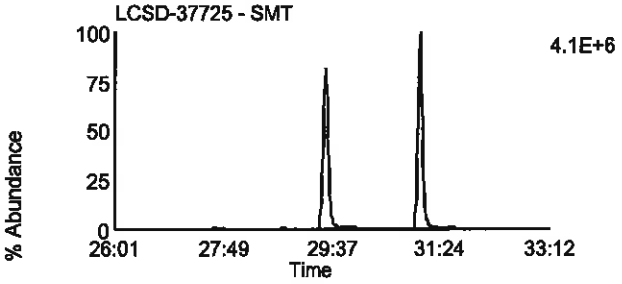
LCSD-37725 - SMT



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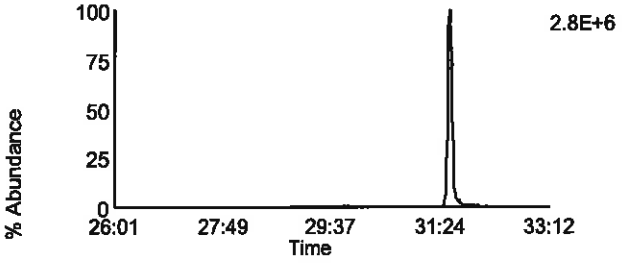
LCSD-37725 - SMT



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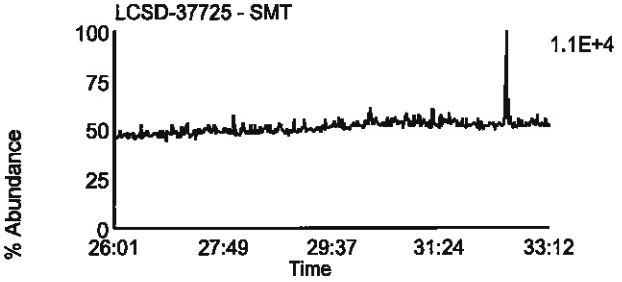
LCSD-37725 - SMT



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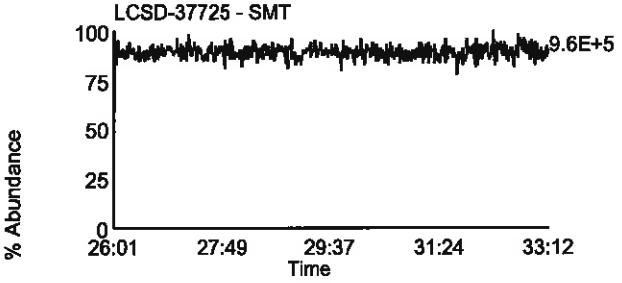
LCSD-37725 - SMT

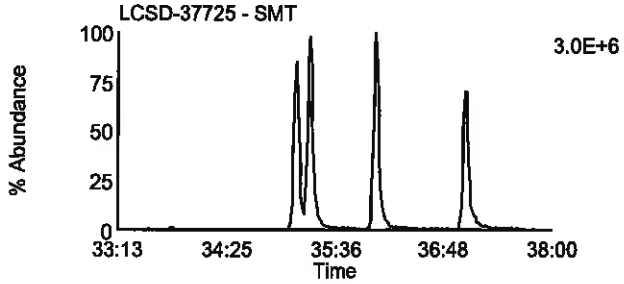


Homologue Group: Hexas

Data File Name: U130917A_08
Date Acquired: 9/17/2013
Sample Description: LCSD-37725 - SMT

Lab Sample ID: LCSD-37725
Client Sample ID: LCSFN
Instrument: 10MSHR06 (U)

Data File: U130917A_08 G3 C1 - 373.8207
LCSD-37725 - SMT



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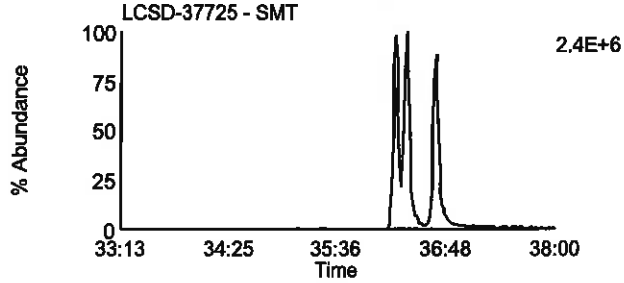
LCSD-37725 - SMT



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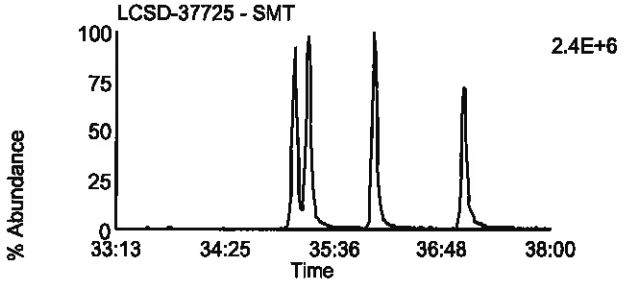
LCSD-37725 - SMT



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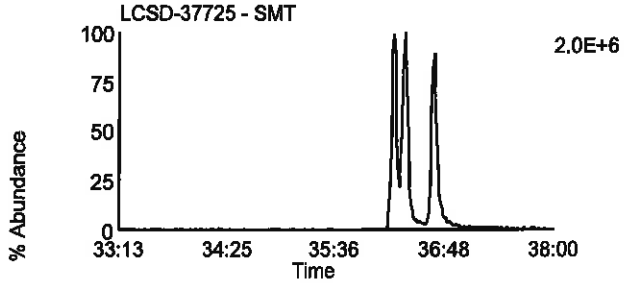
LCSD-37725 - SMT



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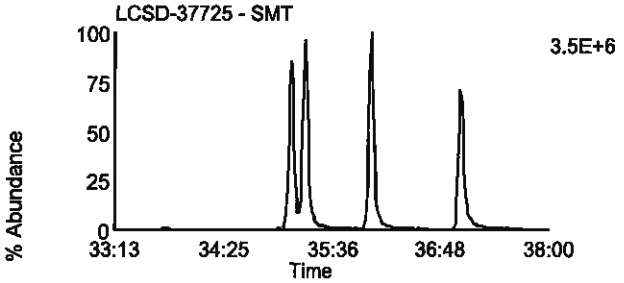
LCSD-37725 - SMT



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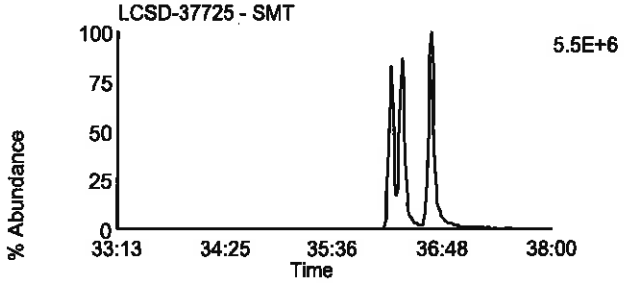
LCSD-37725 - SMT



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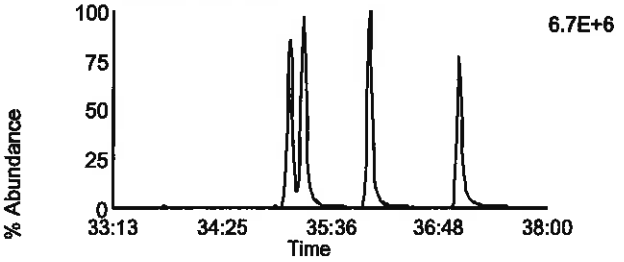
LCSD-37725 - SMT



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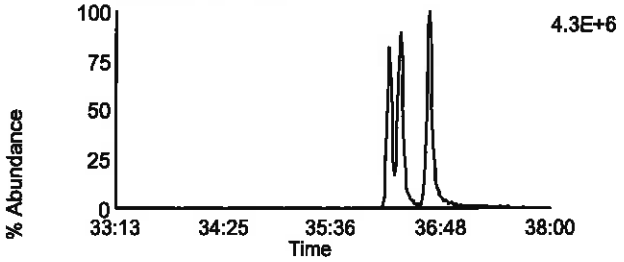
LCSD-37725 - SMT



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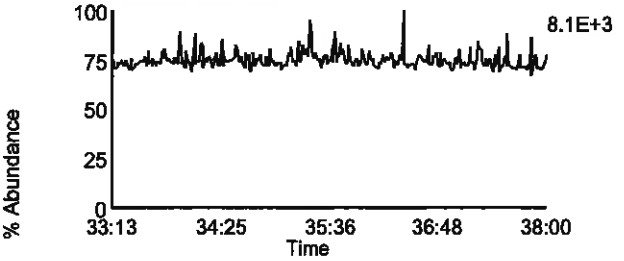
LCSD-37725 - SMT



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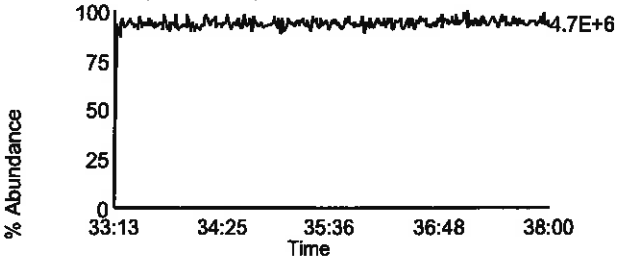
LCSD-37725 - SMT

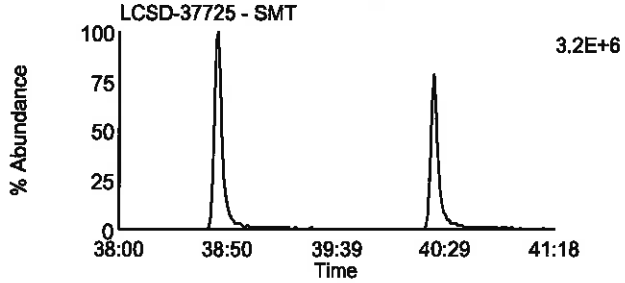


Homologue Group: Heptas

Data File Name: U130917A_08
Date Acquired: 9/17/2013
Sample Description: LCSD-37725 - SMT

Lab Sample ID: LCSD-37725
Client Sample ID: LCSFN
Instrument: 10MSHR06 (U)

Data File: U130917A_08 G4 C3 - 407.7818
LCSD-37725 - SMT



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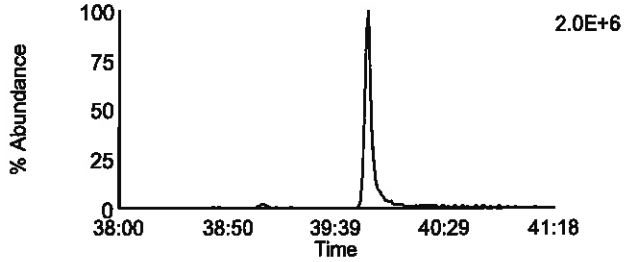
LCSD-37725 - SMT



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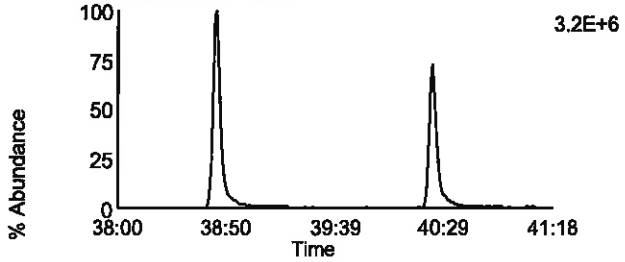
LCSD-37725 - SMT



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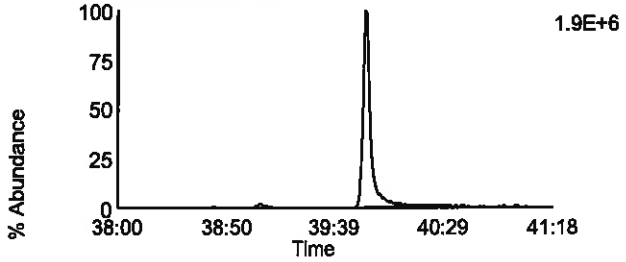
LCSD-37725 - SMT



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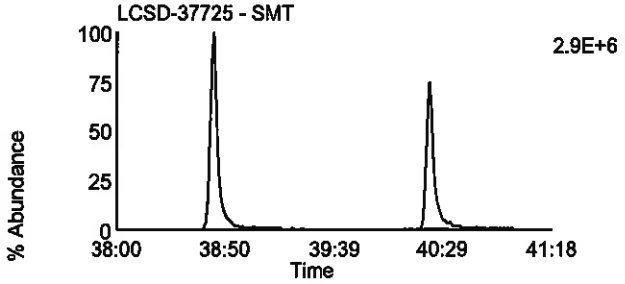
LCSD-37725 - SMT



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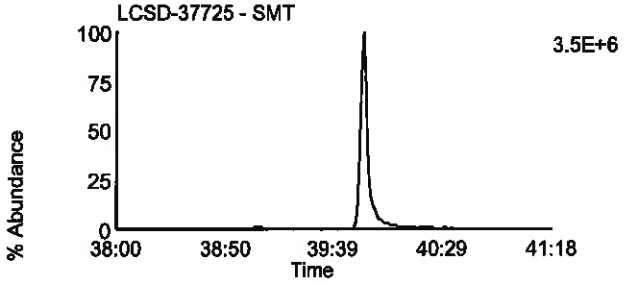
LCSD-37725 - SMT



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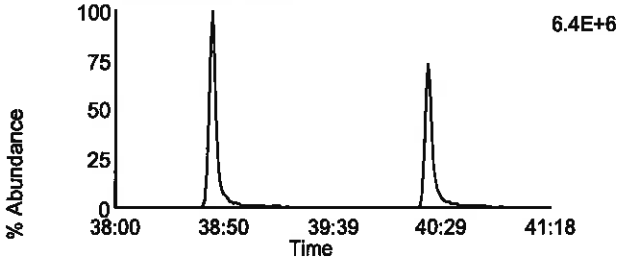
LCSD-37725 - SMT



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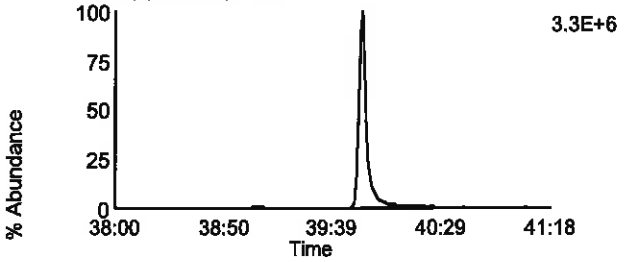

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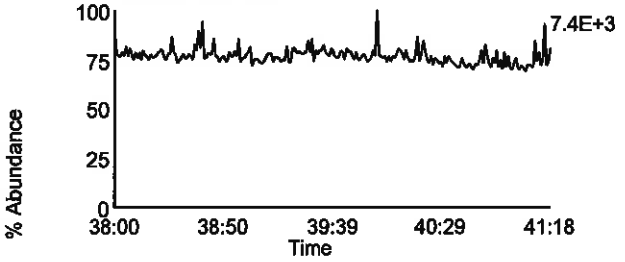
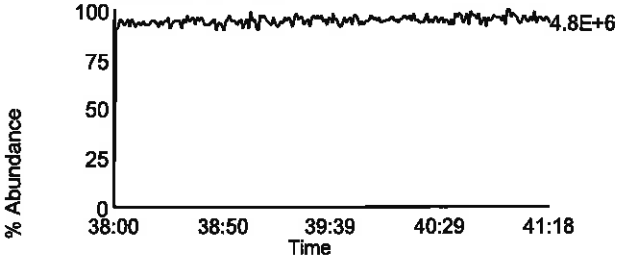
LCSD-37725 - SMT



Data File: U130917A_08 G4 C1 - 380.976
LCSD-37725 - SMT

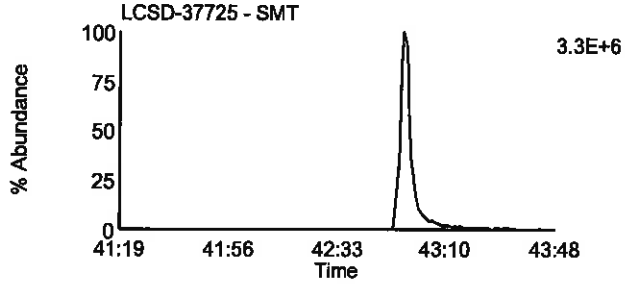


Homologue Group: Octas

Data File Name: U130917A_08
Date Acquired: 9/17/2013
Sample Description: LCSD-37725 - SMT

Lab Sample ID: LCSD-37725
Client Sample ID: LCSFN
Instrument: 10MSHR06 (U)

Data File: U130917A_08 G5 C4 - 441.7428
LCSD-37725 - SMT



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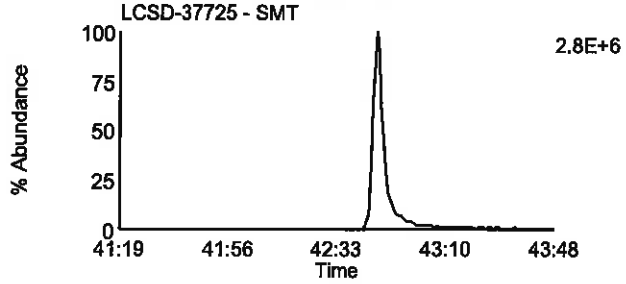
LCSD-37725 - SMT



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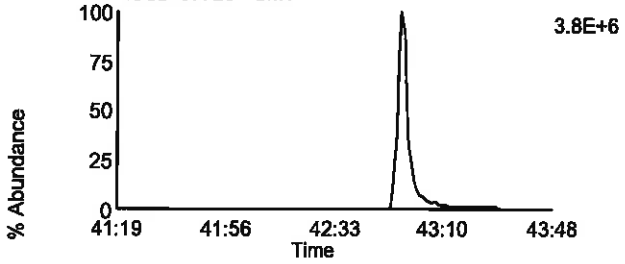
LCSD-37725 - SMT



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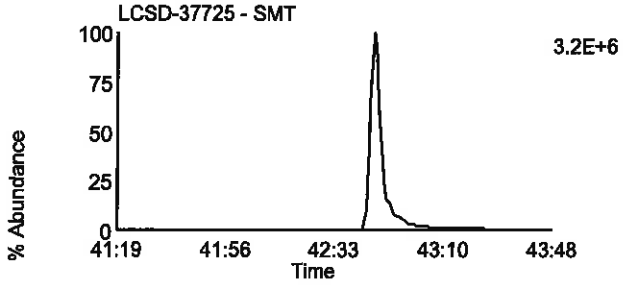
LCSD-37725 - SMT



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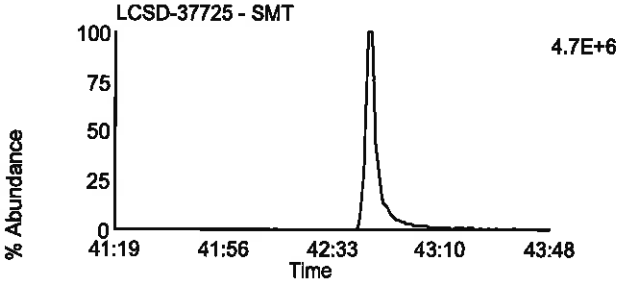
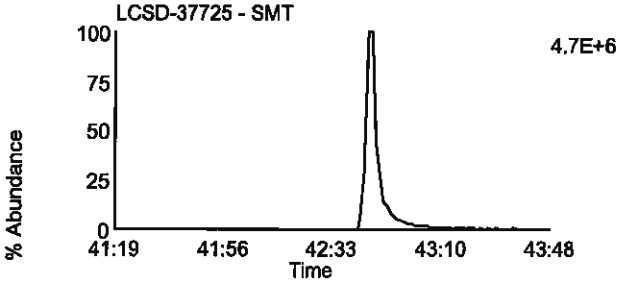
LCSD-37725 - SMT



Data File: U130917A_08 G5 C11 - 469.7779
LCSD-37725 - SMT



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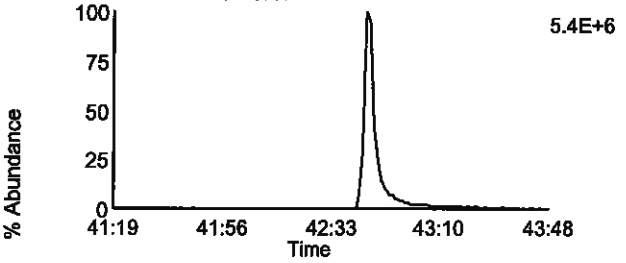
LCSD-37725 - SMT



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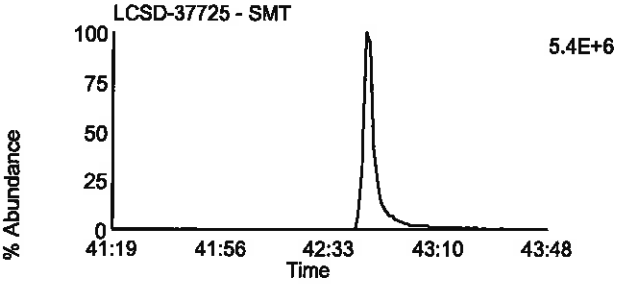
LCSD-37725 - SMT



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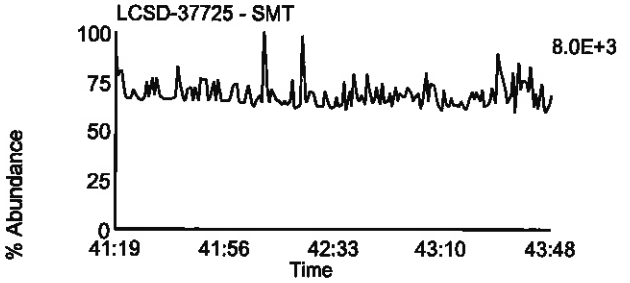
LCSD-37725 - SMT



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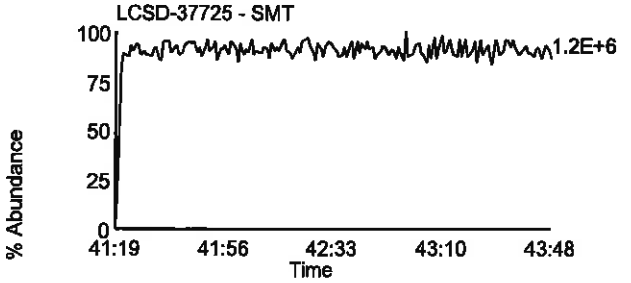
LCSD-37725 - SMT



Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By_____ Date _____

Client ID		Injected By	SMT
Lab ID	BLANK-37723	Instrument ID	10MSHR06 (U)
Filename	U130917A_10	GC Column ID	USD227224H
Analyzed	09/17/2013 16:38	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:37	2.85e7	3.59e7	4.63e6	5.88e6	7.875e3	7.446e3	0.79	
2,3,7,8-TCDF	21:38	ND	ND	ND	ND	1.219e3	8.316e2		

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:54	2.46e7	3.08e7	3.80e6	4.78e6	7.347e3	1.130e3	0.80	
2,3,7,8-TCDD-13C	22:49	2.07e7	2.67e7	3.13e6	3.93e6	4.678e3	4.621e3	0.78	
2,3,7,8-TCDD-37Cl4	22:51	5.10e6		7.47e5		1.884e3	-----		
2,3,7,8-TCDD	22:51	ND	ND	ND	ND	8.724e2	5.435e2		

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:32	3.05e7	2.00e7	4.87e6	3.21e6	2.584e4	2.062e3	1.53	
2,3,4,7,8-PeCDF-13C	31:06	3.16e7	2.07e7	6.75e6	4.41e6	1.248e4	6.451e3	1.53	
1,2,3,7,8-PeCDF	29:35	ND	ND	ND	ND	6.607e2	5.722e2		
2,3,4,7,8-PeCDF	31:07	ND	ND	ND	ND	4.198e2	4.849e2		

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:34	2.26e7	1.43e7	4.47e6	2.70e6	2.614e3	4.142e3	1.59	
1,2,3,7,8-PeCDD	31:35	ND	ND	ND	ND	8.377e2	8.880e2		

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:10	1.13e7	2.18e7	2.79e6	5.28e6	4.834e2	1.493e3	0.52	
1,2,3,6,7,8-HxCDF-13C	35:19	1.53e7	2.90e7	3.24e6	6.07e6	6.921e2	3.587e4	0.53	
2,3,4,6,7,8-HxCDF-13C	36:03	1.36e7	2.59e7	3.02e6	5.85e6	1.035e3	2.371e4	0.52	
1,2,3,7,8,9-HxCDF-13C	37:02	1.13e7	2.18e7	2.44e6	4.67e6	6.330e3	1.731e4	0.52	
1,2,3,4,7,8-HxCDF	35:11	ND	ND	ND	ND	4.916e2	5.459e2		
1,2,3,6,7,8-HxCDF	35:20	ND	ND	ND	ND	6.647e2	5.611e2		
2,3,4,6,7,8-HxCDF	36:05	ND	ND	ND	ND	5.876e2	4.664e2		
1,2,3,7,8,9-HxCDF	37:03	ND	ND	ND	ND	6.210e2	4.399e2		

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Client ID		Injected By	SMT
Lab ID	BLANK-37723	Instrument ID	10MSHR06 (U)
Filename	U130917A_10	GC Column ID	USD227224H
Analyzed	09/17/2013 16:38	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:15	1.58e7	1.25e7	4.07e6	3.15e6	5.148e3	6.239e3	1.27	
1,2,3,6,7,8-HxCDD-13C	36:22	1.87e7	1.47e7	4.30e6	3.28e6	1.151e3	6.089e3	1.28	
1,2,3,7,8,9-HxCDD-13C	36:40	2.25e7	1.73e7	4.63e6	3.70e6	1.304e4	1.335e4	1.30	
1,2,3,4,7,8-HxCDD	36:15	ND	ND	ND	ND	7.378e2	6.653e2		
1,2,3,6,7,8-HxCDD	36:23	ND	ND	ND	ND	8.282e2	7.893e2		
1,2,3,7,8,9-HxCDD	36:41	ND	ND	ND	ND	7.660e2	7.404e2		

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:46	1.05e7	2.27e7	2.61e6	5.71e6	6.931e3	5.452e3	0.46	
1,2,3,4,7,8,9-HpCDF-13C	40:24	8.28e6	1.82e7	2.08e6	4.47e6	4.728e3	5.207e3	0.45	
1,2,3,4,6,7,8-HpCDF	38:47	ND	ND	ND	ND	9.557e2	6.356e2		
1,2,3,4,7,8,9-HpCDF	40:25	ND	ND	ND	ND	1.074e3	9.700e2		

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:54	1.33e7	1.27e7	3.17e6	3.04e6	3.023e3	2.221e4	1.05	
1,2,3,4,6,7,8-HpCDD	39:55	ND	ND	ND	ND	1.009e3	1.014e3		

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:57	ND	ND	ND	ND	7.908e2	1.136e3		

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:47	2.10e7	2.37e7	4.71e6	5.31e6	2.751e2	4.481e2	0.88	
OCDD	42:48	3.35e4	2.05e4	8.98e3	3.86e3	1.194e3	8.443e2	1.63	I

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client ID	LCSFM	Injected By	SMT
Lab ID	LCS-37724	Instrument ID	10MSHR06 (U)
Filename	U130917A_07	GC Column ID	USD227224H
Analyzed	09/17/2013 14:00	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:36	3.01e7	3.87e7	4.81e6	6.28e6	----	----	0.78	
2,3,7,8-TCDF	21:38	2.77e6	3.67e6	4.24e5	6.12e5	----	----	0.75	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:53	2.70e7	3.39e7	4.41e6	5.62e6	----	----	0.80	
2,3,7,8-TCDD-13C	22:49	2.23e7	2.76e7	3.24e6	4.07e6	----	----	0.81	
2,3,7,8-TCDD-37Cl4	22:51	5.73e6		8.29e5		----	----		
2,3,7,8-TCDD	22:51	2.44e6	3.02e6	3.68e5	4.12e5	----	----	0.81	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:31	3.20e7	2.06e7	5.56e6	3.42e6	----	----	1.55	
2,3,4,7,8-PeCDF-13C	31:06	3.30e7	2.14e7	6.25e6	3.98e6	----	----	1.54	
1,2,3,7,8-PeCDF	29:32	1.43e7	9.66e6	2.42e6	1.59e6	----	----	1.48	
2,3,4,7,8-PeCDF	31:06	1.53e7	1.01e7	3.05e6	2.01e6	----	----	1.51	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:34	2.38e7	1.50e7	4.54e6	2.90e6	----	----	1.59	
1,2,3,7,8-PeCDD	31:35	7.15e6	1.16e7	1.35e6	2.38e6	----	----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:10	1.20e7	2.29e7	2.86e6	5.46e6	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:19	1.57e7	2.95e7	3.43e6	6.46e6	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C	36:03	1.46e7	2.76e7	3.33e6	6.33e6	----	----	0.53	
1,2,3,7,8,9-HxCDF-13C	37:02	1.22e7	2.34e7	2.58e6	5.05e6	----	----	0.52	
1,2,3,4,7,8-HxCDF	35:11	1.07e7	9.01e6	2.74e6	2.18e6	----	----	1.18	
1,2,3,6,7,8-HxCDF	35:20	1.32e7	1.08e7	2.80e6	2.35e6	----	----	1.23	
2,3,4,6,7,8-HxCDF	36:04	1.25e7	1.06e7	2.96e6	2.45e6	----	----	1.18	
1,2,3,7,8,9-HxCDF	37:03	1.01e7	8.04e6	2.28e6	1.86e6	----	----	1.25	

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Client ID	LCSFM	Injected By	SMT
Lab ID	LCS-37724	Instrument ID	10MSHR06 (U)
Filename	U130917A_07	GC Column ID	USD227224H
Analyzed	09/17/2013 14:00	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:14	1.71e7	1.34e7	4.29e6	3.39e6	----	----	1.27	
1,2,3,6,7,8-HxCDD-13C	36:22	1.99e7	1.58e7	4.56e6	3.60e6	----	----	1.26	
1,2,3,7,8,9-HxCDD-13C	36:40	2.36e7	1.95e7	5.14e6	4.08e6	----	----	1.21	
1,2,3,4,7,8-HxCDD	36:15	9.12e6	7.72e6	2.23e6	1.99e6	----	----	1.18	
1,2,3,6,7,8-HxCDD	36:23	1.08e7	9.03e6	2.46e6	2.02e6	----	----	1.20	
1,2,3,7,8,9-HxCDD	36:41	9.69e6	8.56e6	2.11e6	1.76e6	----	----	1.13	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:45	1.13e7	2.48e7	2.61e6	5.86e6	----	----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	40:24	8.53e6	1.87e7	2.17e6	4.68e6	----	----	0.46	
1,2,3,4,6,7,8-HpCDF	38:46	1.37e7	1.33e7	3.40e6	3.20e6	----	----	1.03	
1,2,3,4,7,8,9-HpCDF	40:25	9.94e6	9.59e6	2.46e6	2.29e6	----	----	1.04	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:54	1.40e7	1.32e7	3.56e6	3.29e6	----	----	1.06	
1,2,3,4,6,7,8-HpCDD	39:55	8.04e6	7.61e6	2.05e6	1.92e6	----	----	1.06	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:57	1.46e7	1.64e7	3.41e6	3.60e6	----	----	0.89	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:47	2.19e7	2.44e7	4.87e6	5.38e6	----	----	0.90	
OCDD	42:48	1.30e7	1.41e7	2.88e6	3.26e6	----	----	0.92	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____
Reviewed By _____ Date _____

Client ID	LCSFN	Injected By	SMT
Lab ID	LCSD-37725	Instrument ID	10MSHR06 (U)
Filename	U130917A_08	GC Column ID	USD227224H
Analyzed	09/17/2013 14:45	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:36	2.88e7	3.65e7	4.52e6	5.73e6	-----	-----	0.79	
2,3,7,8-TCDF	21:38	2.66e6	3.34e6	4.06e5	4.97e5	-----	-----	0.80	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:53	2.66e7	3.31e7	4.22e6	5.34e6	-----	-----	0.80	
2,3,7,8-TCDD-13C	22:48	2.09e7	2.67e7	3.12e6	3.92e6	-----	-----	0.78	
2,3,7,8-TCDD-37Cl4	22:50	5.41e6		7.86e5		-----	-----		
2,3,7,8-TCDD	22:50	2.31e6	2.95e6	3.33e5	4.30e5	-----	-----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:31	3.03e7	2.00e7	5.06e6	3.33e6	-----	-----	1.52	
2,3,4,7,8-PeCDF-13C	31:06	3.21e7	2.11e7	6.10e6	4.08e6	-----	-----	1.52	
1,2,3,7,8-PeCDF	29:32	1.40e7	9.06e6	2.47e6	1.54e6	-----	-----	1.54	
2,3,4,7,8-PeCDF	31:06	1.50e7	9.75e6	2.92e6	2.04e6	-----	-----	1.54	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:34	2.34e7	1.48e7	4.38e6	2.84e6	-----	-----	1.58	
1,2,3,7,8-PeCDD	31:35	6.92e6	1.12e7	1.38e6	2.27e6	-----	-----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:10	1.21e7	2.35e7	3.00e6	5.67e6	-----	-----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:19	1.56e7	3.09e7	3.35e6	6.49e6	-----	-----	0.50	
2,3,4,6,7,8-HxCDF-13C	36:02	1.47e7	2.78e7	3.50e6	6.65e6	-----	-----	0.53	
1,2,3,7,8,9-HxCDF-13C	37:01	1.21e7	2.32e7	2.48e6	5.11e6	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:10	1.07e7	9.12e6	2.52e6	2.26e6	-----	-----	1.17	
1,2,3,6,7,8-HxCDF	35:20	1.28e7	1.11e7	2.90e6	2.39e6	-----	-----	1.15	
2,3,4,6,7,8-HxCDF	36:03	1.24e7	1.03e7	2.95e6	2.44e6	-----	-----	1.20	
1,2,3,7,8,9-HxCDF	37:02	1.00e7	8.46e6	2.07e6	1.75e6	-----	-----	1.18	

REPORT OF LABORATORY ANALYSIS

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Client ID	LCSFN	Injected By	SMT
Lab ID	LCSD-37725	Instrument ID	10MSHR06 (U)
Filename	U130917A_08	GC Column ID	USD227224H
Analyzed	09/17/2013 14:45	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:14	1.69e7	1.34e7	4.48e6	3.47e6	----	----	1.27	
1,2,3,6,7,8-HxCDD-13C	36:21	2.07e7	1.63e7	4.70e6	3.79e6	----	----	1.27	
1,2,3,7,8,9-HxCDD-13C	36:40	2.53e7	2.00e7	5.45e6	4.25e6	----	----	1.26	
1,2,3,4,7,8-HxCDD	36:15	9.23e6	7.52e6	2.35e6	1.93e6	----	----	1.23	
1,2,3,6,7,8-HxCDD	36:22	1.09e7	8.98e6	2.41e6	1.95e6	----	----	1.21	
1,2,3,7,8,9-HxCDD	36:41	1.03e7	8.17e6	2.13e6	1.74e6	----	----	1.26	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:45	1.13e7	2.51e7	2.88e6	6.38e6	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	40:23	8.70e6	1.88e7	2.15e6	4.62e6	----	----	0.46	
1,2,3,4,6,7,8-HpCDF	38:46	1.37e7	1.34e7	3.20e6	3.17e6	----	----	1.03	
1,2,3,4,7,8,9-HpCDF	40:24	9.68e6	9.46e6	2.53e6	2.29e6	----	----	1.02	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:54	1.41e7	1.34e7	3.53e6	3.32e6	----	----	1.05	
1,2,3,4,6,7,8-HpCDD	39:55	7.71e6	7.75e6	2.01e6	1.92e6	----	----	1.00	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:57	1.48e7	1.69e7	3.33e6	3.81e6	----	----	0.88	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:46	2.25e7	2.54e7	4.73e6	5.42e6	----	----	0.88	
OCDD	42:47	1.28e7	1.45e7	2.84e6	3.15e6	----	----	0.88	

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Report Prepared for:

Rachelle Arada
Advanced Technology Labs
3275 Walnut Avenue
Signal Hill CA 90807

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

Pace Project #: 10240754
Sample Receipt Date: 09/04/2013
Client Project #: 1302547
Client Sub PO #: SC01868
State Cert #: 01155CA

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 4 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Brittany Hansen, your Pace Project Manager.

This report has been reviewed by:

Brittany J. Hansen

September 25, 2013

Brittany Hansen, Project Manager
(612) 607-6429
(612) 607-6444 (fax)
brittany.hansen@pacelabs.com

ACCREDITED IN ACCORDANCE WITH nelac

Report Prepared Date:
September 25, 2013

Report of Laboratory Analysis

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The results relate only to the samples included in this report.

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DISCUSSION

This report presents the results from the analysis performed on one sample submitted by a representative of Advanced Technology Laboratories. The sample was analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The reporting limits were set to correspond to the lowest calibration points and a nominal 10-gram sample amount.

Second column confirmation analyses of 2,3,7,8-TCDF values obtained from the primary (DB5-MS) column are performed only when specifically requested for a project and only when the values are above the concentration of the lowest calibration standard. Typical resolution for this isomer using the DB5-MS column ranges from 25-30%.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extract ranged from 45-82%. Except for fifteen low values in one of the associated quality control samples, which were flagged "R" on the results table, the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained. The Total TCDD concentration reported for the field sample included one or more isomers above the calibration range; the value was flagged "E" and should be regarded as an estimate.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to be free of PCDDs and PCDFs at the reporting limits. These results indicate that the sample processing steps did not significantly impact the results of the field sample determinations.

Laboratory spike samples were also prepared with the sample batch using clean sand that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 95-126% with relative percent differences of 0.9-11.3%. These results indicate high degrees of accuracy and precision for these determinations. Matrix spikes were not prepared with the sample batch.

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Alaska	MN00064	Montana	92
Arizona	AZ0014	Nebraska	
Arkansas	88-0680	Nevada	MN_00064_200
California	01155CA	New Jersey (NE	MN002
Colorado	MN00064	New Mexico	MN00064
Connecticut	PH-0256	New York (NEL	11647
EPA Region 5	WD-15J	North Carolina	27700
EPA Region 8	8TMS-Q	North Dakota	R-036
Florida (NELAP	E87605	Ohio	4150
Georgia (DNR)	959	Oklahoma	D9922
Guam	959	Oregon (ELAP)	MN200001-005
Hawaii	SLD	Oregon (OREL	MN300001-001
Idaho	MN00064	Pennsylvania	68-00563
Illinois	200012	Saipan	MP0003
Indiana	C-MN-01	South Carolina	74003001
Indiana	C-MN-01	Tennesee	2818
Iowa	368	Tennessee	02818
Kansas	E-10167	Texas	T104704192-08
Kentucky	90062	Utah (NELAP)	PAM
Louisiana	03086	Virginia	00251
Maine	2007029	Washington	C755
Maryland	322	West Virginia	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-Q

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Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interference present

J = Estimated value

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = See Discussion

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2,3,7,8-TCDD Equivalency Factors (TEFs) for the Polychlorinated Dibenzo-p-dioxins and Dibenzofurans

89-ITE-Factors

Compound	TEF
2,3,7,8-TCDD	1.000000
1,2,3,7,8-PeCDD	0.500000
1,2,3,4,7,8-HxCDD	0.100000
1,2,3,6,7,8-HxCDD	0.100000
1,2,3,7,8,9-HxCDD	0.100000
1,2,3,4,6,7,8-HpCDD	0.010000
OCDD	0.001000
Total TCDD	0.000000
Total PeCDD	0.000000
Total HxCDD	0.000000
Total HpCDD	0.000000
2,3,7,8-TCDF	0.100000
1,2,3,7,8-PeCDF	0.050000
2,3,4,7,8-PeCDF	0.500000
1,2,3,4,7,8-HxCDF	0.100000
1,2,3,6,7,8-HxCDF	0.100000
2,3,4,6,7,8-HxCDF	0.100000
1,2,3,7,8,9-HxCDF	0.100000
1,2,3,4,6,7,8-HpCDF	0.010000
1,2,3,4,7,8,9-HpCDF	0.010000
OCDF	0.001000
Total TCDF	0.000000
Total PeCDF	0.000000
Total HxCDF	0.000000
Total HpCDF	0.000000

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Appendix A

Sample Management

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Sample ID Cross Reference

Client Sample ID	Pace Sample ID	Date Received	Sample Type
1302547-05 / T-15-14	10240754001-R	09/04/2013	Soil

REPORT OF LABORATORY ANALYSIS

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10240157

ADVANCED TECHNOLOGY LABORATORIES

SUBCONTRACT ORDER

Work Order: 1302547

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Rachelle Arada (Rachelle@atlglobal.com)

RECEIVING LABORATORY:

Pace Analytical Services, Inc.
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone :(612) 607-1700
Fax: (612) 607-6444
PO#: SC01868- STANDARD TAT (RA)

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires		Sampled
ATL Lab#: 1302547-05 / T-15-14			**Soil**	**08/21/13 08:45**
8290 [Dioxins and Dibenzofurans]	**09/19/13 17:00**	09/20/13 08:45		
1-Glass Jar - 4 oz				

Comments: NEED LEVEL III DATA PACKAGE

T=0.7°C

Released By	Date	Received By	Date
		CSI / Pace	9/13 9:50

Released By	Date	Received By	Date

Page 1 of 1

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 28Jan2013 Page 1 of 1
	Document No.: F-MN-L-213-rev.06	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Advanced

Project #: 240754

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other:

Tracking Number: 7966 0142 8929

Custody Seal on Cooler/Box Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: **Temp Blank?** ☐ Yes ☑ No

Thermom. Used: ☑ 88A912167504 ☐ 80512447 ☐ 72337080 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 0.2 **Cooler Temp Corrected (°C):** 0.7 **Biological Tissue Frozen?** ☐ Yes ☐ No

Temp should be above freezing to 6°C **Correction Factor:** +0.5 **Date and Initials of Person Examining Contents:** CS 9.4.13

				Comments:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☐ Yes	☑ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☐ Yes	☑ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: SC	☑ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	☐ Yes	☐ No	☑ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12)	☐ Yes	☐ No	☑ N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☐ Yes	☑ No		Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	14.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: BHL **Date:** 9/4/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

DIOXIN EXTRACTION WORKSHEET

Non Aqueous

Pace Analytical Services, Inc.

Extraction Batch : EB-13881

EB-13881

Method 8290 1613B TO9 M23

Matrix PUF XAD Solid Oil

Tissue Other _____

Spiked By _____

Spike Witness _____

Time of Spiking _____

Extraction On (Date/Time): 9/13/2013 10:00:00 PM

Extraction Off (Date/Time): 9/14/2013 2:15:00 PM

	Sample #	Internal Stds	Native Stds	Extracted mL or g	#AcidRinse	Buffer Soln	Glassware Set	Location	Comments
1	BLANK-37754			10.70					
2	LCS-37755			11.40					
3	LCSD-37756			11.00					
4	10240910001			14.20				10 0905 02	8290,T-O;prescreen
5	10240910002			14.80				10 0905 02	8290,T-O;prescreen
6	10240668001-R			11.00				Rcving	1613,T-O,prescreen
7	10240754001-R			11.30				Rcving	Prescreen, 8290 T-O
8	10240798001-R			36.90				Rcving	8290,T-O,prescreen
9	10241234003			1.00				10 0909 01	8290,T-O;prescreen
10	35106542002			11.80				10 0905 02	8290,TD;prescreen;ASAP

Standards:

Internal Std FS-I-9966-028

Native FS-N-9966-024

Cl-37 Std DWCL4-9966-029

Recovery Std FS-R-9966-027

Tridecane

Mineral Oil

Others

☐ **Silica:**

Date 9/14/2013

Initials TDP

Hexane Lot # 134111

Dispenser ID

Neutral Batch # 242N

Basic Batch # 325B

Acid Batch # 489A

☐ **Alumina:**

Date 9/16/2013

Initials ped

Hexane Lot # 130152

Dispenser ID

60% Batch # 1542

Dispenser ID

Alumina Lot

☐ **Carbon:**

Date 9/17/2013

Initials MF

Toluene Lot # 131926

Dispenser ID

75% Batch # 315

Dispenser ID

50% Batch # 430

Dispenser ID

Hexane Lot # 130152

Dispenser ID

Extract Solvents:

Toluene Lot #

Hexane Lot #

MeCl Lot #

☐ **Acid Base:**

H2SO4 Lot #

Buffer Soln #

QC Matrix Lot/Batch# _____

Extracts Relinquished By: _____ **Received By:** _____ **Date:** _____

FH025Rev.01, 05Jan2009

DIOXIN EXTRACTION WORKSHEET

EB-13881

Extraction Batch : EB-13881

Extraction Notes

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Solid Sample Moisture Log

Sample ID	Container Weight	Adjusted Wet Weight	Adjusted Dry Weight	% Moisture	% Solids	Amount Extracted	Assayed
BLANK-37754	0.00	0.00	0.00	0.00	100.00	10.70	12/30/99
LCS-37755	0.00	0.00	0.00	0.00	100.00	11.40	12/30/99
LCSD-37756	0.00	0.00	0.00	0.00	100.00	11.00	12/30/99
10240910001	0.00	0.00	0.00	0.00	100.00	14.20	12/30/99
10240910002	0.00	0.00	0.00	0.00	100.00	14.80	12/30/99
10240668001-R	0.00	0.00	0.00	27.50	100.00	11.00	9/6/13 CMS2
10240754001-R	0.00	0.00	0.00	11.00	~~100.00~~ ①	11.30	9/13/13 JDL
10240798001-R	0.00	0.00	0.00	44.40	100.00	36.90	9/11/13 JDL
10241234003	0.00	0.00	0.00	0.00	100.00	1.00	12/30/99
35106542002	0.00	0.00	0.00	12.40	100.00	11.80	9/4/13 IR00

① [illegible] 9/25/13

REPORT OF LABORATORY ANALYSIS

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Client names have been blacked out on notebook pages in order to preserve client confidentiality

Analysis Key Code List

- = Not used

✔ = Worked up

= See comment # below

Li = Liner, replace or clean

Ba = Baseplate, change

SyB = Syringe, replace – bent

SyP = Syringe, replace – plugged

SyO = Syringe, replace – other

IS = Injector Septum, replace

BS = Batch Septum, replace

Fi = Filament, replace

Co = Contacts, adjust

Ca = re-Calibrate

Tu = Tune

TC = Tune and Calibrate

CC () = Cut Column (length cut)

CO = Carry-Over possible

RRM = ReRun - Matrix

RRLM = ReRun – Lock Mass

RRBI = ReRun – Bad Injection

RRRT = ReRun – Retention Time shift

RR>S = Rerun – need better Sensitivity

Re = Re-extract

AS = Adjust Slits

LC = Leak Check

RB = Re-Boot system

CiS = Cleaned inner Source

CoS = Cleaned outer Source

AiS = Alternate inner Source

AoS = Alternate outer Source

<Y = Adjust Y focus down

>Y = Adjust Y focus up

Di () = Dilution needed (amount needed)

FE = Front End – liner, baseplate and septum

Sample List Report **MassLynx 4.1 SCN 881** 10MSH-206 7/29/13

Sample List: C:\MassLynx\Default.pro\Sampledb\U130729B.SPL
Last Modified: Monday, July 29, 2013 16:57:48 Central Daylight Time
Printed: Monday, July 29, 2013 16:58:11 Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Method	MS File	Inlet File	Vial	Inj
1	U130729B_01	CAL CS3/CPM-7604-274 - SMT TC	8290	dioxfur	dioxfur	Tray1:1	1.000000
2	U130729B_02	LCS STD-37216 - SMT	HOUSE	dioxfur	dioxfur	Tray1:4	1.000000
3	U130729B_03	BLANK NONANE - SMT	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000
4	U130729B_04	BLANK 8515-142-10X - SMT	HOUSE	dioxfur	dioxfur	Tray1:3	1.000000
5	U130729B_05	SAMP 10231732012 - SMT [redacted] co check	8290	dioxfur	dioxfur	Tray1:5	1.000000
6	U130729B_06	SAMP 10231732014 - SMT [redacted] co check	8290	dioxfur	dioxfur	Tray1:6	1.000000
7	U130729B_07	SAMP 3598370001-R - SMT [redacted]	8290	dioxfur	dioxfur	Tray1:7	1.000000
8	U130729B_08	SAMP 3598370002-R - SMT [redacted]	8290	dioxfur	dioxfur	Tray1:8	1.000000
9	U130729B_09	CAL CS3/CPM-7604-274 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000
10	U130729B_10	CAL CS2-7604-276 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:9	1.000000
11	U130729B_11	CAL CS1-7604-273 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:10	1.000000
12	U130729B_12	CAL CS5-7604-278 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:11	1.000000
13	U130729B_13	CAL CS4-7604-277 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:12	1.000000
14	U130729B_14	BLANK NONANE - SMT	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000
15	U130729B_15	CAL STD-37024 - SMT 2nd	8290/1613B	dioxfur	dioxfur	Tray1:13	1.000000
16	U130729B_16	BLANK NONANE - SMT	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000
17	U130729B_17	BLANK NONANE - SMT	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000
18	U130729B_18	SAMP 60149402001 - SMT [redacted]	1613B-TD	dioxfur	dioxfur	Tray1:14	1.000000
19	U130729B_19	SAMP 201107262 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:15	1.000000
20	U130729B_20	SAMP 1222806001 - SMT [redacted]	1613B-TD/F	dioxfur	dioxfur	Tray1:16	1.000000
21	U130729B_21	SAMP 10236297001 - SMT [redacted]	1613B-TD	dioxfur	dioxfur	Tray1:17	1.000000
22	U130729B_22	SAMP 10236295001 - SMT [redacted]	1613B-TD	dioxfur	dioxfur	Tray1:18	1.000000
23	U130729B_23	BLANK BLANK-37138 - SMT	1613B	dioxfur	dioxfur	Tray1:19	1.000000
24	U130729B_24	CAL CS3/CPM-7604-274 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000

Sum 8/2/13

Sample List Report **MassLynx 4.1 SCN 881** 10MSHR06 9/17/13

Sample List: C:\MassLynx\Default.pro\Sampledb\U130917A.SPL

Last Modified: Wednesday, September 18, 2013 07:15:09 Central Daylight Time

Printed: Wednesday, September 18, 2013 07:15:13 Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Method	MS File	Inlet File	Vial	Inj
1	U130917A_01	CAL CS3/CPM-7604-279 - SMT FE AS TC	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000
2	U130917A_02	SAMP 35106542001-MS - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:4	1.000000
3	U130917A_03	SAMP 35106542001-MSD - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:5	1.000000
4	U130917A_04	BLANK BLANK-8515-142-10X - SMT	HOUSE	dioxfur	dioxfur	Tray1:3	1.000000
5	U130917A_05	LCS LCS-37732 - SMT	8290	dioxfur	dioxfur	Tray1:6	1.000000
6	U130917A_06	CAL CS3/CPM-7604-279 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000
7	U130917A_07	LCS LCS-37724 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:4	1.000000
8	U130917A_08	LCS LCSD-37725 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:5	1.000000
9	U130917A_09	BLANK BLANK-8515-142-10X - SMT	HOUSE	dioxfur	dioxfur	Tray1:3	1.000000
10	U130917A_10	BLANK BLANK-37723 - SMT	8290	dioxfur	dioxfur	Tray1:7	1.000000
11	U130917A_11	SAMP 35106542001 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:8	1.000000
12	U130917A_12	SAMP 35104661009-R2 - SMT [redacted]	8290	dioxfur	dioxfur	Tray1:9	1.000000
13	U130917A_13	SAMP 35104661011-R2 - SMT [redacted] dec	8290	dioxfur	dioxfur	Tray1:10	1.000000
14	U130917A_14	SAMP 35106543001 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:11	1.000000
15	U130917A_15	SAMP 35106543002 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:12	1.000000
16	U130917A_16	SAMP 35106543003 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:13	1.000000
17	U130917A_17	SAMP 35106543004 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:14	1.000000
18	U130917A_18	SAMP 35106543005 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:15	1.000000
19	U130917A_19	SAMP 35106543006 - SMT [redacted]	8290-TD	dioxfur	dioxfur	Tray1:16	1.000000
20	U130917A_20	SAMP 10240757001 - BAL [redacted] xclp	1613B-TD	dioxfur	dioxfur	Tray1:17	1.000000
21	U130917A_21	BLANK NONANE - SMT yellow samps	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000
22	U130917A_22	CAL CS3/CPM-7604-279 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000

pal all

FWH 9/18/13

Sample List Report **MassLynx 4.1 SCN 881** 10MS'HR20 9/6 Sum 9/20/13 9/17/13

Sample List: C:\MassLynx\Default.pro\Sampledb\U130917B.SPL

Last Modified: Wednesday, September 18, 2013 12:53:16 Central Daylight Time

Printed: Wednesday, September 18, 2013 12:56:54 Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Method	MS File	Inlet File	Vial	Inj
1	U130917B_01	✓LCS LCS-37755 - BAL	8290/1613B	dioxfur	dioxfur	Tray1:30	1.000000
2	U130917B_02	✓LCS LCSD-37756 - BAL	8290/1613B	dioxfur	dioxfur	Tray1:31	1.000000
3	U130917B_03	✓BLANK BLANK-8515-142-10X - SMT	HOUSE	dioxfur	dioxfur	Tray1:3	1.000000
4	U130917B_04	✓BLANK BLANK-37653 - BAL	8290	dioxfur	dioxfur	Tray1:6	1.000000
5	U130917B_05	✓BLANK BLANK-37754 - BAL	8290/1613B	dioxfur	dioxfur	Tray1:29	1.000000
6	U130917B_06	✓SAMP 35106542002 - BAL [redacted]	8290-TD	dioxfur	dioxfur	Tray1:32	1.000000
7	U130917B_07	✓SAMP 35104661011-R2 - SMT [redacted] 10X	8290	dioxfur	dioxfur	Tray1:27	1.000000
8	U130917B_08	✓SAMP 10241754001 - SMT [redacted]	8290	dioxfur	dioxfur	Tray1:28	1.000000
9	U130917B_09	✓SAMP 10241752001 - SMT [redacted]	8290	dioxfur	dioxfur	Tray1:29	1.000000
10	U130917B_10	✓SAMP 10241752002 - SMT [redacted]	8290	dioxfur	dioxfur	Tray1:30	1.000000
11	U130917B_11	✓SAMP 10241752003 - SMT [redacted]	8290	dioxfur	dioxfur	Tray1:31	1.000000
12	U130917B_12	✓SAMP 10241752001 - SMT [redacted] 5X	1613B	dioxfur	dioxfur	Tray1:32	1.000000
13	U130917B_13	✓SAMP 10241754001 - SMT [redacted] 5X	1613B	dioxfur	dioxfur	Tray1:33	1.000000
14	U130917B_14	✓LCS LCS-37755 - SMT	1613B	dioxfur	dioxfur	Tray1:34	1.000000
15	U130917B_15	✓CAL CS3/CPM-7604-279 - SMT	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000

Smt- 9/20/13

Sample List Report **MassLynx 4.0 SCN480 SCN533** 10M314205 9/18/13

Sample List: C:\MassLynx\Default.pro\Sampledb\F130918B.SPL

Last Modified: Wednesday, September 18, 2013 5:06:42 PM Central Daylight Time

Printed: Wednesday, September 18, 2013 5:07:14 PM Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Method	MS File	Inlet File	Vial	Inject
1	F130918B_01	CAL CS3/CPM-7604-279 - SMT TC	8290/1613B	dioxfur	dioxfur	1	1.000000
2	F130918B_02	CAL CS3/CPM-7604-279 - SMT FE 4"	8290/1613B	dioxfur	dioxfur	1	1.000000
3	F130918B_03	CAL CS2-7604-276 - SMT	8290/1613B	dioxfur	dioxfur	20	1.000000
4	F130918B_04	CAL CS1-7604-273 - SMT	8290/1613B	dioxfur	dioxfur	21	1.000000
5	F130918B_05	CAL CS5-7604-278 - SMT	8290/1613B	dioxfur	dioxfur	22	1.000000
6	F130918B_06	CAL CS4-7604-277 - SMT	8290/1613B	dioxfur	dioxfur	23	1.000000
7	F130918B_07	BLANK NONANE - SMT	HOUSE	dioxfur	dioxfur	2	1.000000
8	F130918B_08	CAL LCS-37562 - SMT 2nd	8290/1613B	dioxfur	dioxfur	24	1.000000
9	F130918B_09	LCS LCS-37608 - SMT [redacted] x-cln	1613B	dioxfur	dioxfur	17	1.000000
10	F130918B_10	SAMP 10240642007-MS - SMT [redacted] x-cln	1613B	dioxfur	dioxfur	18	1.000000
11	F130918B_11	SAMP 10240642007-MSD - SMT [redacted] x-cln	1613B	dioxfur	dioxfur	19	1.000000

9/20/13

Sample List Report **MassLynx 4.0 SCN480 SCN533** 10MSHR05 9/21/13

Sample List: C:\MassLynx\Default.pro\Sampledb\F130921A.SPL

Last Modified: Friday, September 20, 2013 6:16:31 PM Central Daylight Time

Printed: Friday, September 20, 2013 6:18:33 PM Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Method	MS File	Inlet File	Vial	Inject
1	F130921A_01	LCS LCS-37801 - BAL	8290/1613T	dioxfur	dioxfur	18	1.000000
2	F130921A_02	LCS LCSD-37802 - BAL	8290/1613T	dioxfur	dioxfur	19	1.000000
3	F130921A_03	BLANK NONANE - BAL	HOUSE	dioxfur	dioxfur	2	1.000000
4	F130921A_04	SAMP 201122364 - BAL [redacted]	8290-TD	dioxfur	dioxfur	20	1.000000
5	F130921A_05	BLANK BLANK-37800 - BAL	8290/1613T	dioxfur	dioxfur	21	1.000000
6	F130921A_06	SAMP 10241495019 - BAL [redacted]	8290	dioxfur	dioxfur	22	1.000000
7	F130921A_07	SAMP 10241526013 - BAL [redacted]	8290	dioxfur	dioxfur	23	1.000000
8	F130921A_08	SAMP 35107374001 - BAL [redacted]	8290	dioxfur	dioxfur	24	1.000000
9	F130921A_09	SAMP 35107374002 - BAL [redacted]	8290	dioxfur	dioxfur	25	1.000000
10	F130921A_10	SAMP 35107374003 - BAL [redacted]	8290	dioxfur	dioxfur	26	1.000000
11	F130921A_11	SAMP 35107374004 - BAL [redacted]	8290	dioxfur	dioxfur	27	1.000000
12	F130921A_12	SAMP 35107374005 - BAL [redacted]	8290	dioxfur	dioxfur	28	1.000000
13	F130921A_13	SAMP 35107374006 - BAL [redacted]	8290	dioxfur	dioxfur	29	1.000000
14	F130921A_14	SAMP 35107374007 - BAL [redacted]	8290	dioxfur	dioxfur	30	1.000000
15	F130921A_15	SAMP 35107374008 - BAL [redacted]	8290	dioxfur	dioxfur	31	1.000000
16	F130921A_16	CAL CS3/CPM-7604-279 - BAL BAL	8290/1613B	dioxfur	dioxfur	1	1.000000

pass 8290 + 1613T

Jm 9/25/13

Sample List Report **MassLynx 4.0 SCN480 SCN533** /0 M 5142.05 9/21/13

Sample List: C:\MassLynx\Default.pro\Sampledb\F130921B.SPL

Last Modified: Saturday, September 21, 2013 3:22:23 PM Central Daylight Time

Printed: Saturday, September 21, 2013 3:22:43 PM Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Method	MS File	Inlet File	Vial	Inject
1	F130921B_01	BLANK NONANE - BAL	HOUSE	dioxfur	dioxfur	2	1.000000
2	F130921B_02	SAMP 10241785001 - BAL [redacted]	1613B-TD	dioxfur	dioxfur	4	1.000000
3	F130921B_03	BLANK BLANK-37757 - BAL	8290/1613T	dioxfur	dioxfur	5	1.000000
4	F130921B_04	SAMP 10242402001 - BAL [redacted]	8290	dioxfur	dioxfur	6	1.000000
5	F130921B_05	SAMP 10241526001 - BAL [redacted]	8290	dioxfur	dioxfur	7	1.000000
6	F130921B_06	SAMP 10241526005 - BAL [redacted]	8290	dioxfur	dioxfur	8	1.000000
7	F130921B_07	SAMP 10241526006 - BAL [redacted]	8290	dioxfur	dioxfur	9	1.000000
8	F130921B_08	SAMP 10241670001 - BAL [redacted]	1613B-TD	dioxfur	dioxfur	10	1.000000
9	F130921B_09	SAMP 4083352001 - BAL [redacted]	8290	dioxfur	dioxfur	11	1.000000
10	F130921B_10	SAMP 10240751001-R - BAL ADV	8290	dioxfur	dioxfur	12	1.000000
11	F130921B_11	SAMP 10240751002-R - BAL ADV ①	8290	dioxfur	dioxfur	13	1.000000
12	F130921B_12	SAMP 10240910001 - BAL [redacted]	8290	dioxfur	dioxfur	14	1.000000
13	F130921B_13	SAMP 10240910002 - BAL [redacted]	8290	dioxfur	dioxfur	15	1.000000
14	F130921B_14	LCS LCS-37758 - BAL	8290/1613T	dioxfur	dioxfur	16	1.000000
15	F130921B_15	LCS LCSD-37759 - BAL	8290/1613T	dioxfur	dioxfur	17	1.000000
16	F130921B_16	CAL CS3/CPM-7604-279 - BAL BAL	8290/1613B	dioxfur	dioxfur	1	1.000000

passed 8290/1613 but not 1613 tetra CAL 9/22/13

① 754001 9/21/13

bas 9/25/13

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Advanced Technology Labs

Client's Sample ID	1302547-05 / T-15-14		
Lab Sample ID	10240754001-R		
Filename	F130921B_11		
Injected By	BAL		
Total Amount Extracted	11.3 g	Matrix	Soil
% Moisture	11.0	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	08/21/2013 08:45
ICAL ID	F130918	Received	09/04/2013 09:50
CCal Filename(s)	F130921A_16 & F130921B_16	Extracted	09/13/2013 22:00
Method Blank ID	BLANK-37754	Analyzed	09/21/2013 22:11

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	110.0	----	1.0		2,3,7,8-TCDF-13C	2.00	68
Total TCDF	2100.0	----	1.0		2,3,7,8-TCDD-13C	2.00	77
					1,2,3,7,8-PeCDF-13C	2.00	69
2,3,7,8-TCDD	6.5	----	1.0		2,3,4,7,8-PeCDF-13C	2.00	68
Total TCDD	980.0	----	1.0	E	1,2,3,7,8-PeCDD-13C	2.00	82
					1,2,3,4,7,8-HxCDF-13C	2.00	67
1,2,3,7,8-PeCDF	33.0	----	5.0		1,2,3,6,7,8-HxCDF-13C	2.00	69
2,3,4,7,8-PeCDF	120.0	----	5.0		2,3,4,6,7,8-HxCDF-13C	2.00	65
Total PeCDF	970.0	----	5.0		1,2,3,7,8,9-HxCDF-13C	2.00	64
					1,2,3,4,7,8-HxCDD-13C	2.00	73
1,2,3,7,8-PeCDD	14.0	----	5.0		1,2,3,6,7,8-HxCDD-13C	2.00	66
Total PeCDD	540.0	----	5.0		1,2,3,4,6,7,8-HpCDF-13C	2.00	77
					1,2,3,4,7,8,9-HpCDF-13C	2.00	72
1,2,3,4,7,8-HxCDF	63.0	----	5.0		1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	54.0	----	5.0		OCDD-13C	4.00	45
2,3,4,6,7,8-HxCDF	100.0	----	5.0				
1,2,3,7,8,9-HxCDF	14.0	----	5.0		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	470.0	----	5.0		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	11.0	----	5.0		2,3,7,8-TCDD-37Cl4	0.20	86
1,2,3,6,7,8-HxCDD	28.0	----	5.0				
1,2,3,7,8,9-HxCDD	20.0	----	5.0				
Total HxCDD	680.0	----	5.0				
1,2,3,4,6,7,8-HpCDF	220.0	----	5.0		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	11.0	----	5.0		Equivalence: 120 ng/Kg		
Total HpCDF	280.0	----	5.0		(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	260.0	----	5.0				
Total HpCDD	500.0	----	5.0				
OCDF	36.0	----	10.0				
OCDD	830.0	----	10.0				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

and are valid to no more than 2 significant figures.
E = Exceeds calibration range

REPORT OF LABORATORY ANALYSIS

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Appendix C

QC and Calibration Results Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Pace Analytical™

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-37754	Matrix	Solid
Filename	U130917B_05	Dilution	NA
Total Amount Extracted	10.7 g	Extracted	09/13/2013 22:00
ICAL ID	U130729	Analyzed	09/18/2013 05:55
CCal Filename(s)	U130917A_22 & U130917B_15	Injected By	BAL

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	1.0	2,3,7,8-TCDF-13C	2.00	75
Total TCDF	ND	----	1.0	2,3,7,8-TCDD-13C	2.00	81
				1,2,3,7,8-PeCDF-13C	2.00	73
2,3,7,8-TCDD	ND	----	1.0	2,3,4,7,8-PeCDF-13C	2.00	76
Total TCDD	ND	----	1.0	1,2,3,7,8-PeCDD-13C	2.00	80
				1,2,3,4,7,8-HxCDF-13C	2.00	75
1,2,3,7,8-PeCDF	ND	----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	83
2,3,4,7,8-PeCDF	ND	----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	93
Total PeCDF	ND	----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	76
				1,2,3,4,7,8-HxCDD-13C	2.00	83
1,2,3,7,8-PeCDD	ND	----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	78
Total PeCDD	ND	----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	75
				1,2,3,4,7,8,9-HpCDF-13C	2.00	72
1,2,3,4,7,8-HxCDF	ND	----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	70
1,2,3,6,7,8-HxCDF	ND	----	5.0	OCDD-13C	4.00	69
2,3,4,6,7,8-HxCDF	ND	----	5.0			
1,2,3,7,8,9-HxCDF	ND	----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	----	5.0	2,3,7,8-TCDD-37Cl4	0.20	84
1,2,3,6,7,8-HxCDD	ND	----	5.0			
1,2,3,7,8,9-HxCDD	ND	----	5.0			
Total HxCDD	ND	----	5.0			
1,2,3,4,6,7,8-HpCDF	ND	----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	5.0	Equivalence: 0.00 ng/Kg		
Total HpCDF	ND	----	5.0	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	5.0			
Total HpCDD	ND	----	5.0			
OCDF	ND	----	10.0			
OCDD	ND	----	10.0			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

Pace Analytical™

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-37755		
Filename	U130917B_01	Matrix	Solid
Total Amount Extracted	11.4 g	Dilution	NA
ICAL ID	U130729	Extracted	09/13/2013 22:00
CCal Filename(s)	U130917A_22 & U130917B_15	Analyzed	09/18/2013 02:48
Method Blank ID	BLANK-37754	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.
2,3,7,8-TCDF	0.20	0.20	98
Total TCDF			
2,3,7,8-TCDD	0.20	0.20	102
Total TCDD			
1,2,3,7,8-PeCDF	1.0	1.0	101
2,3,4,7,8-PeCDF	1.0	1.0	101
Total PeCDF			
1,2,3,7,8-PeCDD	1.0	0.95	95
Total PeCDD			
1,2,3,4,7,8-HxCDF	1.0	1.0	102
1,2,3,6,7,8-HxCDF	1.0	1.00	100
2,3,4,6,7,8-HxCDF	1.0	0.98	98
1,2,3,7,8,9-HxCDF	1.0	1.0	105
Total HxCDF			
1,2,3,4,7,8-HxCDD	1.0	1.0	105
1,2,3,6,7,8-HxCDD	1.0	1.1	108
1,2,3,7,8,9-HxCDD	1.0	1.2	122
Total HxCDD			
1,2,3,4,6,7,8-HpCDF	1.0	1.1	112
1,2,3,4,7,8,9-HpCDF	1.0	1.0	100
Total HpCDF			
1,2,3,4,6,7,8-HpCDD	1.0	0.98	98
Total HpCDD			
OCDF	2.0	2.3	115
OCDD	2.0	2.1	107

Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF-13C	2.0	10 R
2,3,7,8-TCDD-13C	2.0	10 R
1,2,3,7,8-PeCDF-13C	2.0	14 R
2,3,4,7,8-PeCDF-13C	2.0	13 R
1,2,3,7,8-PeCDD-13C	2.0	14 R
1,2,3,4,7,8-HxCDF-13C	2.0	19 R
1,2,3,6,7,8-HxCDF-13C	2.0	20 R
2,3,4,6,7,8-HxCDF-13C	2.0	24 R
1,2,3,7,8,9-HxCDF-13C	2.0	20 R
1,2,3,4,7,8-HxCDD-13C	2.0	18 R
1,2,3,6,7,8-HxCDD-13C	2.0	17 R
1,2,3,4,6,7,8-HpCDF-13C	2.0	24 R
1,2,3,4,7,8,9-HpCDF-13C	2.0	21 R
1,2,3,4,6,7,8-HpCDD-13C	2.0	21 R
OCDD-13C	4.0	22 R
1,2,3,4-TCDD-13C	2.0	NA
1,2,3,7,8,9-HxCDD-13C	2.0	NA
2,3,7,8-TCDD-37Cl4	0.20	11

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

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Minneapolis, MN 55414

Tel: 612-607-1700
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Pace Analytical™

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCSD-37756		
Filename	U130917B_02	Matrix	Solid
Total Amount Extracted	11.0 g	Dilution	NA
ICAL ID	U130729	Extracted	09/13/2013 22:00
CCal Filename(s)	U130917A_22 & U130917B_15	Analyzed	09/18/2013 03:34
Method Blank ID	BLANK-37754	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.22	108	2,3,7,8-TCDF-13C	2.0	78
Total TCDF				2,3,7,8-TCDD-13C	2.0	84
				1,2,3,7,8-PeCDF-13C	2.0	75
2,3,7,8-TCDD	0.20	0.21	103	2,3,4,7,8-PeCDF-13C	2.0	76
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	81
				1,2,3,4,7,8-HxCDF-13C	2.0	82
1,2,3,7,8-PeCDF	1.0	1.1	108	1,2,3,6,7,8-HxCDF-13C	2.0	87
2,3,4,7,8-PeCDF	1.0	1.1	106	2,3,4,6,7,8-HxCDF-13C	2.0	98
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	80
				1,2,3,4,7,8-HxCDD-13C	2.0	88
1,2,3,7,8-PeCDD	1.0	0.99	99	1,2,3,6,7,8-HxCDD-13C	2.0	82
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	83
				1,2,3,4,7,8,9-HpCDF-13C	2.0	81
1,2,3,4,7,8-HxCDF	1.0	1.1	111	1,2,3,4,6,7,8-HpCDD-13C	2.0	78
1,2,3,6,7,8-HxCDF	1.0	1.1	106	OCDD-13C	4.0	77
2,3,4,6,7,8-HxCDF	1.0	1.0	103			
1,2,3,7,8,9-HxCDF	1.0	1.1	111	1,2,3,4-TCDD-13C	2.0	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDD	1.0	1.1	110	2,3,7,8-TCDD-37Cl4	0.20	90
1,2,3,6,7,8-HxCDD	1.0	1.2	120			
1,2,3,7,8,9-HxCDD	1.0	1.1	109			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.1	113			
1,2,3,4,7,8,9-HpCDF	1.0	1.1	106			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	1.1	109			
Total HpCDD						
OCDF	2.0	2.5	126			
OCDD	2.0	2.4	118			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

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1700 Elm Street - Suite 200
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Tel: 612-607-1700
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Method 8290

Spike Recovery Relative Percent Difference (RPD) Results

Client: Advanced Technology Labs

Spike 1 ID: LCS-37755
Spike 1 Filename: U130917B_01
Spike 2 ID: LCSD-37756
Spike 2 Filename: U130917B_02

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	98	108	9.7
2,3,7,8-TCDD	102	103	1.0
1,2,3,7,8-PeCDF	101	108	6.7
2,3,4,7,8-PeCDF	101	106	4.8
1,2,3,7,8-PeCDD	95	99	4.1
1,2,3,4,7,8-HxCDF	102	111	8.5
1,2,3,6,7,8-HxCDF	100	106	5.8
2,3,4,6,7,8-HxCDF	98	103	5.0
1,2,3,7,8,9-HxCDF	105	111	5.6
1,2,3,4,7,8-HxCDD	105	110	4.7
1,2,3,6,7,8-HxCDD	108	120	10.5
1,2,3,7,8,9-HxCDD	122	109	11.3
1,2,3,4,6,7,8-HpCDF	112	113	0.9
1,2,3,4,7,8,9-HpCDF	100	106	5.8
1,2,3,4,6,7,8-HpCDD	98	109	10.6
OCDF	115	126	9.1
OCDD	107	118	9.8

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

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Pace Analytical Services, Inc.

Method 8290/1613
Initial Calibration (ICAL) - Response Factor Summary

ICAL ID	**F130918**	Data Files:		Time	Injected
Calibration Date	09/18/2013	CS-1	F130918B_04	18:22	SMT
Instrument	10MSHR05 (F)	CS-2	F130918B_03	17:38	SMT
Column Phase	DB-5MS 0.25mm	CS-3	F130918B_02	16:50	SMT
Column ID No.	USD174324H	CS-4	F130918B_06	19:54	SMT
		CS-5	F130918B_05	19:08	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
2,3,7,8-TCDF	1.0056	1.0674	1.1267	1.1435	1.1410	1.0968	5.43
2,3,7,8-TCDD	1.1272	1.0525	1.1558	1.1616	1.1665	1.1327	4.18
1,2,3,7,8-PeCDF	1.0831	1.1328	1.1318	1.1577	1.1649	1.1340	2.83
2,3,4,7,8-PeCDF	1.1251	1.1557	1.1618	1.2091	1.2023	1.1708	2.98
1,2,3,7,8-PeCDD	1.0941	1.1224	1.1458	1.1499	1.1508	1.1326	2.16
1,2,3,4,7,8-HxCDF	1.2706	1.2612	1.2627	1.3010	1.3317	1.2855	2.37
1,2,3,6,7,8-HxCDF	1.2834	1.2327	1.2533	1.2605	1.2831	1.2626	1.70
2,3,4,6,7,8-HxCDF	1.2082	1.3573	1.3273	1.3706	1.3544	1.3236	5.02
1,2,3,7,8,9-HxCDF	1.1508	1.1661	1.1842	1.2378	1.2037	1.1885	2.86
1,2,3,4,7,8-HxCDD	1.1578	1.1292	1.1763	1.1857	1.1840	1.1666	2.03
1,2,3,6,7,8-HxCDD	1.0592	1.0951	1.0775	1.0667	1.0624	1.0722	1.36
1,2,3,7,8,9-HxCDD	1.0642	1.0902	1.1631	1.1315	1.1180	1.1134	3.41
1,2,3,4,6,7,8-HpCDF	1.3326	1.4411	1.3298	1.3610	1.4254	1.3780	3.79
1,2,3,4,7,8,9-HpCDF	1.3392	1.3268	1.4124	1.3688	1.4889	1.3872	4.73
1,2,3,4,6,7,8-HpCDD	1.1301	1.1383	1.1786	1.2130	1.2203	1.1761	3.52
OCDF	1.3867	1.3738	1.4585	1.5364	1.5611	1.4633	5.80
OCDD	1.0231	1.0533	1.0806	1.1352	1.1108	1.0806	4.12
Total PeCDF	1.1041	1.1443	1.1468	1.1834	1.1836	1.1524	2.87
Total HxCDF	1.2282	1.2543	1.2569	1.2925	1.2932	1.2650	2.20
Total HxCDD	1.0937	1.1048	1.1390	1.1280	1.1215	1.1174	1.62
Total HpCDF	1.3359	1.3839	1.3711	1.3649	1.4571	1.3826	3.27
2,3,7,8-TCDF-13C	1.5962	1.5358	1.6981	1.5974	1.6444	1.6144	3.76
2,3,7,8-TCDD-13C	0.9072	0.9137	1.0205	0.9423	0.9846	0.9536	5.06
2,3,7,8-TCDD-37Cl4	0.9052	1.0111	1.1580	1.1020	1.1462	1.0645	9.97
1,2,3,7,8-PeCDF-13C	1.3665	1.3891	1.6039	1.4704	1.5398	1.4740	6.78
2,3,4,7,8-PeCDF-13C	1.3514	1.3617	1.6640	1.4181	1.5070	1.4604	8.86
1,2,3,7,8-PeCDD-13C	0.7487	0.7585	0.9429	0.8067	0.8660	0.8245	9.81
1,2,3,4,7,8-HxCDF-13C	1.4266	1.4118	1.3881	1.4751	1.4248	1.4253	2.23
1,2,3,6,7,8-HxCDF-13C	1.5667	1.5976	1.5163	1.6657	1.6059	1.5904	3.45
2,3,4,6,7,8-HxCDF-13C	1.5190	1.4179	1.4313	1.4574	1.4271	1.4505	2.82
1,2,3,7,8,9-HxCDF-13C	1.3579	1.3812	1.4571	1.4213	1.4473	1.4130	3.01
1,2,3,4,7,8-HxCDD-13C	0.9031	0.9502	0.9065	0.9408	0.9440	0.9289	2.40
1,2,3,6,7,8-HxCDD-13C	1.0218	1.0547	1.0601	1.1025	1.0744	1.0627	2.77
1,2,3,4,6,7,8-HpCDF-13C	0.8307	0.8000	0.8218	0.8286	0.8037	0.8170	1.75
1,2,3,4,7,8,9-HpCDF-13C	0.6477	0.6629	0.6302	0.7068	0.6797	0.6654	4.43
1,2,3,4,6,7,8-HpCDD-13C	0.5574	0.5867	0.5737	0.6335	0.6077	0.5918	5.02
OCDD-13C	0.7252	0.7876	0.7685	0.7903	0.8569	0.7857	6.05

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Method 8290/1613
Initial Calibration (ICAL) - Isotope Ratio Summary

		Data Files:		Time	Injected
ICAL ID	**F130918**	CS-1	F130918B_04	18:22	SMT
Calibration Date	09/18/2013	CS-2	F130918B_03	17:38	SMT
Instrument	10MSHR05 (F)	CS-3	F130918B_02	16:50	SMT
Column Phase	DB-5MS 0.25mm	CS-4	F130918B_06	19:54	SMT
Column ID No.	USD174324H	CS-5	F130918B_05	19:08	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
2,3,7,8-TCDF	0.84	0.78	0.81	0.79	0.80	0.65 - 0.89
2,3,7,8-TCDD	0.86	0.73	0.79	0.78	0.79	0.65 - 0.89
1,2,3,7,8-PeCDF	1.57	1.62	1.57	1.61	1.61	1.32 - 1.78
2,3,4,7,8-PeCDF	1.51	1.63	1.62	1.59	1.61	1.32 - 1.78
1,2,3,7,8-PeCDD	0.66	0.64	0.64	0.64	0.65	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.30	1.27	1.31	1.29	1.27	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.29	1.24	1.27	1.30	1.28	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.26	1.27	1.28	1.31	1.26	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.18	1.26	1.30	1.31	1.31	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.27	1.28	1.30	1.38	1.29	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.21	1.31	1.28	1.23	1.29	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.23	1.24	1.26	1.30	1.28	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF	1.09	0.99	1.02	1.02	0.97	0.88 - 1.20
1,2,3,4,7,8,9-HpCDF	0.93	1.07	0.98	1.09	1.07	0.88 - 1.20
1,2,3,4,6,7,8-HpCDD	1.08	0.98	1.02	1.05	1.06	0.88 - 1.20
OCDF	0.91	0.94	0.94	0.93	0.95	0.76 - 1.02
OCDD	0.92	0.89	0.90	0.89	0.91	0.76 - 1.02
1,2,3,4-TCDD-13C	0.81	0.80	0.82	0.79	0.80	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.24	1.26	1.28	1.26	1.27	1.05 - 1.43
2,3,7,8-TCDF-13C	0.81	0.80	0.80	0.80	0.79	0.65 - 0.89
2,3,7,8-TCDD-13C	0.81	0.81	0.81	0.80	0.80	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.62	1.64	1.62	1.62	1.61	1.32 - 1.78
2,3,4,7,8-PeCDF-13C	1.63	1.60	1.65	1.65	1.62	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.59	1.58	1.62	1.57	1.61	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.53	0.53	0.53	0.52	0.54	0.43 - 0.59
1,2,3,6,7,8-HxCDF-13C	0.54	0.56	0.53	0.53	0.55	0.43 - 0.59
2,3,4,6,7,8-HxCDF-13C	0.53	0.55	0.54	0.55	0.53	0.43 - 0.59
1,2,3,7,8,9-HxCDF-13C	0.54	0.53	0.54	0.54	0.54	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.32	1.28	1.28	1.33	1.29	1.05 - 1.43
1,2,3,6,7,8-HxCDD-13C	1.26	1.25	1.25	1.23	1.28	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF-13C	0.44	0.47	0.46	0.45	0.46	0.37 - 0.51
1,2,3,4,7,8,9-HpCDF-13C	0.42	0.47	0.46	0.45	0.44	0.37 - 0.51
1,2,3,4,6,7,8-HpCDD-13C	1.14	1.01	1.08	1.11	1.11	0.88 - 1.20
OCDD-13C	0.91	0.91	0.90	0.93	0.91	0.76 - 1.02

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Method 8290/1613
Initial Calibration (ICAL) - Response Factor Summary

ICAL ID	**U130729**	Data Files:		Time	Injected
Calibration Date	07/29/2013	CS-1	U130729B_11	23:48	SMT
Instrument	10MSHR06 (U)	CS-2	U130729B_10	23:00	SMT
Column Phase	DB-5MS 0.25mm	CS-3	U130729B_09	22:12	SMT
Column ID No.	USD227224H	CS-4	U130729B_13	01:25	SMT
		CS-5	U130729B_12	00:36	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
2,3,7,8-TCDF	0.9356	0.9238	0.8824	0.8940	0.8840	0.9040	2.69
2,3,7,8-TCDD	1.1618	1.0345	1.0720	1.0288	1.0360	1.0666	5.24
1,2,3,7,8-PeCDF	0.8534	0.8707	0.8673	0.8846	0.8996	0.8751	2.01
2,3,4,7,8-PeCDF	0.9395	0.9176	0.8908	0.9162	0.9166	0.9162	1.88
1,2,3,7,8-PeCDD	1.0781	1.0114	0.9619	1.0014	0.9919	1.0090	4.25
1,2,3,4,7,8-HxCDF	1.1070	1.0856	1.0239	1.0667	1.0596	1.0686	2.90
1,2,3,6,7,8-HxCDF	1.0026	0.9946	1.0113	1.0330	1.0420	1.0167	1.98
2,3,4,6,7,8-HxCDF	1.0042	1.1256	1.0588	1.1135	1.1345	1.0873	5.06
1,2,3,7,8,9-HxCDF	0.9501	0.9693	0.9282	0.9549	0.9921	0.9589	2.47
1,2,3,4,7,8-HxCDD	1.0731	1.0471	0.9893	1.0280	1.0187	1.0313	3.04
1,2,3,6,7,8-HxCDD	0.9783	0.9579	0.9208	0.9102	0.9122	0.9359	3.26
1,2,3,7,8,9-HxCDD	1.0505	1.0345	1.0728	0.9951	1.0170	1.0340	2.89
1,2,3,4,6,7,8-HpCDF	1.3629	1.3723	1.3154	1.3595	1.3500	1.3520	1.62
1,2,3,4,7,8,9-HpCDF	1.4255	1.3742	1.3364	1.3544	1.3668	1.3715	2.44
1,2,3,4,6,7,8-HpCDD	1.1726	1.0583	1.0544	1.0378	1.0599	1.0766	5.05
OCDF	1.1991	1.1875	1.1027	1.2415	1.2886	1.2039	5.74
OCDD	1.0715	1.0501	0.9799	1.0275	1.0555	1.0369	3.43
Total PeCDF	0.8965	0.8942	0.8791	0.9004	0.9081	0.8956	1.19
Total HxCDF	1.0160	1.0438	1.0055	1.0420	1.0570	1.0329	2.06
Total HxCDD	1.0340	1.0132	0.9943	0.9777	0.9827	1.0004	2.32
Total HpCDF	1.3942	1.3733	1.3259	1.3569	1.3584	1.3617	1.84
2,3,7,8-TCDF-13C	1.5722	1.4945	1.5171	1.5002	1.5232	1.5215	2.02
2,3,7,8-TCDD-13C	1.0108	0.9945	1.0257	1.0010	1.0313	1.0126	1.55
2,3,7,8-TCDD-37Cl4	1.1240	1.1311	1.1109	1.1123	1.1464	1.1249	1.30
1,2,3,7,8-PeCDF-13C	1.1720	1.1505	1.2095	1.1519	1.2113	1.1790	2.53
2,3,4,7,8-PeCDF-13C	1.1514	1.1779	1.2366	1.1325	1.2172	1.1831	3.69
1,2,3,7,8-PeCDD-13C	0.7286	0.7509	0.8225	0.7297	0.7919	0.7647	5.39
1,2,3,4,7,8-HxCDF-13C	1.0769	1.0883	1.0277	1.1142	1.0998	1.0814	3.06
1,2,3,6,7,8-HxCDF-13C	1.3124	1.2845	1.2177	1.3118	1.3026	1.2858	3.09
2,3,4,6,7,8-HxCDF-13C	1.2210	1.1491	0.7454	1.1672	1.1285	1.0822	17.69
1,2,3,7,8,9-HxCDF-13C	1.0715	1.1004	1.0367	1.1133	1.1119	1.0867	3.00
1,2,3,4,7,8-HxCDD-13C	0.8595	0.8802	0.7619	0.8596	0.8736	0.8470	5.71
1,2,3,6,7,8-HxCDD-13C	1.0600	1.0804	0.9858	1.0934	1.0826	1.0604	4.10
1,2,3,4,6,7,8-HpCDF-13C	1.0545	1.0485	1.0068	1.0394	1.0437	1.0386	1.80
1,2,3,4,7,8,9-HpCDF-13C	0.8501	0.8420	0.7920	0.8264	0.8510	0.8323	2.96
1,2,3,4,6,7,8-HpCDD-13C	0.8427	0.8580	0.8264	0.8247	0.8321	0.8368	1.65
OCDD-13C	0.7304	0.7454	0.7215	0.7278	0.7778	0.7406	3.05

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Method 8290/1613
Initial Calibration (ICAL) - Isotope Ratio Summary

		Data Files:		Time	Injected
ICAL ID	**U130729**	CS-1	U130729B_11	23:48	SMT
Calibration Date	07/29/2013	CS-2	U130729B_10	23:00	SMT
Instrument	10MSHR06 (U)	CS-3	U130729B_09	22:12	SMT
Column Phase	DB-5MS 0.25mm	CS-4	U130729B_13	01:25	SMT
Column ID No.	USD227224H	CS-5	U130729B_12	00:36	SMT

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
2,3,7,8-TCDF	0.89	0.73	0.76	0.75	0.75	0.65 - 0.89
2,3,7,8-TCDD	0.74	0.79	0.74	0.77	0.78	0.65 - 0.89
1,2,3,7,8-PeCDF	1.46	1.53	1.53	1.53	1.54	1.32 - 1.78
2,3,4,7,8-PeCDF	1.43	1.52	1.52	1.55	1.48	1.32 - 1.78
1,2,3,7,8-PeCDD	0.62	0.60	0.60	0.61	0.61	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.15	1.24	1.22	1.21	1.22	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.25	1.23	1.25	1.20	1.23	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.21	1.25	1.21	1.25	1.28	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.16	1.28	1.22	1.27	1.23	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.15	1.19	1.24	1.27	1.23	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.14	1.17	1.24	1.20	1.23	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.18	1.18	1.28	1.23	1.21	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF	1.03	1.02	1.01	1.08	1.04	0.88 - 1.20
1,2,3,4,7,8,9-HpCDF	1.06	1.13	1.05	1.06	1.04	0.88 - 1.20
1,2,3,4,6,7,8-HpCDD	0.99	1.04	1.02	1.04	1.05	0.88 - 1.20
OCDF	0.94	0.90	0.89	0.89	0.90	0.76 - 1.02
OCDD	0.79	0.88	0.89	0.87	0.88	0.76 - 1.02
1,2,3,4-TCDD-13C	0.80	0.80	0.79	0.80	0.80	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.26	1.27	1.23	1.26	1.24	1.05 - 1.43
2,3,7,8-TCDF-13C	0.78	0.76	0.78	0.78	0.77	0.65 - 0.89
2,3,7,8-TCDD-13C	0.78	0.78	0.77	0.78	0.79	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.56	1.53	1.57	1.58	1.59	1.32 - 1.78
2,3,4,7,8-PeCDF-13C	1.58	1.58	1.53	1.55	1.52	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.58	1.59	1.58	1.59	1.59	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.52	0.52	0.52	0.52	0.52	0.43 - 0.59
1,2,3,6,7,8-HxCDF-13C	0.52	0.51	0.53	0.53	0.52	0.43 - 0.59
2,3,4,6,7,8-HxCDF-13C	0.52	0.52	0.50	0.52	0.52	0.43 - 0.59
1,2,3,7,8,9-HxCDF-13C	0.53	0.52	0.52	0.50	0.53	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.27	1.31	1.25	1.27	1.30	1.05 - 1.43
1,2,3,6,7,8-HxCDD-13C	1.27	1.21	1.26	1.25	1.22	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF-13C	0.45	0.46	0.45	0.45	0.45	0.37 - 0.51
1,2,3,4,7,8,9-HpCDF-13C	0.45	0.45	0.46	0.46	0.46	0.37 - 0.51
1,2,3,4,6,7,8-HpCDD-13C	1.08	1.07	1.06	1.07	1.09	0.88 - 1.20
OCDD-13C	0.91	0.90	0.90	0.89	0.89	0.76 - 1.02

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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U130917A_22	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-7604-279	GC Column ID	USD227224H
Analyzed	09/18/2013 02:01	ICAL ID	U130729

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	9.5	0.77	0.9040	0.8611	-4.7
2,3,7,8-TCDD	10	10.5	0.78	1.0666	1.1147	4.5
1,2,3,7,8-PeCDF	50	49.4	1.53	0.8751	0.8638	-1.3
2,3,4,7,8-PeCDF	50	47.1	1.49	0.9162	0.8623	-5.9
1,2,3,7,8-PeCDD	50	49.8	0.61	1.0090	1.0040	-0.5
1,2,3,4,7,8-HxCDF	50	46.8	1.20	1.0686	1.0012	-6.3
1,2,3,6,7,8-HxCDF	50	48.1	1.21	1.0167	0.9785	-3.8
2,3,4,6,7,8-HxCDF	50	48.0	1.18	1.0873	1.0437	-4.0
1,2,3,7,8,9-HxCDF	50	47.4	1.20	0.9589	0.9084	-5.3
1,2,3,4,7,8-HxCDD	50	49.1	1.24	1.0313	1.0117	-1.9
1,2,3,6,7,8-HxCDD	50	48.3	1.20	0.9359	0.9042	-3.4
1,2,3,7,8,9-HxCDD	50	45.4	1.22	1.0340	0.9387	-9.2
1,2,3,4,6,7,8-HpCDF	50	49.9	1.05	1.3520	1.3505	-0.1
1,2,3,4,7,8,9-HpCDF	50	48.9	1.02	1.3715	1.3411	-2.2
1,2,3,4,6,7,8-HpCDD	50	51.0	1.05	1.0766	1.0980	2.0
OCDF	100	98.6	0.89	1.2039	1.1866	-1.4
OCDD	100	96.1	0.89	1.0369	0.9964	-3.9
Total PeCDF	100	96.4	NA	0.8956	0.8631	-3.6
Total HxCDF	200	190.3	NA	1.0329	0.9829	-4.8
Total HxCDD	150	142.8	NA	1.0004	0.9515	-4.9
Total HpCDF	100	98.8	NA	1.3617	1.3458	-1.2
2,3,7,8-TCDF-13C	100	100.7	0.78	1.5215	1.5320	0.7
2,3,7,8-TCDD-13C	100	97.2	0.78	1.0126	0.9847	-2.8
2,3,7,8-TCDD-37Cl4	10	9.8	NA	1.1249	1.1016	-2.1
1,2,3,7,8-PeCDF-13C	100	94.7	1.55	1.1790	1.1161	-5.3
2,3,4,7,8-PeCDF-13C	100	96.3	1.56	1.1831	1.1392	-3.7
1,2,3,7,8-PeCDD-13C	100	94.9	1.58	0.7647	0.7261	-5.1
1,2,3,4,7,8-HxCDF-13C	100	103.8	0.52	1.0814	1.1224	3.8
1,2,3,6,7,8-HxCDF-13C	100	102.4	0.52	1.2858	1.3163	2.4
2,3,4,6,7,8-HxCDF-13C	100	109.2	0.51	1.0822	1.1817	9.2
1,2,3,7,8,9-HxCDF-13C	100	96.5	0.52	1.0867	1.0485	-3.5
1,2,3,4,7,8-HxCDD-13C	100	107.4	1.24	0.8470	0.9097	7.4
1,2,3,6,7,8-HxCDD-13C	100	107.5	1.26	1.0604	1.1396	7.5
1,2,3,4,6,7,8-HpCDF-13C	100	106.5	0.46	1.0386	1.1061	6.5
1,2,3,4,7,8,9-HpCDF-13C	100	100.9	0.45	0.8323	0.8398	0.9
1,2,3,4,6,7,8-HpCDD-13C	100	95.1	1.06	0.8368	0.7954	-4.9
OCDD-13C	200	218.6	0.89	0.7406	0.8095	9.3
1,2,3,4-TCDD-13C	100	NA	0.79	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.26	NA	NA	NA

Concentrations expressed as pg/ul NA = Not Applicable * = Outside target range

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Minneapolis, MN 55414

Tel: 612-607-1700
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Pace Analytical™

Method 8290
PCDD/PCDF Calibration Verification

Run Name:	U130917B_15	Instrument ID	10MSHR06 (U)
Standard	CS3/CPM-7604-279	GC Column ID	USD227224H
Analyzed	09/18/2013 13:51	ICAL ID	U130729

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	9.9	0.76	0.9040	0.8930	-1.2
2,3,7,8-TCDD	10	10.7	0.79	1.0666	1.1447	7.3
1,2,3,7,8-PeCDF	50	50.1	1.52	0.8751	0.8761	0.1
2,3,4,7,8-PeCDF	50	49.0	1.48	0.9162	0.8986	-1.9
1,2,3,7,8-PeCDD	50	51.2	0.61	1.0090	1.0338	2.5
1,2,3,4,7,8-HxCDF	50	47.6	1.19	1.0686	1.0172	-4.8
1,2,3,6,7,8-HxCDF	50	48.6	1.22	1.0167	0.9876	-2.9
2,3,4,6,7,8-HxCDF	50	49.3	1.22	1.0873	1.0711	-1.5
1,2,3,7,8,9-HxCDF	50	49.3	1.20	0.9589	0.9451	-1.4
1,2,3,4,7,8-HxCDD	50	49.8	1.23	1.0313	1.0265	-0.5
1,2,3,6,7,8-HxCDD	50	50.1	1.23	0.9359	0.9382	0.3
1,2,3,7,8,9-HxCDD	50	47.4	1.21	1.0340	0.9800	-5.2
1,2,3,4,6,7,8-HpCDF	50	51.9	1.04	1.3520	1.4046	3.9
1,2,3,4,7,8,9-HpCDF	50	50.8	1.03	1.3715	1.3927	1.5
1,2,3,4,6,7,8-HpCDD	50	50.7	1.08	1.0766	1.0911	1.3
OCDF	100	106.8	0.91	1.2039	1.2857	6.8
OCDD	100	99.7	0.90	1.0369	1.0342	-0.3
Total PeCDF	100	99.1	NA	0.8956	0.8874	-0.9
Total HxCDF	200	194.7	NA	1.0329	1.0053	-2.7
Total HxCDD	150	147.3	NA	1.0004	0.9816	-1.9
Total HpCDF	100	102.7	NA	1.3617	1.3986	2.7
2,3,7,8-TCDF-13C	100	107.7	0.78	1.5215	1.6384	7.7
2,3,7,8-TCDD-13C	100	99.1	0.80	1.0126	1.0035	-0.9
2,3,7,8-TCDD-37Cl4	10	10.2	NA	1.1249	1.1524	2.4
1,2,3,7,8-PeCDF-13C	100	102.4	1.56	1.1790	1.2077	2.4
2,3,4,7,8-PeCDF-13C	100	103.4	1.53	1.1831	1.2231	3.4
1,2,3,7,8-PeCDD-13C	100	98.7	1.59	0.7647	0.7545	-1.3
1,2,3,4,7,8-HxCDF-13C	100	107.1	0.51	1.0814	1.1582	7.1
1,2,3,6,7,8-HxCDF-13C	100	106.2	0.52	1.2858	1.3650	6.2
2,3,4,6,7,8-HxCDF-13C	100	113.4	0.51	1.0822	1.2277	13.4
1,2,3,7,8,9-HxCDF-13C	100	102.3	0.52	1.0867	1.1118	2.3
1,2,3,4,7,8-HxCDD-13C	100	110.3	1.26	0.8470	0.9343	10.3
1,2,3,6,7,8-HxCDD-13C	100	104.2	1.26	1.0604	1.1049	4.2
1,2,3,4,6,7,8-HpCDF-13C	100	102.4	0.45	1.0386	1.0636	2.4
1,2,3,4,7,8,9-HpCDF-13C	100	98.9	0.44	0.8323	0.8234	-1.1
1,2,3,4,6,7,8-HpCDD-13C	100	88.5	1.08	0.8368	0.7404	-11.5
OCDD-13C	200	215.4	0.90	0.7406	0.7976	7.7
1,2,3,4-TCDD-13C	100	NA	0.80	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.25	NA	NA	NA

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Minneapolis, MN 55414

Tel: 612-607-1700
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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	F130921A_16	Instrument ID	10MSHR05 (F)
Standard	CS3/CPM-7604-279	GC Column ID	USD174324H
Analyzed	09/21/2013 13:44	ICAL ID	F130918

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	10.3	0.79	1.0968	1.1279	2.8
2,3,7,8-TCDD	10	10.8	0.81	1.1327	1.2196	7.7
1,2,3,7,8-PeCDF	50	51.5	1.62	1.1340	1.1690	3.1
2,3,4,7,8-PeCDF	50	50.7	1.59	1.1708	1.1875	1.4
1,2,3,7,8-PeCDD	50	53.6	0.62	1.1326	1.2131	7.1
1,2,3,4,7,8-HxCDF	50	51.2	1.31	1.2855	1.3175	2.5
1,2,3,6,7,8-HxCDF	50	49.5	1.31	1.2626	1.2495	-1.0
2,3,4,6,7,8-HxCDF	50	50.3	1.31	1.3236	1.3319	0.6
1,2,3,7,8,9-HxCDF	50	51.0	1.28	1.1885	1.2132	2.1
1,2,3,4,7,8-HxCDD	50	49.7	1.32	1.1666	1.1587	-0.7
1,2,3,6,7,8-HxCDD	50	50.5	1.28	1.0722	1.0833	1.0
1,2,3,7,8,9-HxCDD	50	49.8	1.29	1.1134	1.1086	-0.4
1,2,3,4,6,7,8-HpCDF	50	55.5	1.04	1.3780	1.5308	11.1
1,2,3,4,7,8,9-HpCDF	50	52.6	1.01	1.3872	1.4582	5.1
1,2,3,4,6,7,8-HpCDD	50	51.9	1.06	1.1761	1.2196	3.7
OCDF	100	102.3	0.95	1.4633	1.4970	2.3
OCDD	100	106.7	0.90	1.0806	1.1534	6.7
Total PeCDF	100	102.3	NA	1.1524	1.1782	2.2
Total HxCDF	200	202.1	NA	1.2650	1.2780	1.0
Total HxCDD	150	150.0	NA	1.1174	1.1169	0.0
Total HpCDF	100	108.1	NA	1.3826	1.4945	8.1
2,3,7,8-TCDF-13C	100	116.3	0.81	1.6144	1.8774	16.3
2,3,7,8-TCDD-13C	100	106.1	0.79	0.9536	1.0118	6.1
2,3,7,8-TCDD-37Cl4	10	11.3	NA	1.0645	1.2019	12.9
1,2,3,7,8-PeCDF-13C	100	119.3	1.62	1.4740	1.7591	19.3
2,3,4,7,8-PeCDF-13C	100	125.1	1.62	1.4604	1.8277	25.1
1,2,3,7,8-PeCDD-13C	100	122.1	1.56	0.8245	1.0064	22.1
1,2,3,4,7,8-HxCDF-13C	100	100.3	0.54	1.4253	1.4291	0.3
1,2,3,6,7,8-HxCDF-13C	100	103.1	0.55	1.5904	1.6391	3.1
2,3,4,6,7,8-HxCDF-13C	100	100.2	0.54	1.4505	1.4539	0.2
1,2,3,7,8,9-HxCDF-13C	100	97.9	0.55	1.4130	1.3833	-2.1
1,2,3,4,7,8-HxCDD-13C	100	103.6	1.28	0.9289	0.9626	3.6
1,2,3,6,7,8-HxCDD-13C	100	102.8	1.29	1.0627	1.0929	2.8
1,2,3,4,6,7,8-HpCDF-13C	100	99.9	0.46	0.8170	0.8164	-0.1
1,2,3,4,7,8,9-HpCDF-13C	100	98.9	0.47	0.6654	0.6579	-1.1
1,2,3,4,6,7,8-HpCDD-13C	100	94.7	1.12	0.5918	0.5602	-5.3
OCDD-13C	200	147.9	0.95	0.7857	0.5811	-26.0
1,2,3,4-TCDD-13C	100	NA	0.81	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.30	NA	NA	NA

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Method 8290
PCDD/PCDF Calibration Verification

Run Name:	F130921B_16	Instrument ID	10MSHR05 (F)
Standard	CS3/CPM-7604-279	GC Column ID	USD174324H
Analyzed	09/22/2013 01:59	ICAL ID	F130918

Compound	Known Conc.	Conc Found	Ion Abund. Ratio	Average RF	Daily RF	Deviation (%)
2,3,7,8-TCDF	10	8.4	0.74	1.0968	0.9238	-15.8
2,3,7,8-TCDD	10	9.9	0.84	1.1327	1.1220	-0.9
1,2,3,7,8-PeCDF	50	43.7	1.58	1.1340	0.9916	-12.6
2,3,4,7,8-PeCDF	50	42.7	1.57	1.1708	0.9998	-14.6
1,2,3,7,8-PeCDD	50	47.2	0.61	1.1326	1.0690	-5.6
1,2,3,4,7,8-HxCDF	50	45.0	1.27	1.2855	1.1567	-10.0
1,2,3,6,7,8-HxCDF	50	45.8	1.26	1.2626	1.1562	-8.4
2,3,4,6,7,8-HxCDF	50	46.2	1.22	1.3236	1.2237	-7.5
1,2,3,7,8,9-HxCDF	50	45.2	1.26	1.1885	1.0748	-9.6
1,2,3,4,7,8-HxCDD	50	45.4	1.26	1.1666	1.0584	-9.3
1,2,3,6,7,8-HxCDD	50	45.8	1.23	1.0722	0.9815	-8.5
1,2,3,7,8,9-HxCDD	50	45.3	1.30	1.1134	1.0085	-9.4
1,2,3,4,6,7,8-HpCDF	50	49.4	1.05	1.3780	1.3604	-1.3
1,2,3,4,7,8,9-HpCDF	50	50.8	1.03	1.3872	1.4085	1.5
1,2,3,4,6,7,8-HpCDD	50	51.1	1.09	1.1761	1.2019	2.2
OCDF	100	84.9	0.91	1.4633	1.2422	-15.1
OCDD	100	95.8	0.93	1.0806	1.0354	-4.2
Total PeCDF	100	86.4	NA	1.1524	0.9957	-13.6
Total HxCDF	200	182.2	NA	1.2650	1.1528	-8.9
Total HxCDD	150	136.4	NA	1.1174	1.0162	-9.1
Total HpCDF	100	100.1	NA	1.3826	1.3845	0.1
2,3,7,8-TCDF-13C	100	97.8	0.80	1.6144	1.5786	-2.2
2,3,7,8-TCDD-13C	100	106.1	0.82	0.9536	1.0115	6.1
2,3,7,8-TCDD-37Cl4	10	10.7	NA	1.0645	1.1369	6.8
1,2,3,7,8-PeCDF-13C	100	96.2	1.60	1.4740	1.4184	-3.8
2,3,4,7,8-PeCDF-13C	100	100.5	1.59	1.4604	1.4673	0.5
1,2,3,7,8-PeCDD-13C	100	114.7	1.58	0.8245	0.9455	14.7
1,2,3,4,7,8-HxCDF-13C	100	86.6	0.53	1.4253	1.2348	-13.4
1,2,3,6,7,8-HxCDF-13C	100	85.1	0.53	1.5904	1.3531	-14.9
2,3,4,6,7,8-HxCDF-13C	100	83.2	0.53	1.4505	1.2063	-16.8
1,2,3,7,8,9-HxCDF-13C	100	83.1	0.53	1.4130	1.1742	-16.9
1,2,3,4,7,8-HxCDD-13C	100	101.8	1.27	0.9289	0.9453	1.8
1,2,3,6,7,8-HxCDD-13C	100	99.9	1.24	1.0627	1.0620	-0.1
1,2,3,4,6,7,8-HpCDF-13C	100	113.4	0.46	0.8170	0.9263	13.4
1,2,3,4,7,8,9-HpCDF-13C	100	106.8	0.48	0.6654	0.7106	6.8
1,2,3,4,6,7,8-HpCDD-13C	100	109.2	1.14	0.5918	0.6463	9.2
OCDD-13C	200	173.8	0.93	0.7857	0.6828	-13.1
1,2,3,4-TCDD-13C	100	NA	0.82	NA	NA	NA
1,2,3,7,8,9-HxCDD-13C	100	NA	1.24	NA	NA	NA

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Appendix D

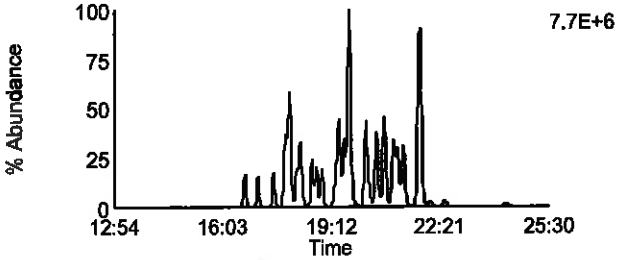
Sample Raw Data

Homologue Group: Tetras

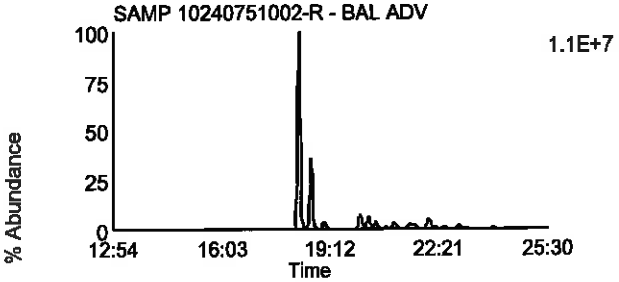
Data File Name: F130921B_11
Date Acquired: 9/21/2013
Sample Description: SAMP 10240751002-R - BAL ADV

Lab Sample ID: 10240754001-R
Client Sample ID: 1302547-05 / T-15-14
Instrument: 10MSHR05 (F)

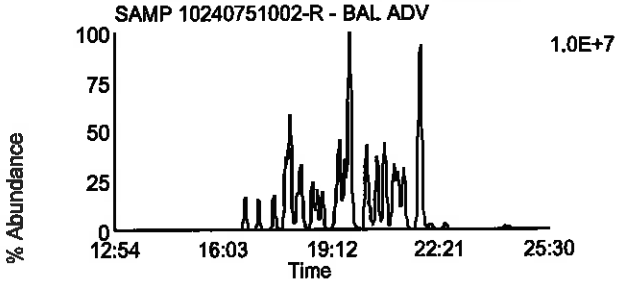
Data File: F130921B_11 G1 C1 - 303.9016
SAMP 10240751002-R - BAL ADV



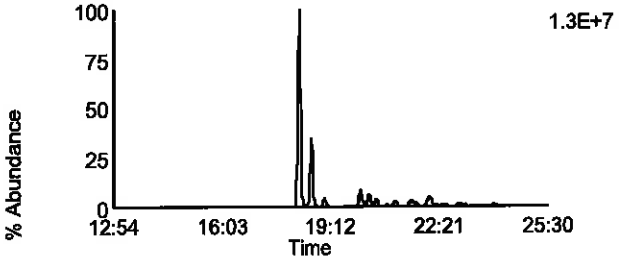
Data File: F130921B_11 G1 C7 - 319.8965
SAMP 10240751002-R - BAL ADV



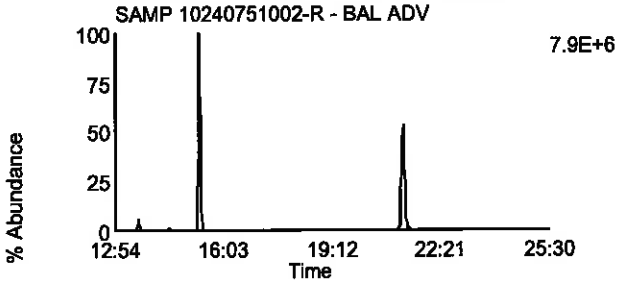
Data File: F130921B_11 G1 C2 - 305.8987
SAMP 10240751002-R - BAL ADV



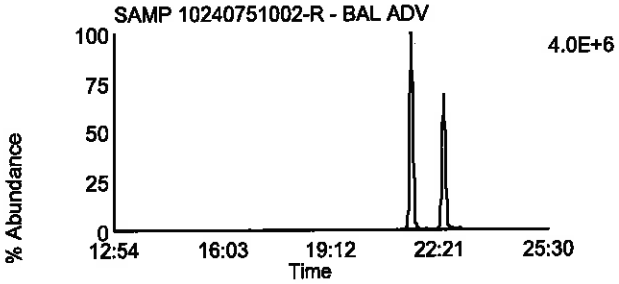
Data File: F130921B_11 G1 C8 - 321.8936
SAMP 10240751002-R - BAL ADV



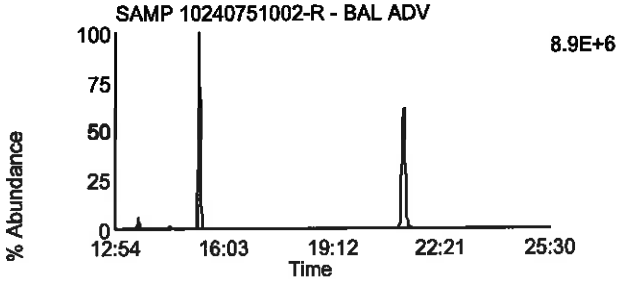
Data File: F130921B_11 G1 C3 - 315.9418
SAMP 10240751002-R - BAL ADV



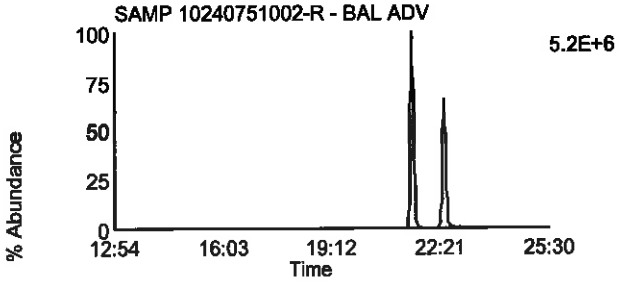
Data File: F130921B_11 G1 C10 - 331.9367
SAMP 10240751002-R - BAL ADV



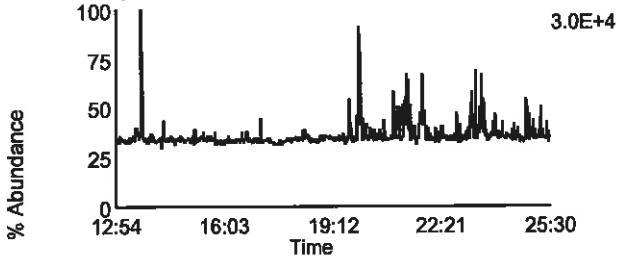
Data File: F130921B_11 G1 C4 - 317.9389
SAMP 10240751002-R - BAL ADV



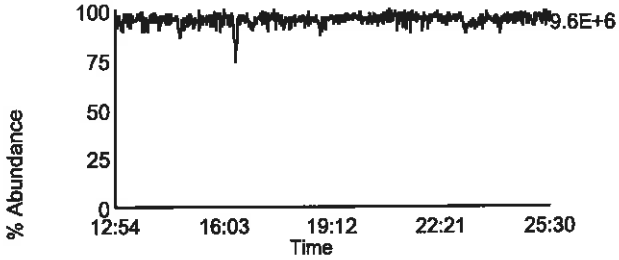
Data File: F130921B_11 G1 C11 - 333.9338
SAMP 10240751002-R - BAL ADV



Data File: F130921B_11 G1 C14 - 375.8364
SAMP 10240751002-R - BAL ADV



Data File: F130921B_11 G1 C5 - 318.9792
SAMP 10240751002-R - BAL ADV

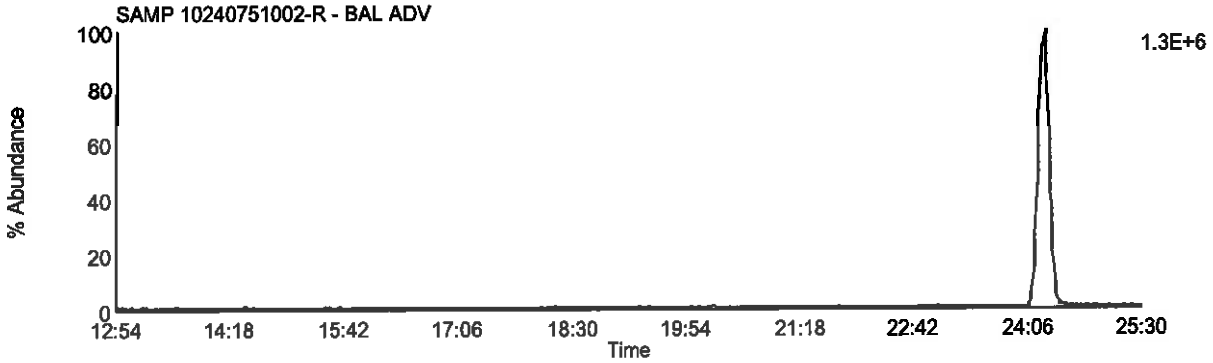


Homologue Group: Penta & Cleanup

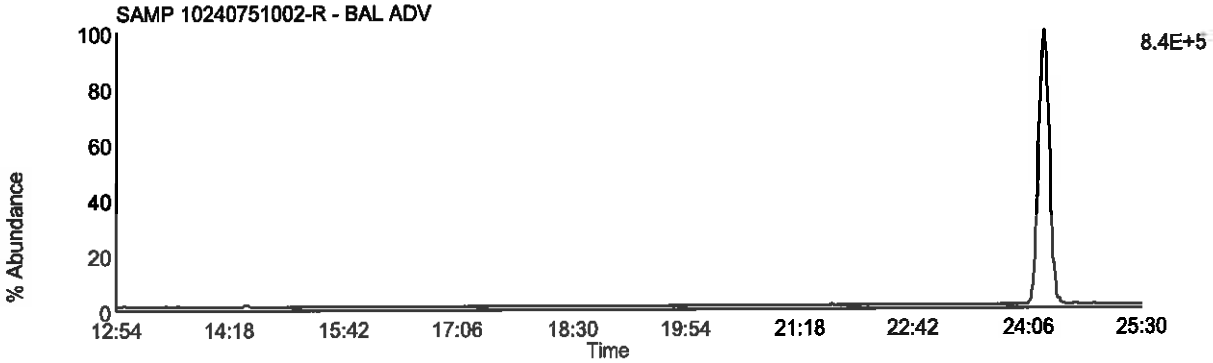
Data File Name: F130921B_11
Date Acquired: 9/21/2013
Sample Description: SAMP 10240751002-R - BAL ADV

Lab Sample ID: 10240754001-R
Client Sample ID: 1302547-05 / T-15-14
Instrument: 10MSHR05 (F)

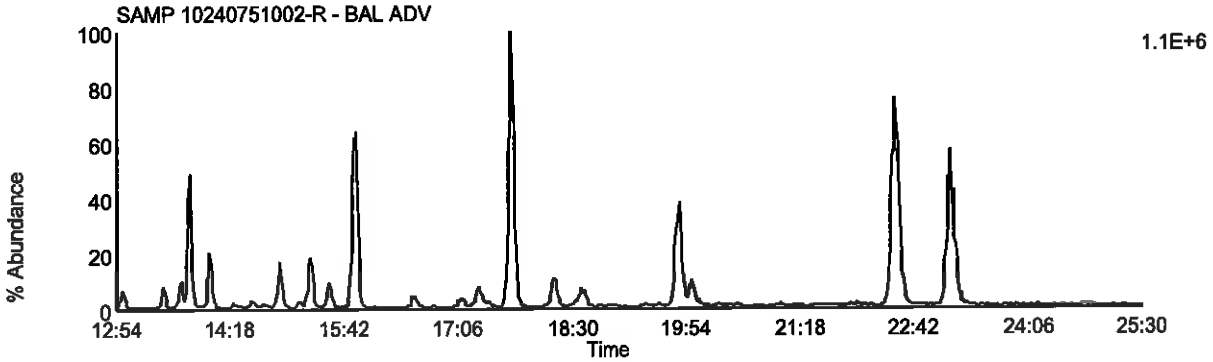
Data File: F130921B_11 G1 C12 - 339.8597
SAMP 10240751002-R - BAL ADV



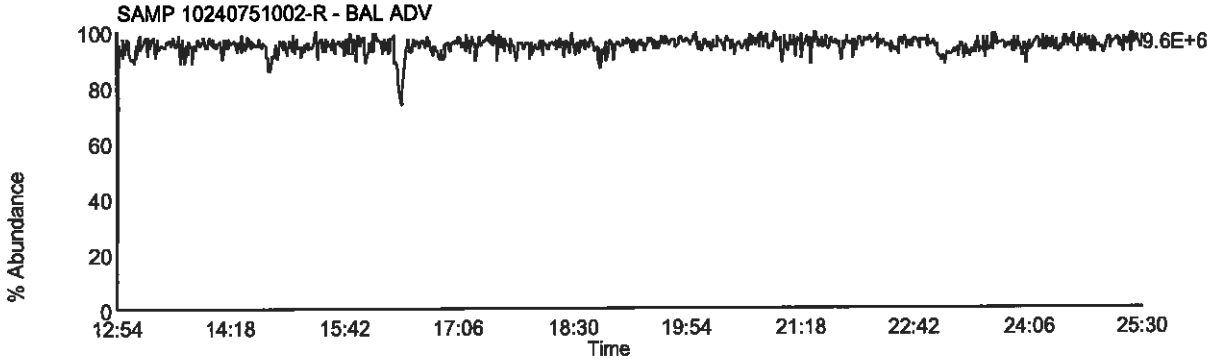
Data File: F130921B_11 G1 C13 - 341.8567
SAMP 10240751002-R - BAL ADV



Data File: F130921B_11 G1 C9 - 327.8847
SAMP 10240751002-R - BAL ADV



Data File: F130921B_11 G1 C5 - 318.9792
SAMP 10240751002-R - BAL ADV

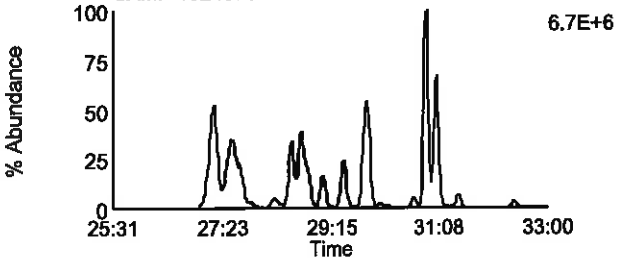


Homologue Group: Pentas

Data File Name: F130921B_11
Date Acquired: 9/21/2013
Sample Description: SAMP 10240751002-R - BAL ADV

Lab Sample ID: 10240754001-R
Client Sample ID: 1302547-05 / T-15-14
Instrument: 10MSHR05 (F)

Data File: F130921B_11 G2 C1 - 339.8597
SAMP 10240751002-R - BAL ADV



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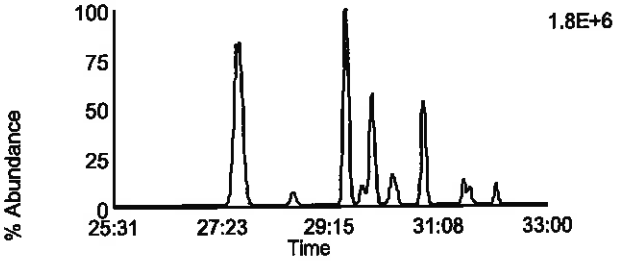
SAMP 10240751002-R - BAL ADV



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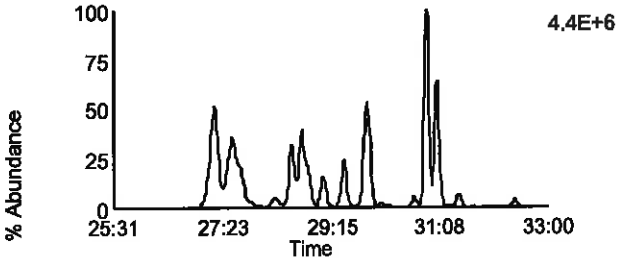
SAMP 10240751002-R - BAL ADV



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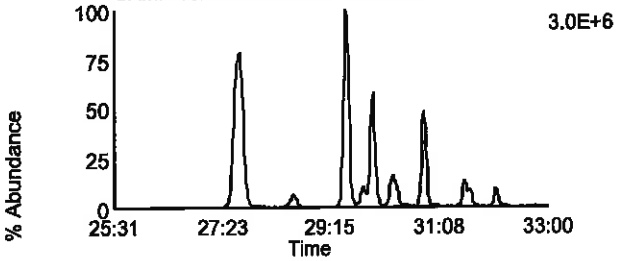
SAMP 10240751002-R - BAL ADV



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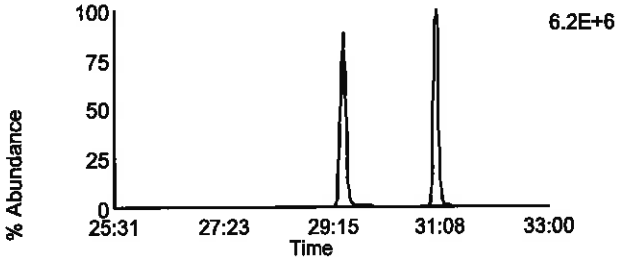
SAMP 10240751002-R - BAL ADV



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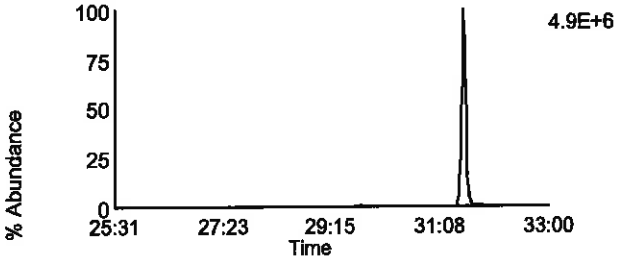
SAMP 10240751002-R - BAL ADV



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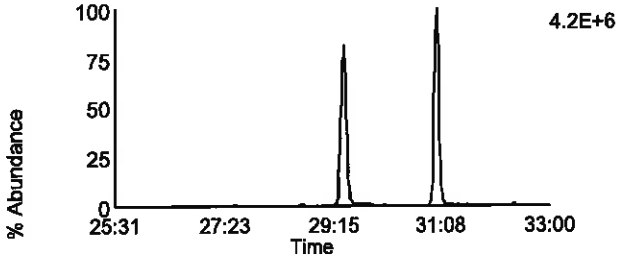
SAMP 10240751002-R - BAL ADV



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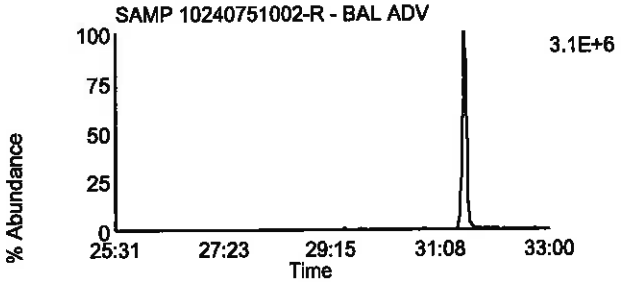

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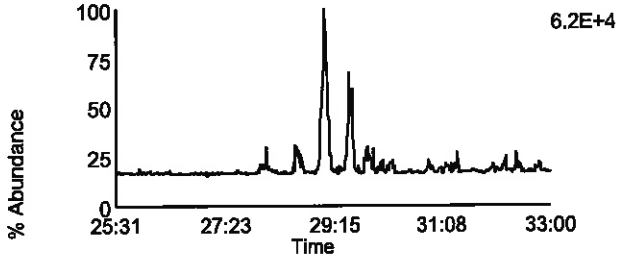
SAMP 10240751002-R - BAL ADV



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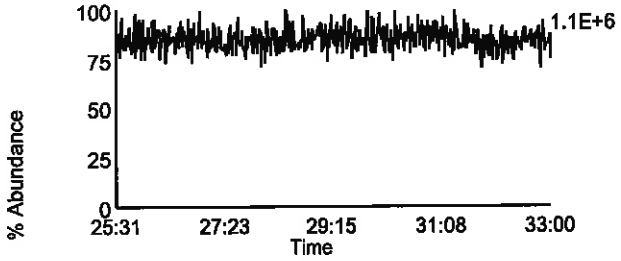
SAMP 10240751002-R - BAL ADV

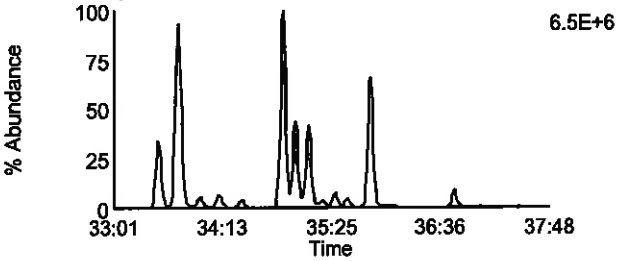


Homologue Group: Hexas

Data File Name: F130921B_11
Date Acquired: 9/21/2013
Sample Description: SAMP 10240751002-R - BAL ADV

Lab Sample ID: 10240754001-R
Client Sample ID: 1302547-05 / T-15-14
Instrument: 10MSHR05 (F)

Data File: F130921B_11 G3 C1 - 373.8207
SAMP 10240751002-R - BAL ADV



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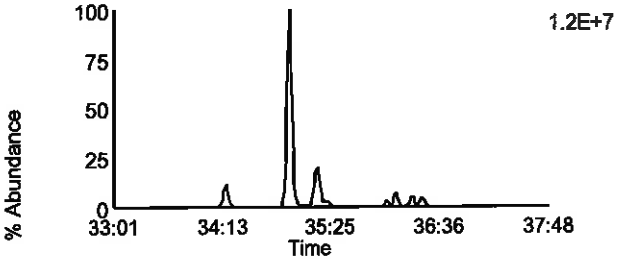

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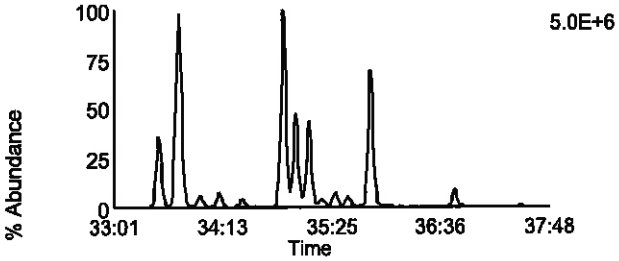
SAMP 10240751002-R - BAL ADV



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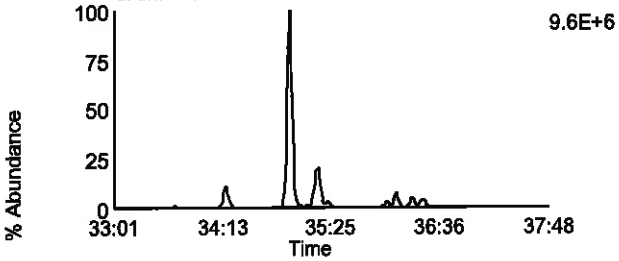

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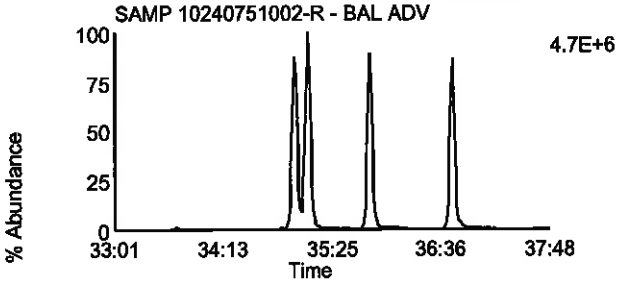

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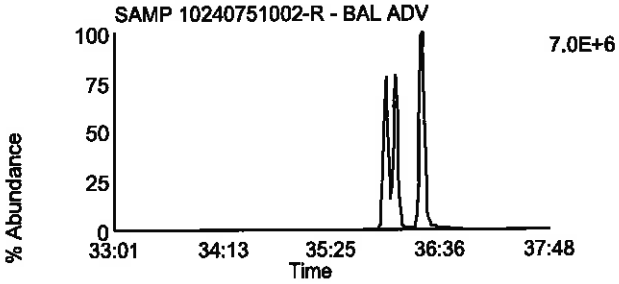

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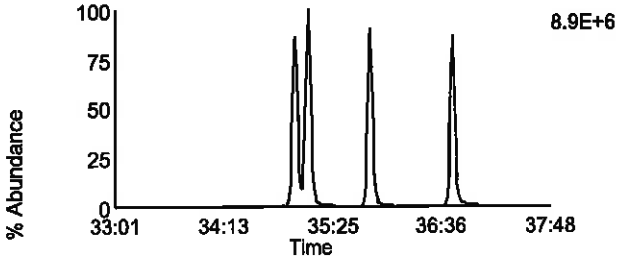
SAMP 10240751002-R - BAL ADV



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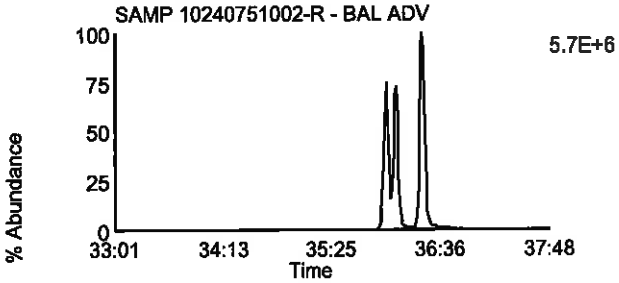
SAMP 10240751002-R - BAL ADV



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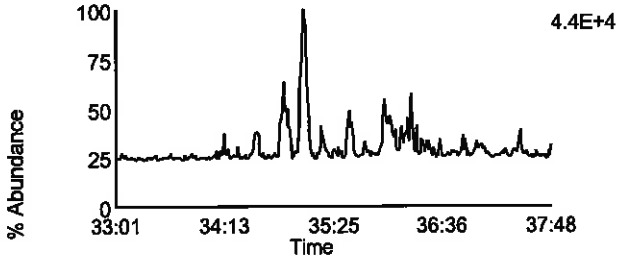
SAMP 10240751002-R - BAL ADV



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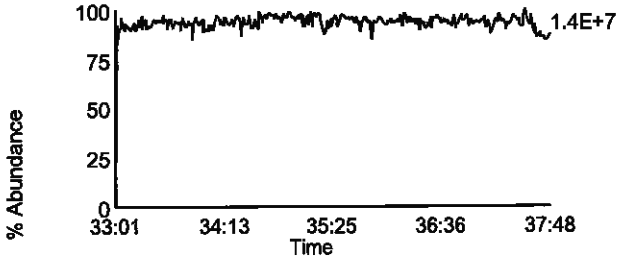
SAMP 10240751002-R - BAL ADV

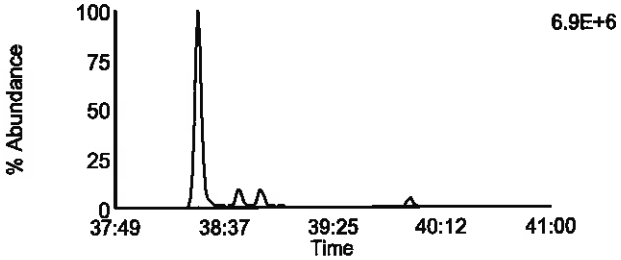


Homologue Group: Heptas

Data File Name: F130921B_11
Date Acquired: 9/21/2013
Sample Description: SAMP 10240751002-R - BAL ADV

Lab Sample ID: 10240754001-R
Client Sample ID: 1302547-05 / T-15-14
Instrument: 10MSHR05 (F)

Data File: F130921B_11 G4 C3 - 407.7818
SAMP 10240751002-R - BAL ADV



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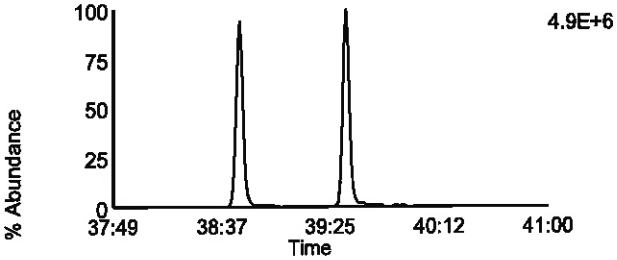
SAMP 10240751002-R - BAL ADV



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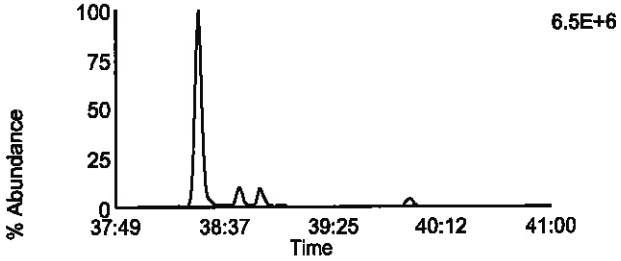

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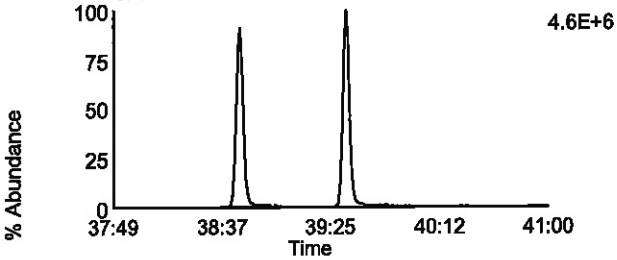
SAMP 10240751002-R - BAL ADV



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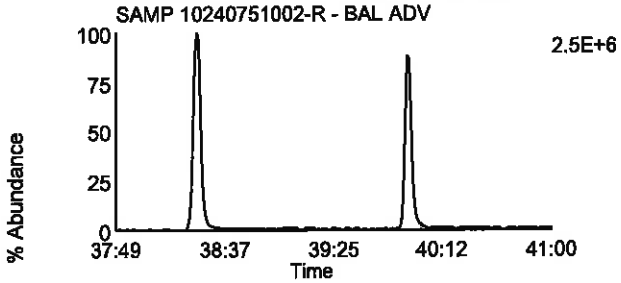

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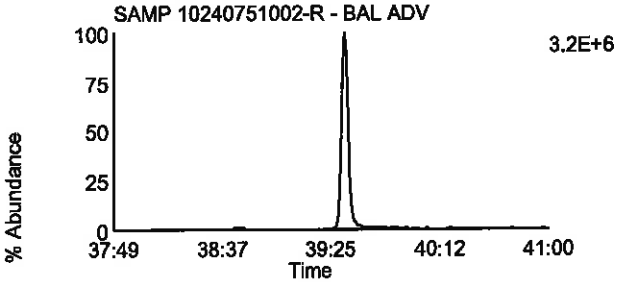
SAMP 10240751002-R - BAL ADV



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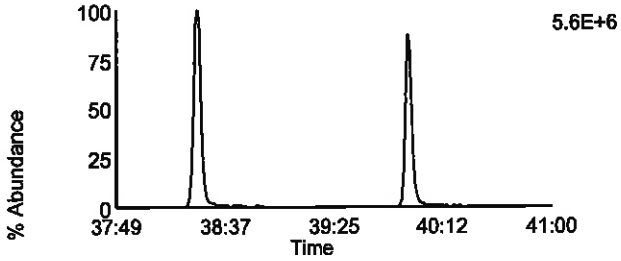
SAMP 10240751002-R - BAL ADV



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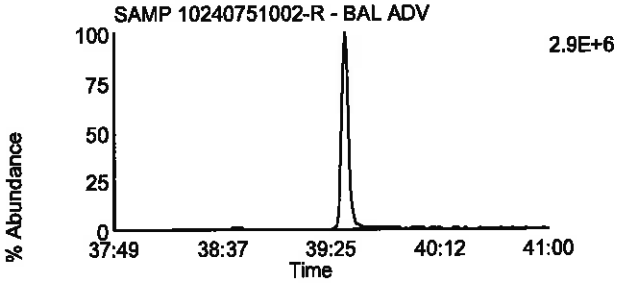
SAMP 10240751002-R - BAL ADV



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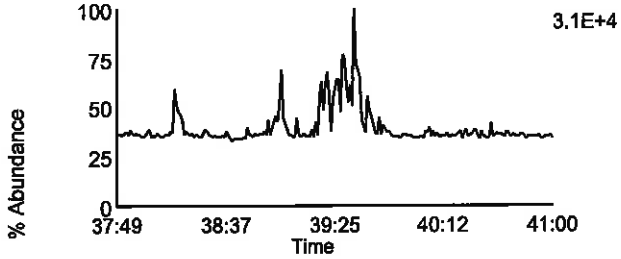
SAMP 10240751002-R - BAL ADV



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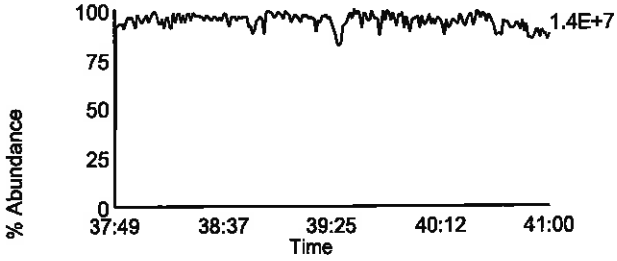
SAMP 10240751002-R - BAL ADV

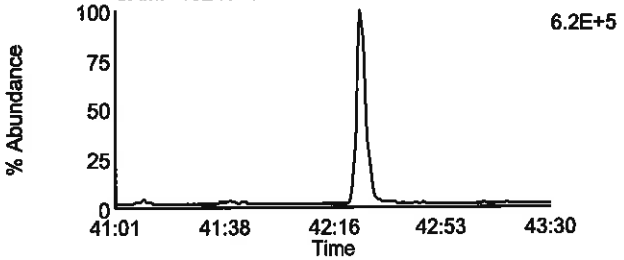


Homologue Group: Octas

Data File Name: F130921B_11
Date Acquired: 9/21/2013
Sample Description: SAMP 10240751002-R - BAL ADV

Lab Sample ID: 10240754001-R
Client Sample ID: 1302547-05 / T-15-14
Instrument: 10MSHR05 (F)

Data File: F130921B_11 G5 C4 - 441.7428
SAMP 10240751002-R - BAL ADV



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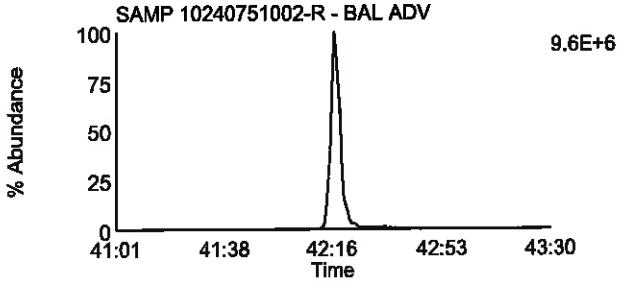

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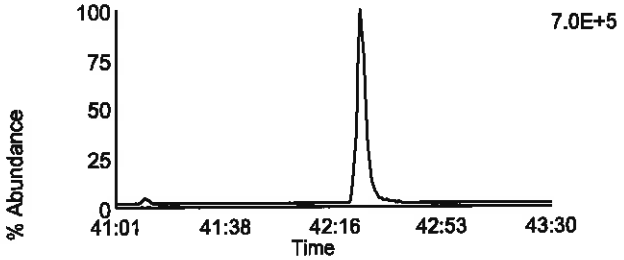

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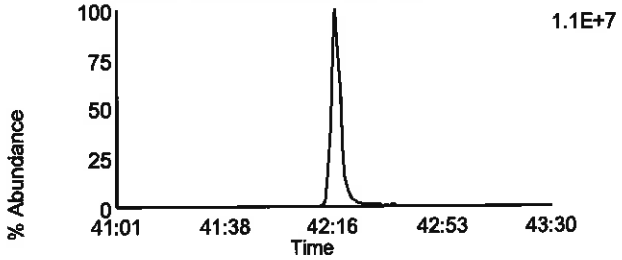

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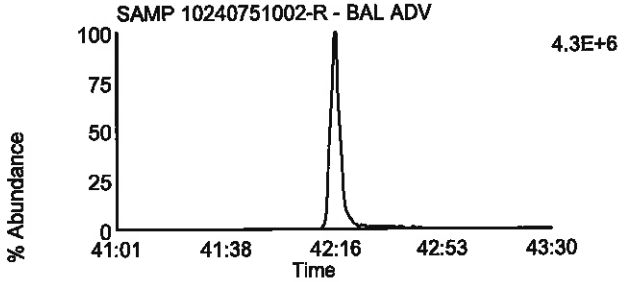

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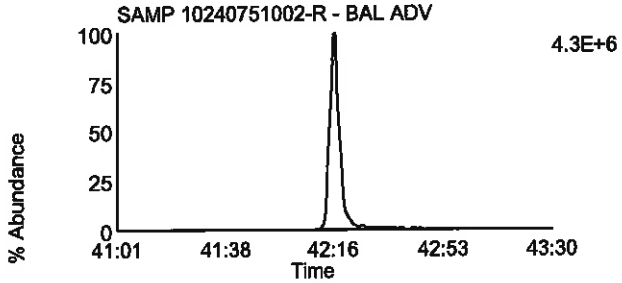
SAMP 10240751002-R - BAL ADV



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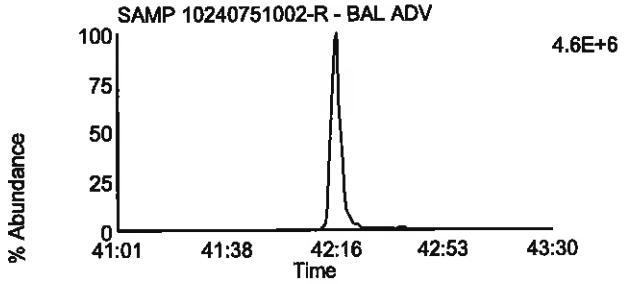

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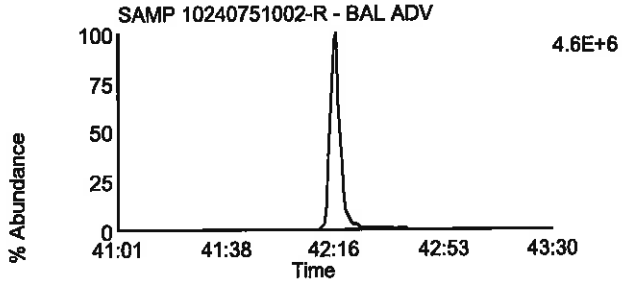
SAMP 10240751002-R - BAL ADV



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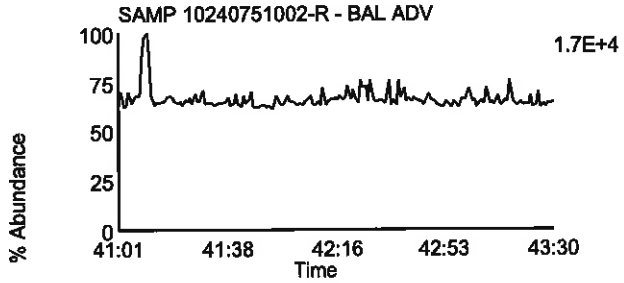

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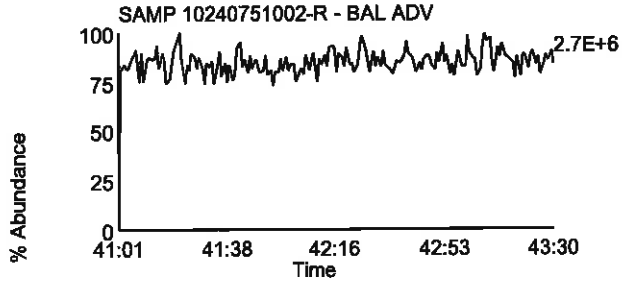

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID	1302547-05 / T-15-14	Injected By	BAL
Lab ID	10240754001-R	Instrument ID	10MSHR05 (F)
Filename	F130921B_11	GC Column ID	USD174324H
Analyzed	09/21/2013 22:11	ICAL ID	F130918

Tetra-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C		21:16	2.90e7	3.63e7	4.25e6	5.47e6	5.430e3	4.073e3	0.80	
2,3,7,8-TCDF		21:18	1.73e7	2.13e7	2.38e6	3.06e6	8.394e3	6.565e3	0.81	
Other TCDF	1	16:43	6.21e6	7.95e6					0.78	
	2	17:07	5.80e6	7.47e6					0.78	
	3	17:33	7.11e6	9.05e6					0.79	
	4	17:51	6.64e6	8.70e6					0.76	
	5	18:01	4.03e7	5.19e7					0.78	
	6	18:20	2.40e7	3.09e7					0.78	
	7	18:41	1.01e7	1.31e7					0.77	
	8	18:48	8.76e6	1.13e7					0.77	
	9	18:58	8.84e6	1.15e7					0.77	
	10	19:27	2.85e7	3.65e7					0.78	
	11	19:34	1.31e7	1.72e7					0.76	
	12	19:45	5.41e7	6.92e7					0.78	
	13	20:14	2.29e7	2.96e7					0.77	
	14	20:32	1.85e7	2.40e7					0.77	
	15	20:45	2.43e7	3.09e7					0.79	
	16	21:01	2.97e7	3.94e7					0.75	
	17	22:04	1.58e6	2.02e6					0.78	
	18	22:29	1.74e6	2.07e6					0.84	
	19	24:15	1.15e6	1.41e6					0.82	
Ethers	1	21:46	5.16e7	6.67e7					0.77	E

Tetra-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C		21:31	2.67e7	3.26e7	4.03e6	5.20e6	3.911e3	3.641e3	0.82	
2,3,7,8-TCDD-13C		22:28	1.98e7	2.39e7	2.77e6	3.43e6	2.961e3	2.656e3	0.83	
2,3,7,8-TCDD-37Cl4		22:29	5.41e6		8.26e5		1.921e3	-----		
2,3,7,8-TCDD		22:30	7.16e5	9.05e5	1.07e5	1.30e5	1.676e3	9.802e2	0.79	
Other TCDD	1	18:17	5.71e7	7.21e7					0.79	
	2	18:38	2.09e7	2.69e7					0.78	
	3	19:01	2.57e6	3.34e6					0.77	
	4	19:49	1.91e5	2.25e5					0.85	
	5	20:04	6.04e6	7.85e6					0.77	
	6	20:19	4.29e6	5.11e6					0.84	
	7	20:32	2.30e6	2.93e6					0.79	
	8	20:48	4.20e5	5.80e5					0.72	
	9	21:04	2.25e6	2.71e6					0.83	
	10	21:32	2.12e6	2.90e6					0.73	
	11	21:40	1.03e6	1.22e6					0.84	

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Client Name	Advanced Technology Labs		
Client ID	1302547-05 / T-15-14	Injected By	BAL
Lab ID	10240754001-R	Instrument ID	10MSHR05 (F)
Filename	F130921B_11	GC Column ID	USD174324H
Analyzed	09/21/2013 22:11	ICAL ID	F130918

	12	22:04	4.58e6	5.73e6	0.80
	13	22:15	8.90e5	1.26e6	0.71
	14	22:56	1.26e6	1.51e6	0.84
	15	23:07	4.20e5	5.28e5	0.80
	16	23:58	4.50e5	5.82e5	0.77

Penta-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C		29:27	3.69e7	2.33e7	5.49e6	3.46e6	1.324e4	1.570e3	1.58	
2,3,4,7,8-PeCDF-13C		31:04	3.59e7	2.32e7	6.21e6	4.23e6	3.752e3	4.116e3	1.55	
1,2,3,7,8-PeCDF		29:26	6.95e6	4.43e6	1.59e6	1.04e6	6.712e3	2.201e3	1.57	
2,3,4,7,8-PeCDF		31:05	2.51e7	1.61e7	4.47e6	2.82e6	2.805e3	2.863e3	1.56	
Other PeCDF	1	27:15	3.60e7	2.32e7					1.55	
	2	27:33	3.53e7	2.24e7					1.57	
	3	28:16	2.97e6	1.93e6					1.54	
	4	28:35	1.52e7	9.38e6					1.62	
	5	28:44	2.65e7	1.68e7					1.57	
	6	30:07	1.05e6	6.10e5					1.73	
	7	30:41	1.84e6	1.19e6					1.55	
	8	30:55	3.97e7	2.57e7					1.54	
	9	31:28	2.45e6	1.63e6					1.51	
	10	32:25	1.15e6	7.96e5					1.44	
	11	24:19	1.21e7	7.29e6					1.66	
Ethers	1	29:08	7.44e6	4.66e6					1.60	E
	2	29:31	2.58e6	1.56e6					1.66	E
	3	29:52	2.96e7	1.94e7					1.53	E

Penta-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C		31:32	2.49e7	1.52e7	4.87e6	3.04e6	7.026e3	3.723e3	1.63	
1,2,3,7,8-PeCDD		31:33	1.15e6	2.04e6	1.13e4	3.98e5	1.659e3	2.519e3	0.57	
Other PeCDD	1	27:41	1.60e7	2.64e7					0.60	
	2	28:38	8.74e5	1.32e6					0.66	
	3	29:32	1.19e7	1.93e7					0.62	
	4	29:49	1.18e6	1.90e6					0.62	
	5	29:60	6.43e6	1.05e7					0.61	
	6	30:19	2.34e6	4.04e6					0.58	
	7	30:52	5.14e6	7.97e6					0.64	
	8	31:39	7.54e5	1.18e6					0.64	
	9	32:07	8.45e5	1.45e6					0.58	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code

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Client Name	Advanced Technology Labs		
Client ID	1302547-05 / T-15-14	Injected By	BAL
Lab ID	10240754001-R	Instrument ID	10MSHR05 (F)
Filename	F130921B_11	GC Column ID	USD174324H
Analyzed	09/21/2013 22:11	ICAL ID	F130918

1,2,3,4,7,8-HxCDF-13C		35:01	1.73e7	3.24e7	4.10e6	7.63e6	1.691e3	1.279e3	0.53	
1,2,3,6,7,8-HxCDF-13C		35:09	1.94e7	3.72e7	4.70e6	8.86e6	1.120e4	1.279e3	0.52	
2,3,4,6,7,8-HxCDF-13C		35:50	1.70e7	3.23e7	4.19e6	8.01e6	1.381e3	1.210e3	0.53	
1,2,3,7,8,9-HxCDF-13C		36:44	1.65e7	3.05e7	4.06e6	7.67e6	2.323e3	7.638e3	0.54	
1,2,3,4,7,8-HxCDF		35:02	1.12e7	9.09e6	2.80e6	2.34e6	2.916e3	2.194e3	1.23	
1,2,3,6,7,8-HxCDF		35:10	1.09e7	8.59e6	2.67e6	2.16e6	2.484e3	2.332e3	1.27	
2,3,4,6,7,8-HxCDF		35:51	1.83e7	1.46e7	4.25e6	3.43e6	3.311e3	3.024e3	1.25	
1,2,3,7,8,9-HxCDF		36:46	2.21e6	1.61e6	5.61e5	4.03e5	3.008e3	2.458e3	1.37	
Other HxCDF	1	33:31	9.70e6	7.55e6					1.28	
	2	33:44	2.77e7	2.16e7					1.28	
	3	33:59	1.50e6	1.14e6					1.31	
	4	34:11	2.01e6	1.55e6					1.29	
	5	34:26	1.15e6	8.90e5					1.29	
	6	35:28	1.80e6	1.54e6					1.17	
Ethers	1	34:54	2.49e7	1.94e7					1.28	E
	2	35:19	1.02e6	7.72e5					1.32	E
	3	35:36	1.36e6	1.10e6					1.24	E

Hexa-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C		36:01	1.98e7	1.56e7	5.40e6	4.30e6	9.369e3	3.771e3	1.27	
1,2,3,6,7,8-HxCDD-13C		36:07	2.03e7	1.59e7	5.49e6	4.14e6	9.107e3	4.436e3	1.28	
1,2,3,7,8,9-HxCDD-13C		36:25	2.91e7	2.29e7	6.99e6	5.71e6	8.108e3	7.170e3	1.27	
1,2,3,4,7,8-HxCDD		36:01	1.23e6	1.03e6	3.55e5	2.90e5	3.934e3	3.074e3	1.20	
1,2,3,6,7,8-HxCDD		36:08	3.04e6	2.42e6	8.41e5	6.88e5	4.619e3	6.813e3	1.26	
1,2,3,7,8,9-HxCDD		36:26	2.27e6	1.69e6	6.07e5	3.98e5	3.320e3	5.426e3	1.34	
Other HxCDD	1	34:16	5.46e6	4.25e6					1.29	
	2	34:57	4.76e7	3.77e7					1.26	
	3	35:16	1.23e7	1.00e7					1.22	
	4	35:22	1.56e6	1.10e6					1.42	
	5	36:19	2.24e6	1.81e6					1.24	

Hepta-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C		38:25	1.02e7	2.24e7	2.53e6	5.54e6	3.539e3	5.983e3	0.46	
1,2,3,4,7,8,9-HpCDF-13C		39:57	8.00e6	1.70e7	2.24e6	4.84e6	2.122e3	2.228e3	0.47	
1,2,3,4,6,7,8-HpCDF		38:26	2.55e7	2.42e7	6.92e6	6.47e6	5.607e3	4.362e3	1.05	
1,2,3,4,7,8,9-HpCDF		39:59	1.01e6	9.15e5	3.07e5	2.54e5	3.407e3	3.136e3	1.10	
Other HpCDF	1	38:43	2.43e6	2.47e6					0.98	
	2	38:54	2.39e6	2.21e6					1.08	
Ethers	1	39:02	1.50e5	1.56e5					0.96	E

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700
Fax: 612-607-6444

Client Name	Advanced Technology Labs		
Client ID	1302547-05 / T-15-14	Injected By	BAL
Lab ID	10240754001-R	Instrument ID	10MSHR05 (F)
Filename	F130921B_11	GC Column ID	USD174324H
Analyzed	09/21/2013 22:11	ICAL ID	F130918

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:30	1.18e7	1.05e7	3.21e6	2.86e6	6.349e3	1.913e4	1.12	
1,2,3,4,6,7,8-HpCDD	39:31	1.74e7	1.64e7	4.89e6	4.58e6	4.006e3	8.592e3	1.06	
Other HpCDD 1	38:45	1.66e7	1.53e7					1.08	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:25	2.29e6	2.58e6	6.05e5	6.85e5	2.298e3	1.808e3	0.89	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:17	1.76e7	1.88e7	4.34e6	4.56e6	1.842e3	9.224e2	0.93	
OCDD	42:17	3.82e7	4.37e7	9.60e6	1.10e7	1.980e3	1.992e3	0.87	

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Appendix E

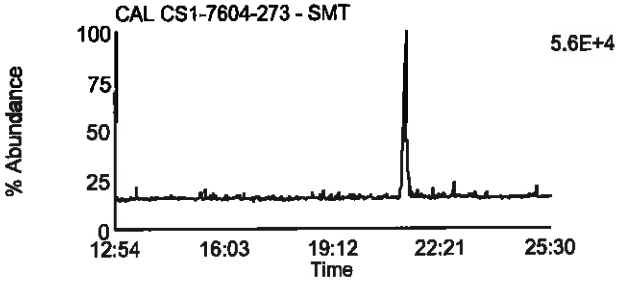
Calibration Raw Data

Homologue Group: Tetras

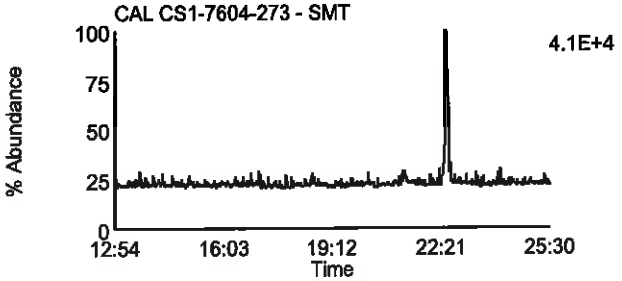
Data File Name: F130918B_04
Date Acquired: 9/18/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR05 (F)

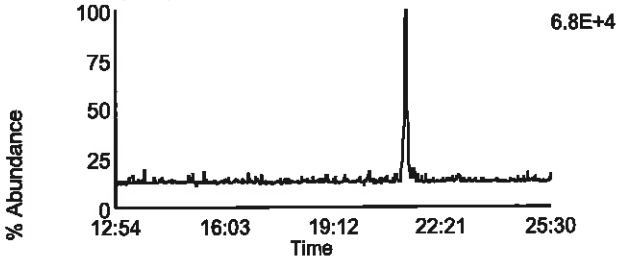
Data File: F130918B_04 G1 C1 - 303.9016
CAL CS1-7604-273 - SMT



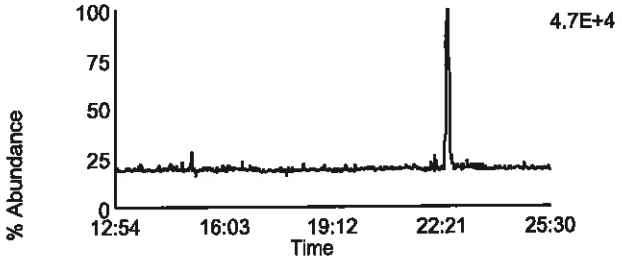
Data File: F130918B_04 G1 C7 - 319.8965
CAL CS1-7604-273 - SMT



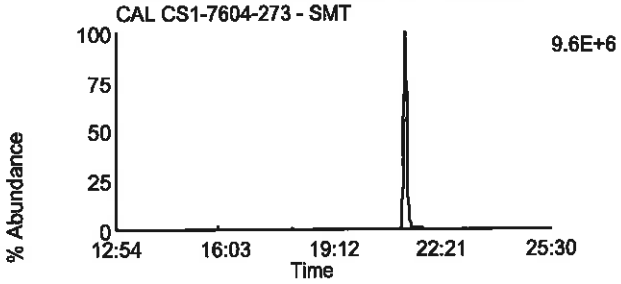
Data File: F130918B_04 G1 C2 - 305.8987
CAL CS1-7604-273 - SMT



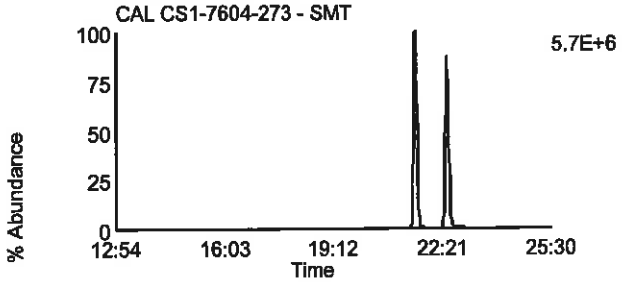
Data File: F130918B_04 G1 C8 - 321.8936
CAL CS1-7604-273 - SMT



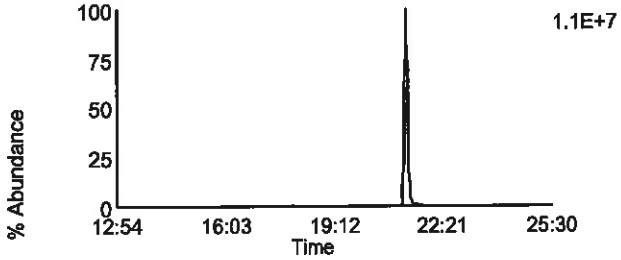
Data File: F130918B_04 G1 C3 - 315.9418
CAL CS1-7604-273 - SMT



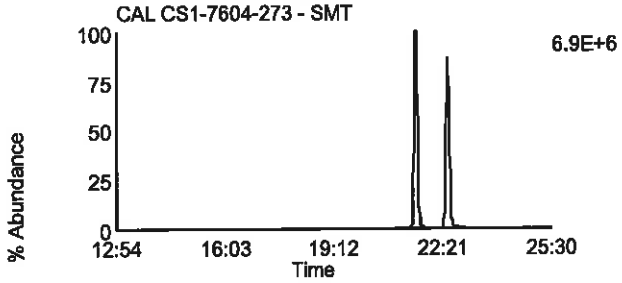
Data File: F130918B_04 G1 C10 - 331.9367
CAL CS1-7604-273 - SMT



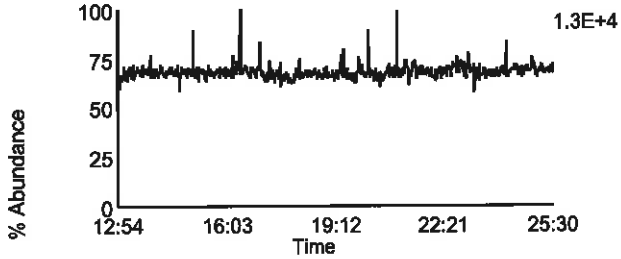
Data File: F130918B_04 G1 C4 - 317.9389
CAL CS1-7604-273 - SMT



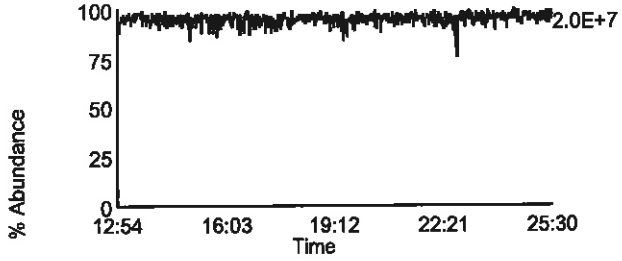
Data File: F130918B_04 G1 C11 - 333.9338
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G1 C14 - 375.8364
CAL CS1-7604-273 - SMT



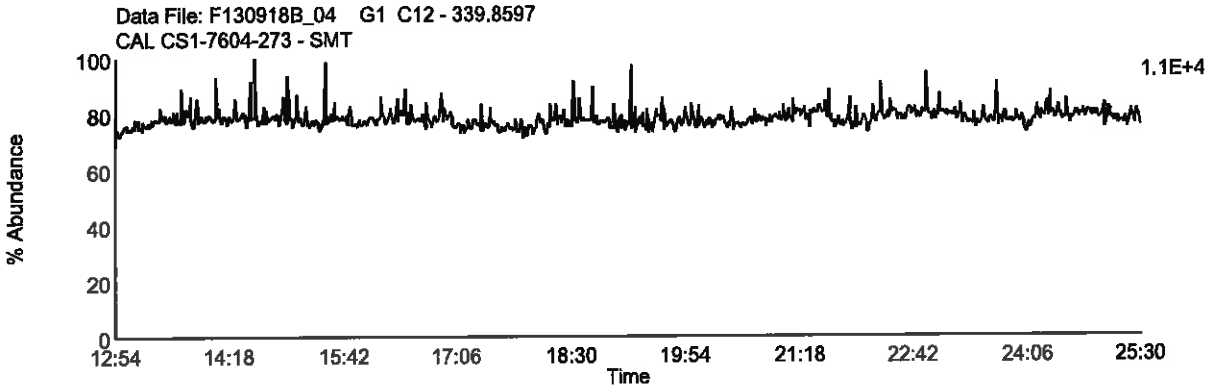
Data File: F130918B_04 G1 C5 - 318.9792
CAL CS1-7604-273 - SMT

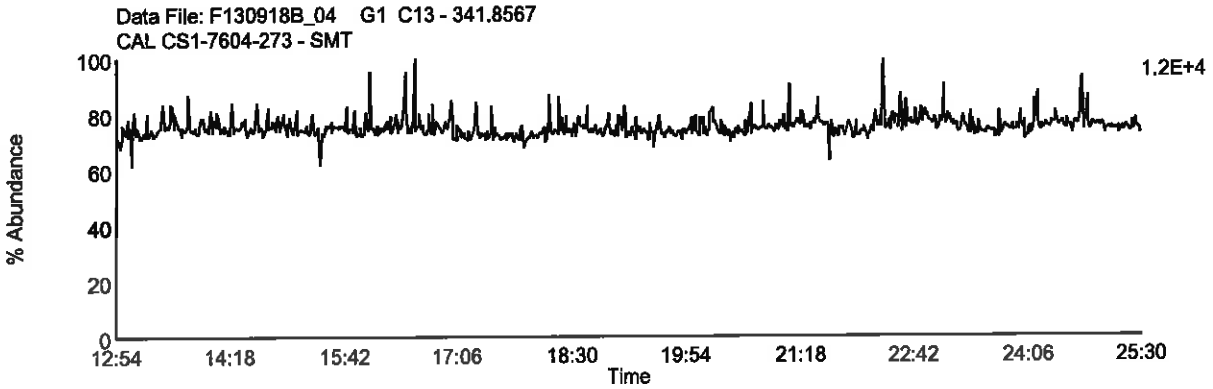


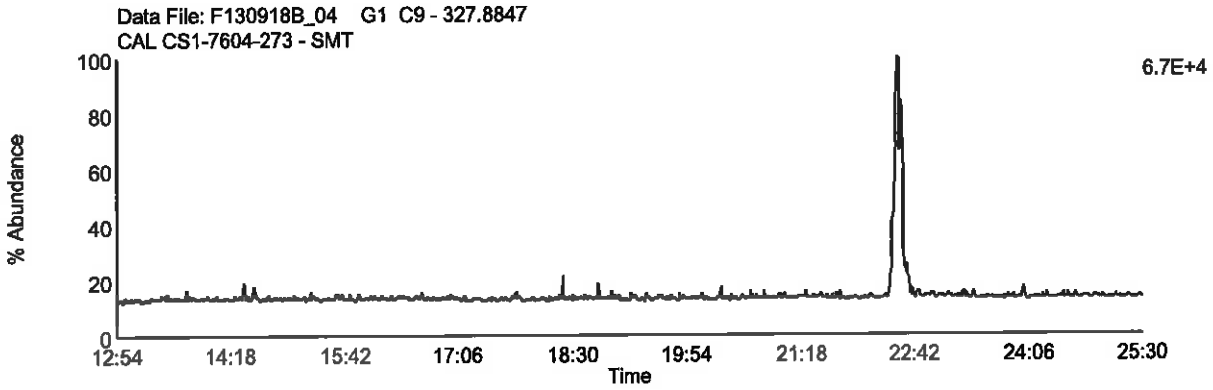
Homologue Group: Penta & Cleanup

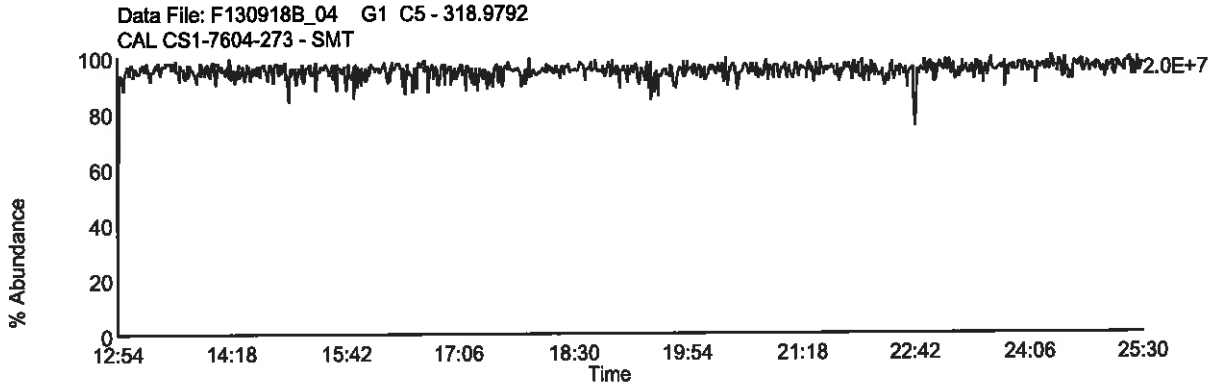
Data File Name: F130918B_04
Date Acquired: 9/18/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR05 (F)







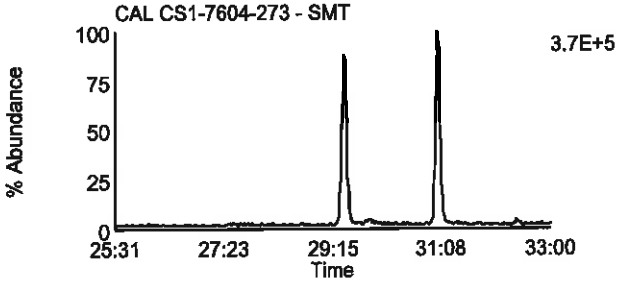


Homologue Group: Pentas

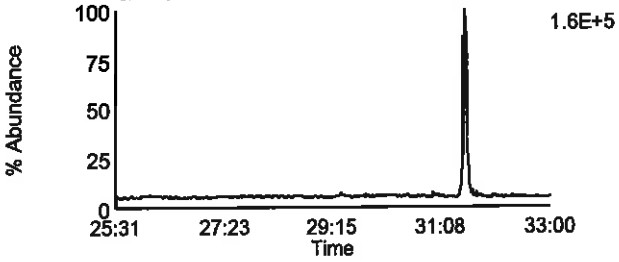
Data File Name: F130918B_04
Date Acquired: 9/18/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR05 (F)

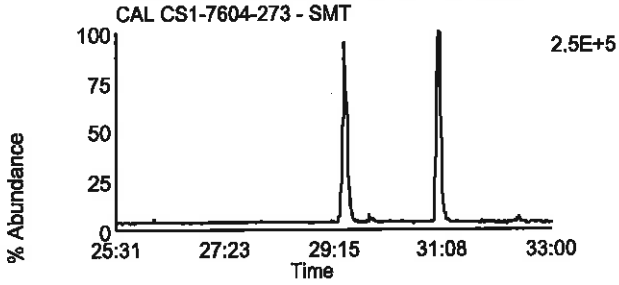
Data File: F130918B_04 G2 C1 - 339.8597
CAL CS1-7604-273 - SMT



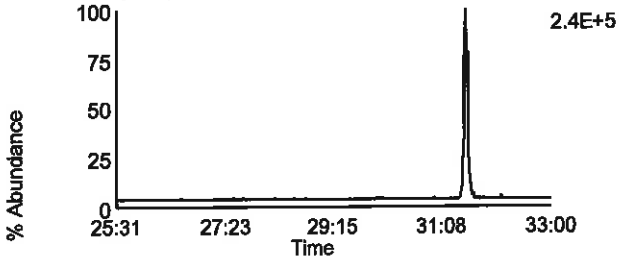
Data File: F130918B_04 G2 C4 - 353.8576
CAL CS1-7604-273 - SMT



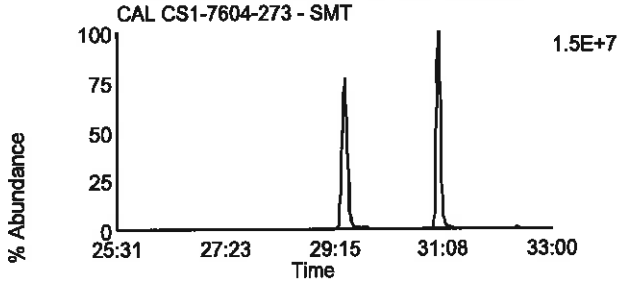
Data File: F130918B_04 G2 C2 - 341.8567
CAL CS1-7604-273 - SMT



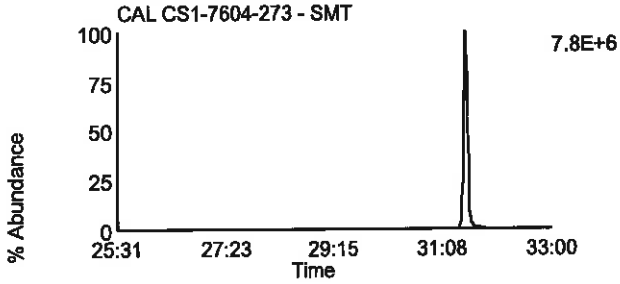
Data File: F130918B_04 G2 C8 - 355.8546
CAL CS1-7604-273 - SMT



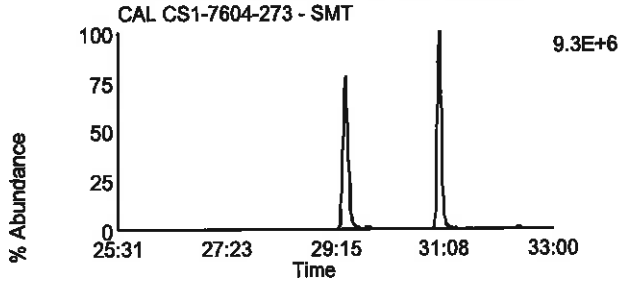
Data File: F130918B_04 G2 C3 - 351.8999
CAL CS1-7604-273 - SMT



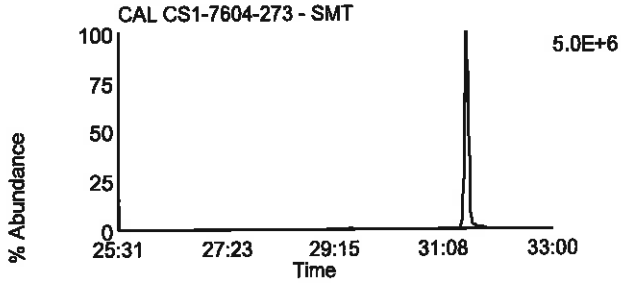
Data File: F130918B_04 G2 C10 - 367.8948
CAL CS1-7604-273 - SMT



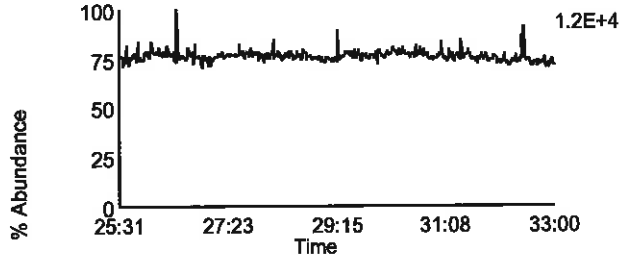
Data File: F130918B_04 G2 C5 - 353.8969
CAL CS1-7604-273 - SMT



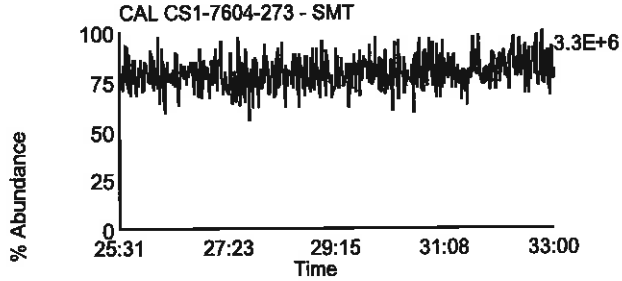
Data File: F130918B_04 G2 C11 - 369.8918
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G2 C12 - 409.7974
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G2 C6 - 354.9792
CAL CS1-7604-273 - SMT

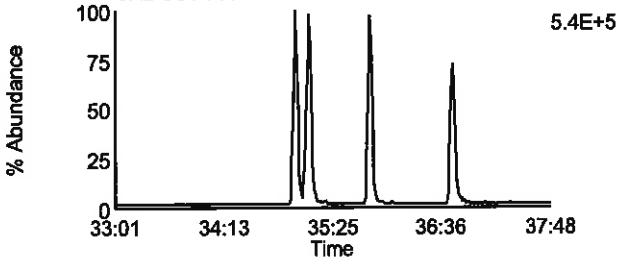


Homologue Group: Hexas

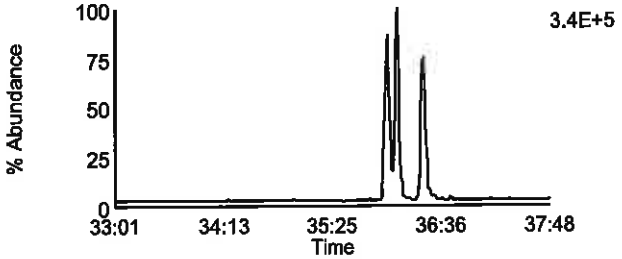
Data File Name: F130918B_04
Date Acquired: 9/18/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130918B_04 G3 C1 - 373.8207
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G3 C7 - 389.8156
CAL CS1-7604-273 - SMT



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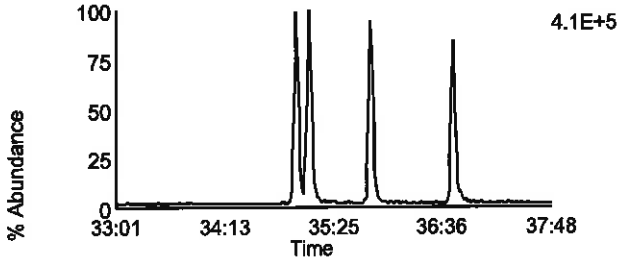
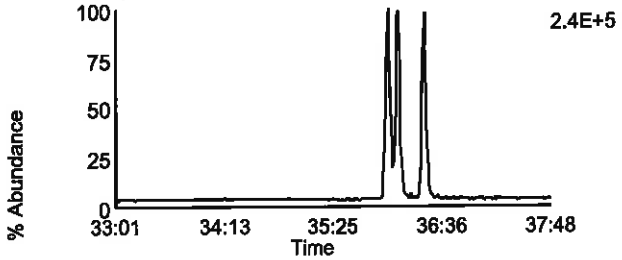
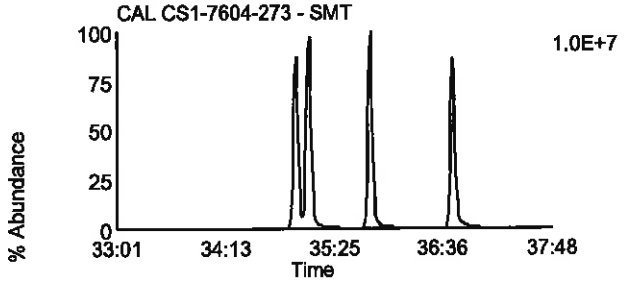
CAL CS1-7604-273 - SMT



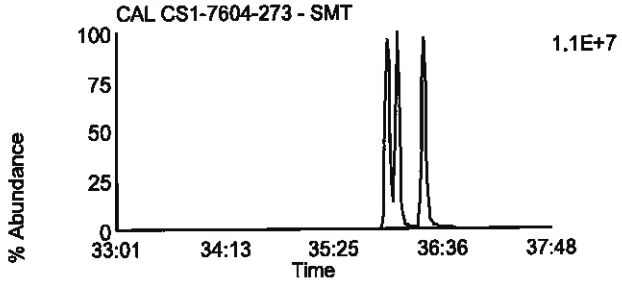
Data File: F130918B_04 G3 C8 - 391.8127
CAL CS1-7604-273 - SMT



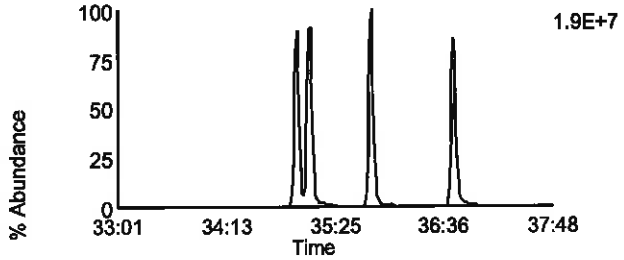
Data File: F130918B_04 G3 C5 - 383.8639
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G3 C9 - 401.8559
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G3 C6 - 385.861
CAL CS1-7604-273 - SMT



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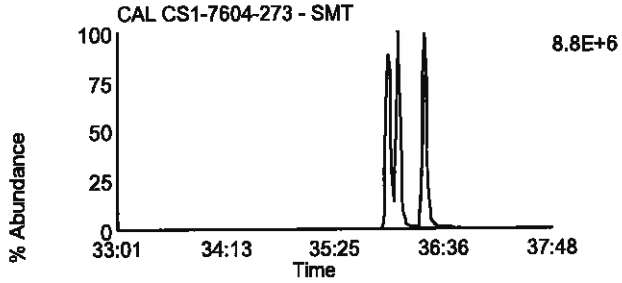
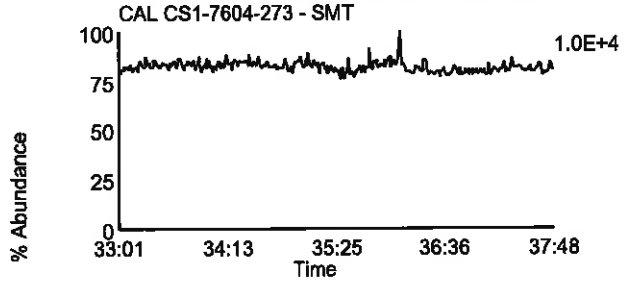
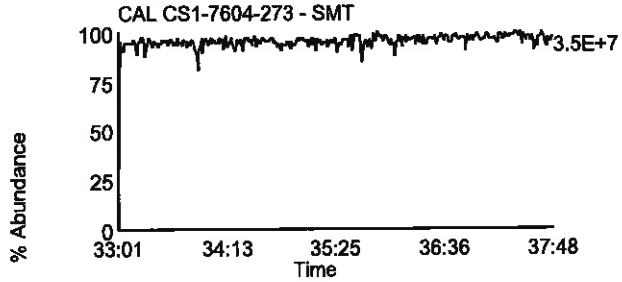
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G3 C11 - 445.7555
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G3 C3 - 380.976
CAL CS1-7604-273 - SMT

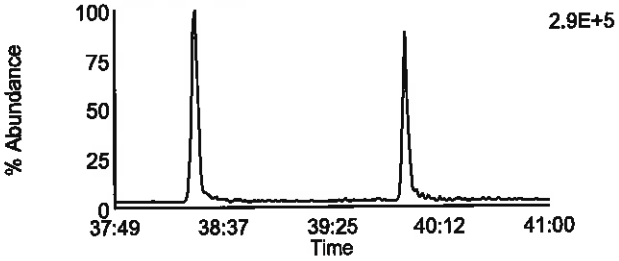


Homologue Group: Heptas

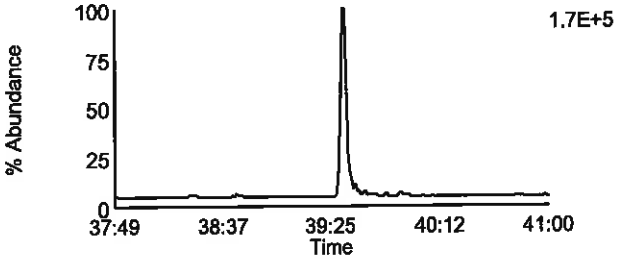
Data File Name: F130918B_04
Date Acquired: 9/18/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR05 (F)

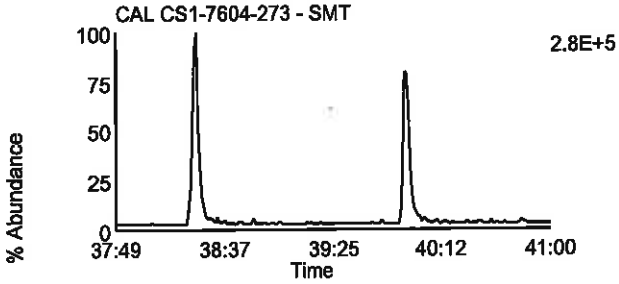
Data File: F130918B_04 G4 C3 - 407.7818
CAL CS1-7604-273 - SMT



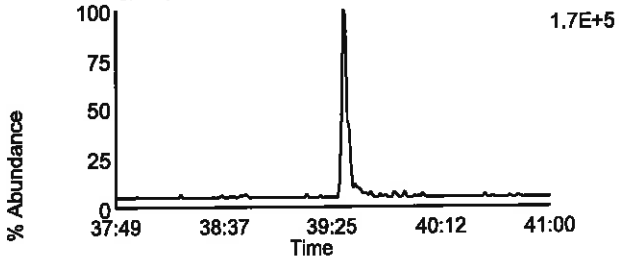
Data File: F130918B_04 G4 C8 - 423.7767
CAL CS1-7604-273 - SMT



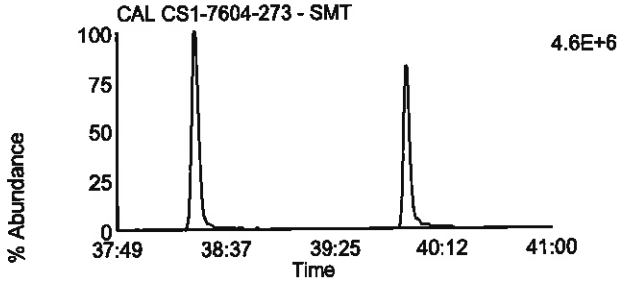
Data File: F130918B_04 G4 C4 - 409.7788
CAL CS1-7604-273 - SMT



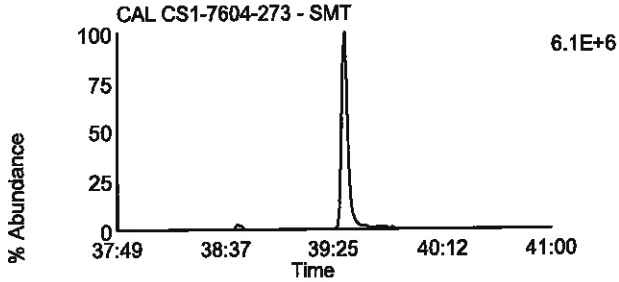
Data File: F130918B_04 G4 C9 - 425.7737
CAL CS1-7604-273 - SMT



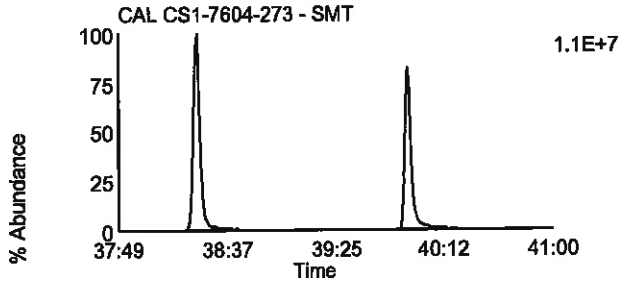
Data File: F130918B_04 G4 C6 - 417.825
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G4 C11 - 435.8169
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G4 C7 - 419.822
CAL CS1-7604-273 - SMT



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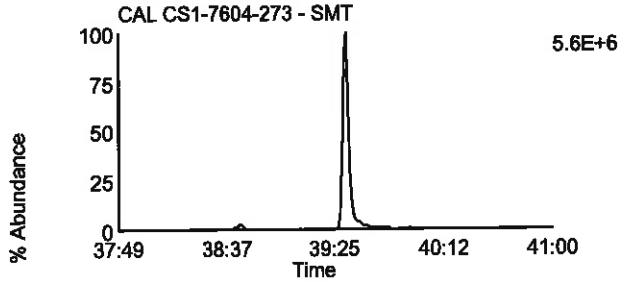
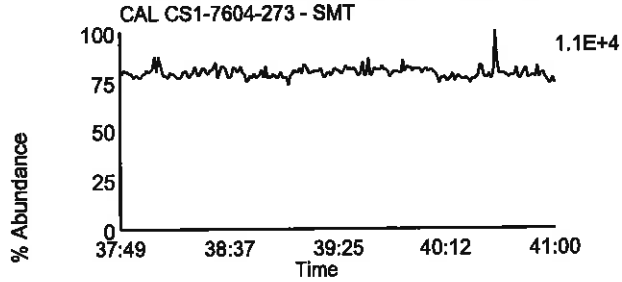
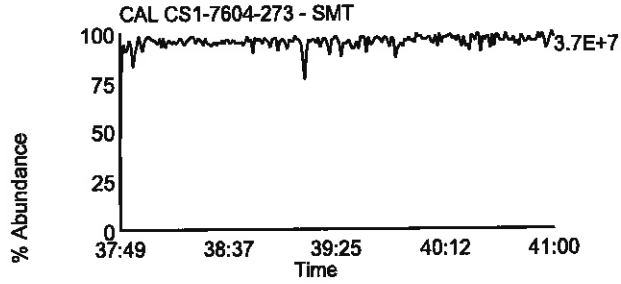


Data File: F130918B_04 G4 C13 - 479.7165
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G4 C1 - 380.976
CAL CS1-7604-273 - SMT

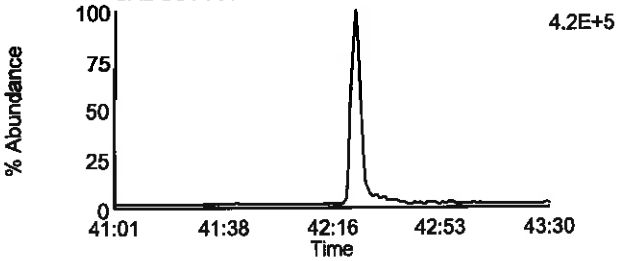


Homologue Group: Octas

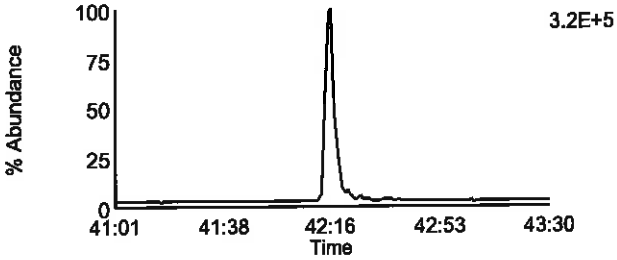
Data File Name: F130918B_04
Date Acquired: 9/18/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR05 (F)

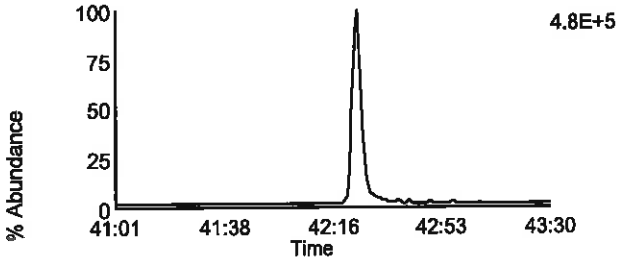
Data File: F130918B_04 G5 C4 - 441.7428
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G5 C8 - 457.7377
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G5 C5 - 443.7398
CAL CS1-7604-273 - SMT



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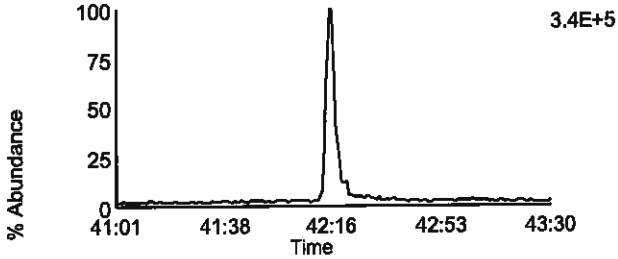
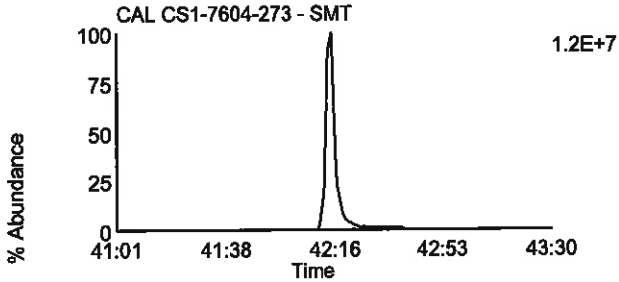
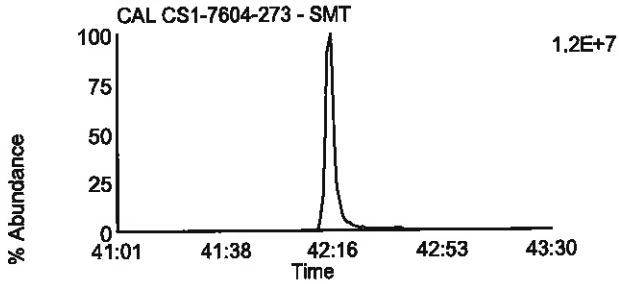
CAL CS1-7604-273 - SMT



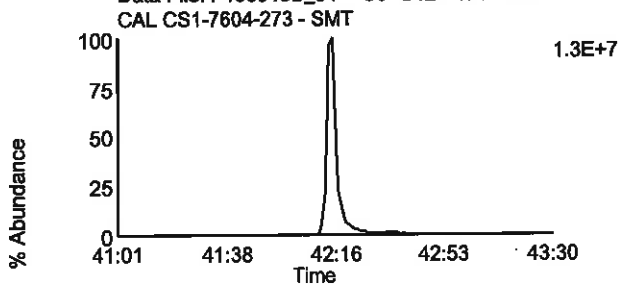
Data File: F130918B_04 G5 C11 - 469.7779
CAL CS1-7604-273 - SMT



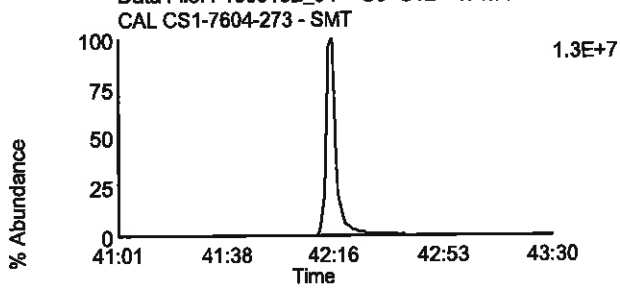
Data File: F130918B_04 G5 C11 - 469.7779
CAL CS1-7604-273 - SMT



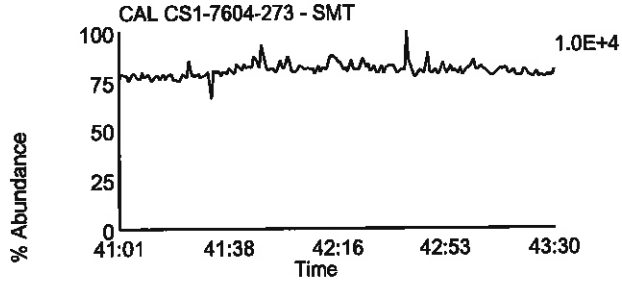
Data File: F130918B_04 G5 C12 - 471.7749
CAL CS1-7604-273 - SMT



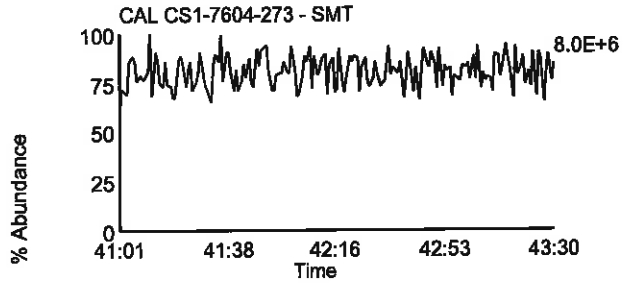
Data File: F130918B_04 G5 C12 - 471.7749
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G5 C13 - 513.6775
CAL CS1-7604-273 - SMT



Data File: F130918B_04 G5 C2 - 430.9728
CAL CS1-7604-273 - SMT

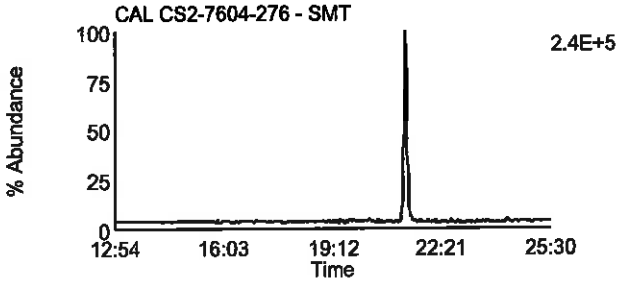


Homologue Group: Tetras

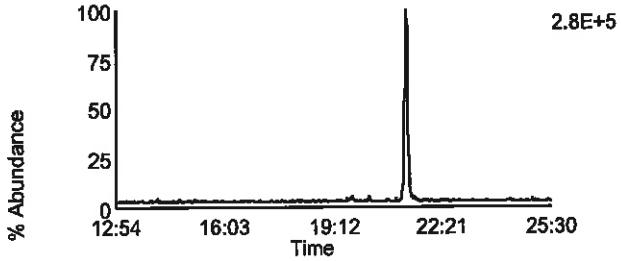
Data File Name: F130918B_03
Date Acquired: 9/18/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR05 (F)

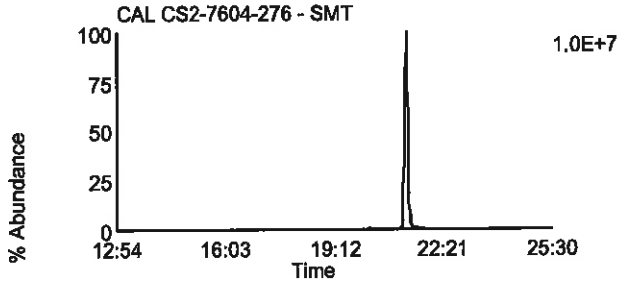
Data File: F130918B_03 G1 C1 - 303.9016
CAL CS2-7604-276 - SMT



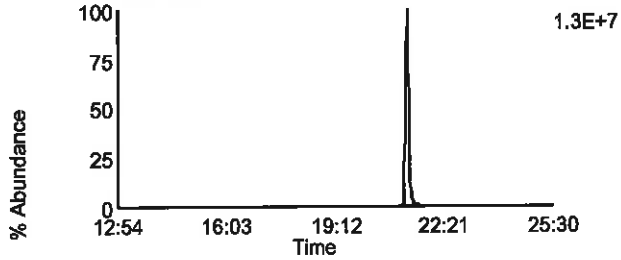
Data File: F130918B_03 G1 C2 - 305.8987
CAL CS2-7604-276 - SMT



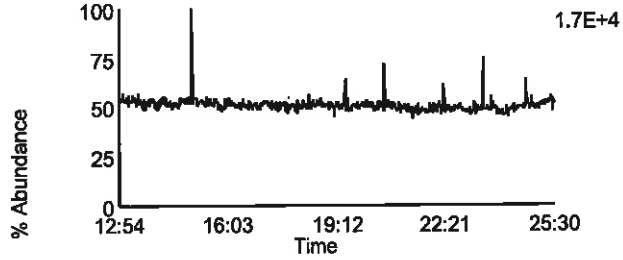
Data File: F130918B_03 G1 C3 - 315.9418
CAL CS2-7604-276 - SMT



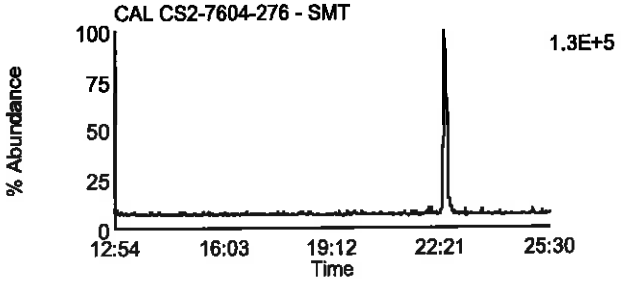
Data File: F130918B_03 G1 C4 - 317.9389
CAL CS2-7604-276 - SMT



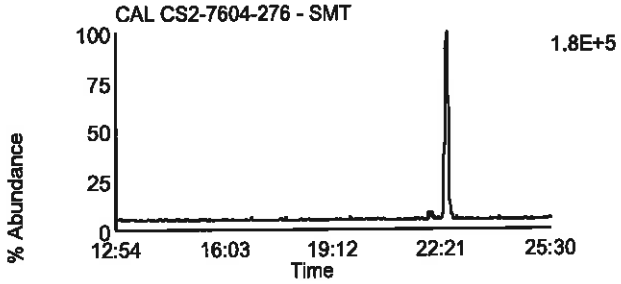
Data File: F130918B_03 G1 C14 - 375.8364
CAL CS2-7604-276 - SMT



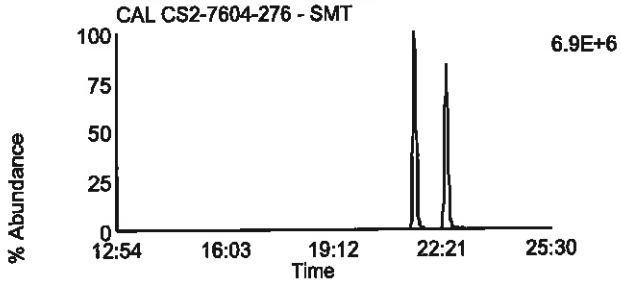
Data File: F130918B_03 G1 C7 - 319.8965
CAL CS2-7604-276 - SMT



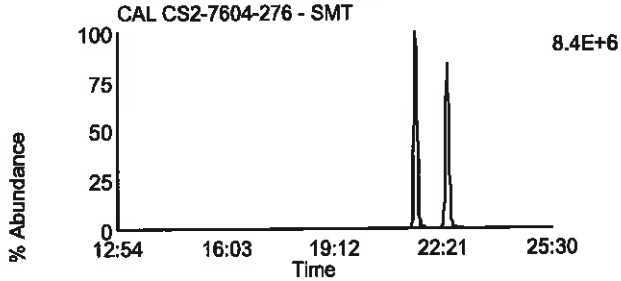
Data File: F130918B_03 G1 C8 - 321.8936
CAL CS2-7604-276 - SMT



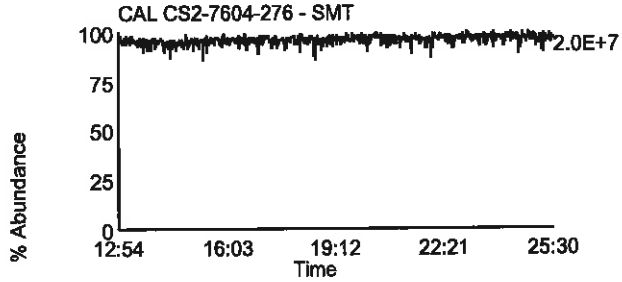
Data File: F130918B_03 G1 C10 - 331.9367
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G1 C11 - 333.9338
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G1 C5 - 318.9792
CAL CS2-7604-276 - SMT

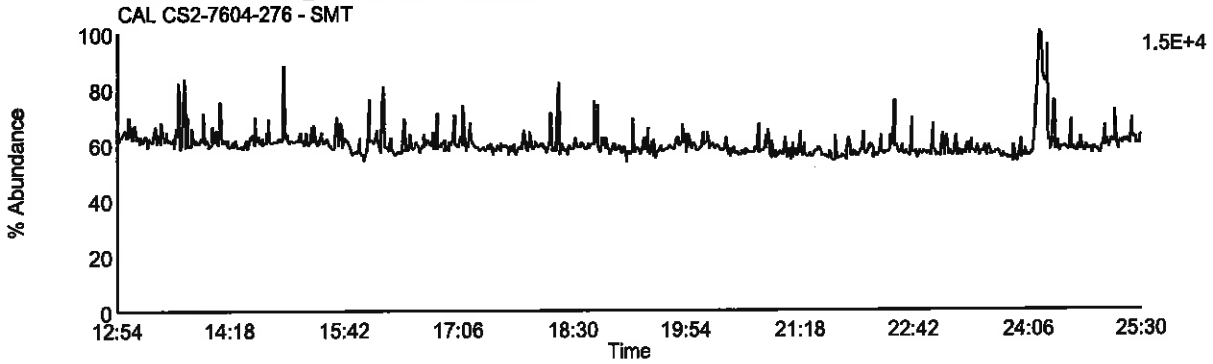


Homologue Group: Penta & Cleanup

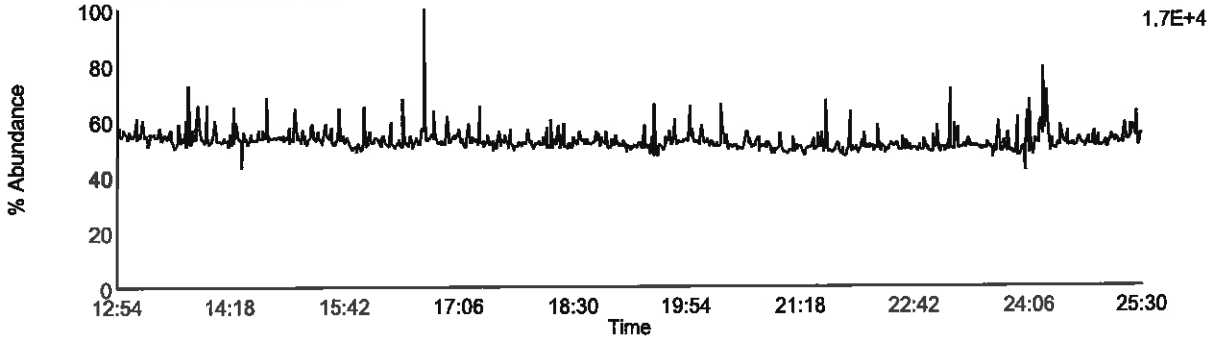
Data File Name: F130918B_03
Date Acquired: 9/18/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR05 (F)

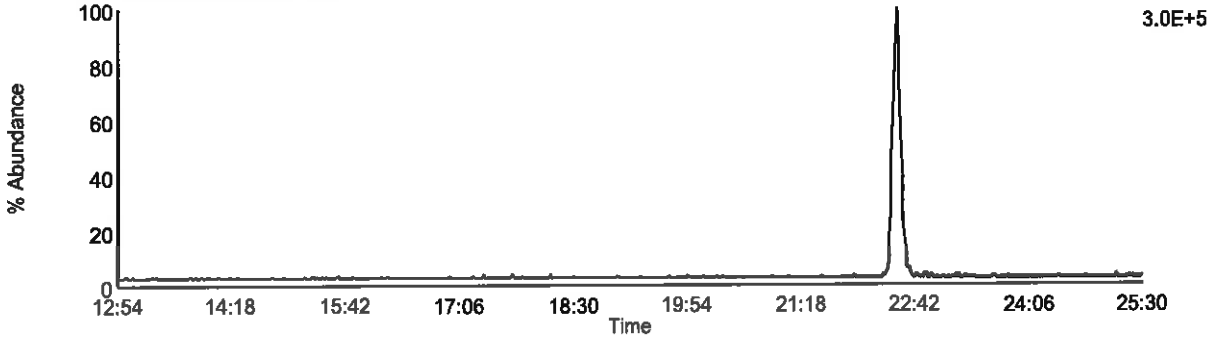
Data File: F130918B_03 G1 C12 - 339.8597
CAL CS2-7604-276 - SMT



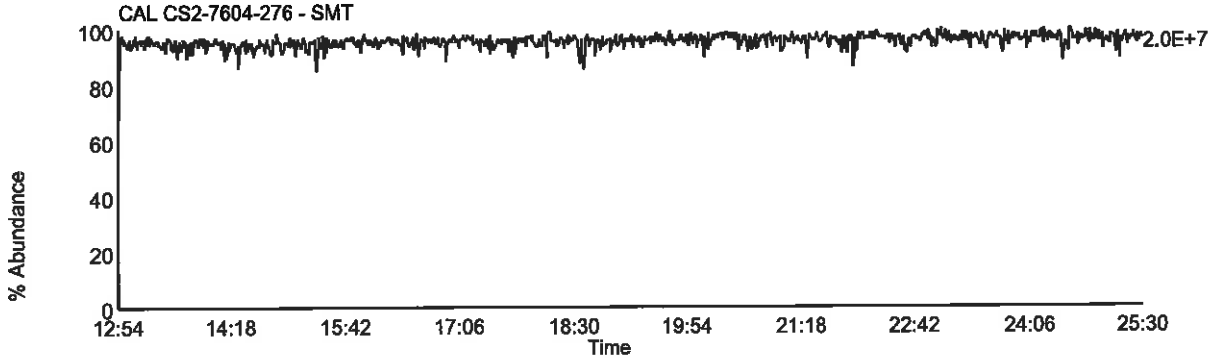
Data File: F130918B_03 G1 C13 - 341.8567
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G1 C9 - 327.8847
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G1 C5 - 318.9792
CAL CS2-7604-276 - SMT

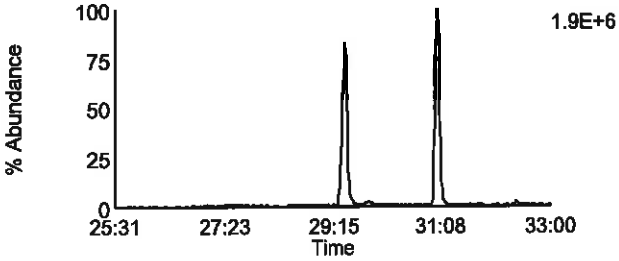


Homologue Group: Pentas

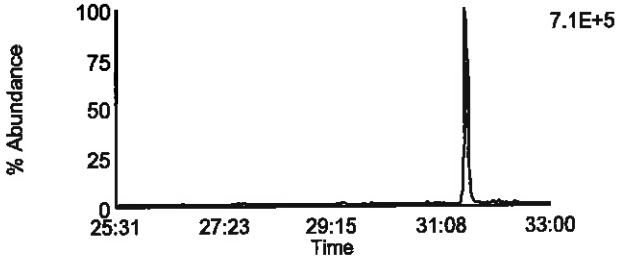
Data File Name: F130918B_03
Date Acquired: 9/18/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR05 (F)

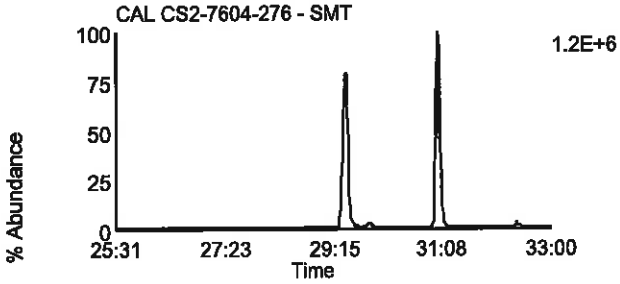
Data File: F130918B_03 G2 C1 - 339.8597
CAL CS2-7604-276 - SMT



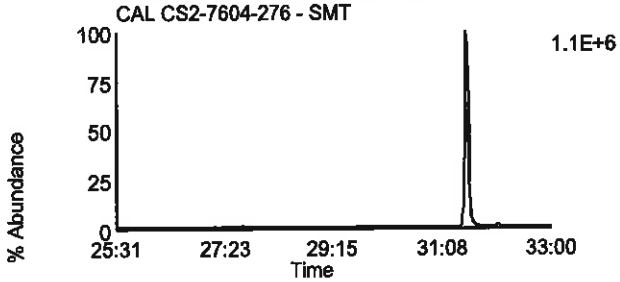
Data File: F130918B_03 G2 C4 - 353.8576
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G2 C2 - 341.8567
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G2 C8 - 355.8546
CAL CS2-7604-276 - SMT



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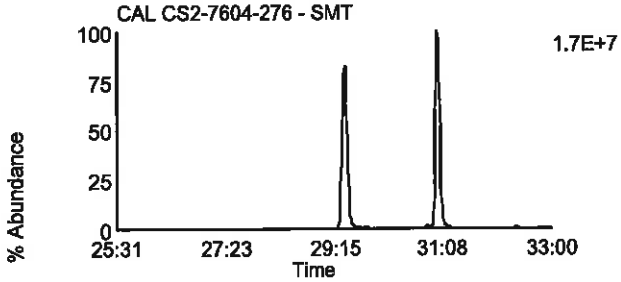
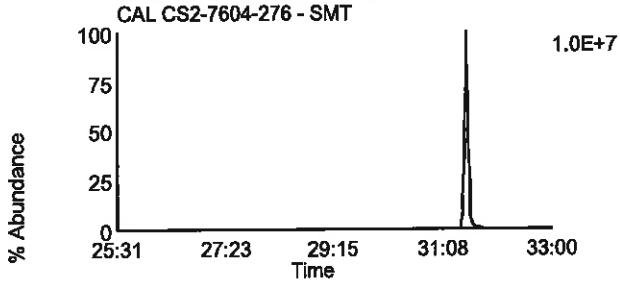
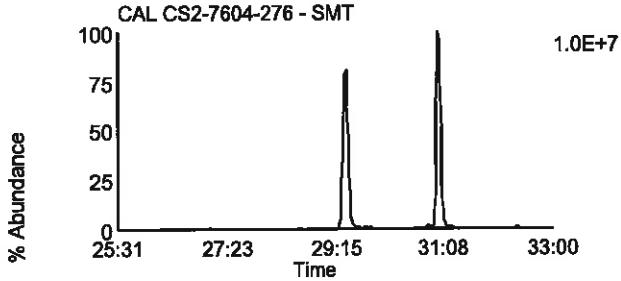
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G2 C10 - 367.8948
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G2 C5 - 353.8969
CAL CS2-7604-276 - SMT



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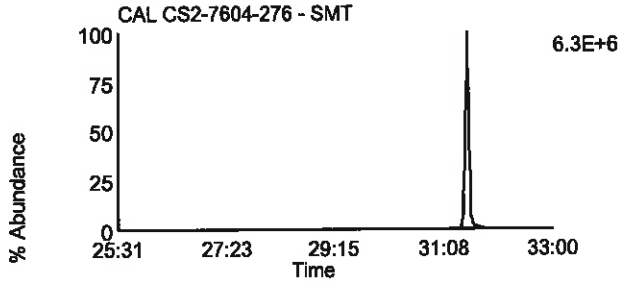
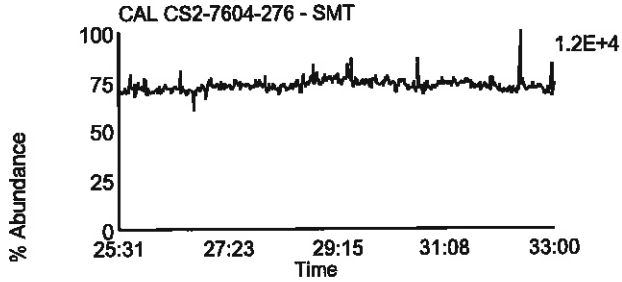
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G2 C12 - 409.7974
CAL CS2-7604-276 - SMT



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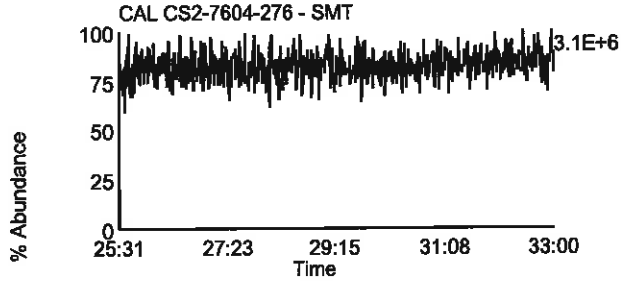
CAL CS2-7604-276 - SMT

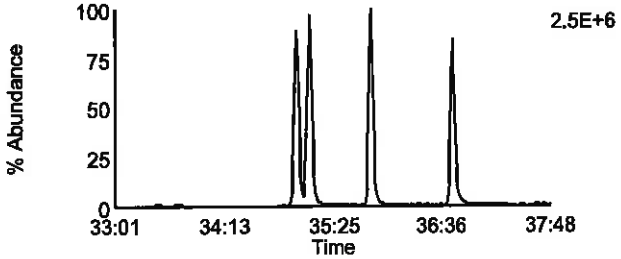


Homologue Group: Hexas

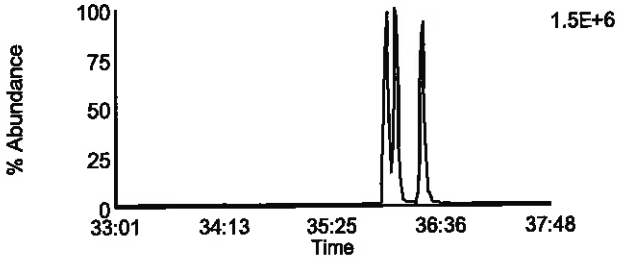
Data File Name: F130918B_03
Date Acquired: 9/18/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR05 (F)

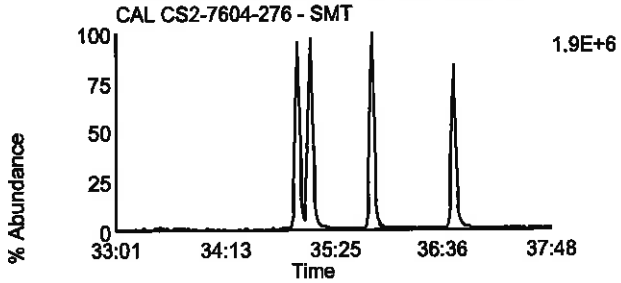
Data File: F130918B_03 G3 C1 - 373.8207
CAL CS2-7604-276 - SMT



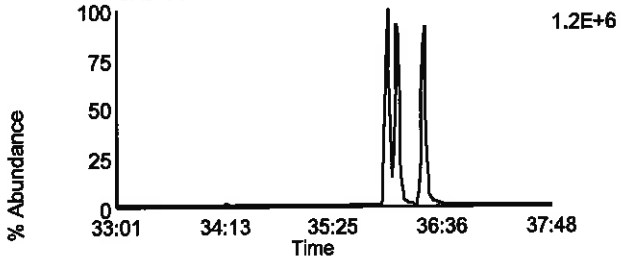
Data File: F130918B_03 G3 C7 - 389.8156
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G3 C2 - 375.8178
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G3 C8 - 391.8127
CAL CS2-7604-276 - SMT



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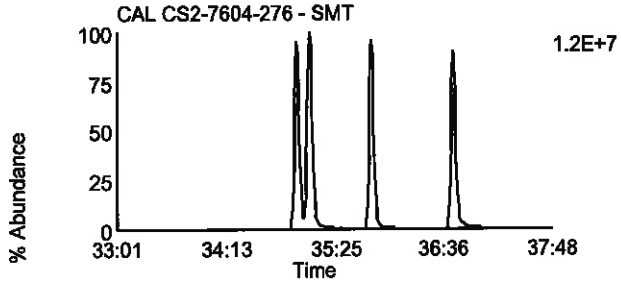
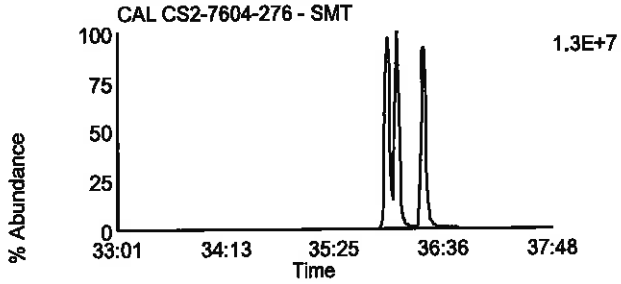
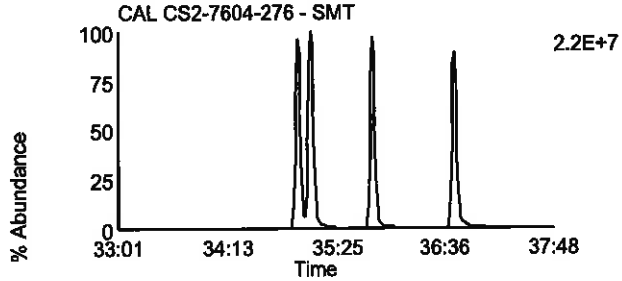
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G3 C9 - 401.8559
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G3 C6 - 385.861
CAL CS2-7604-276 - SMT



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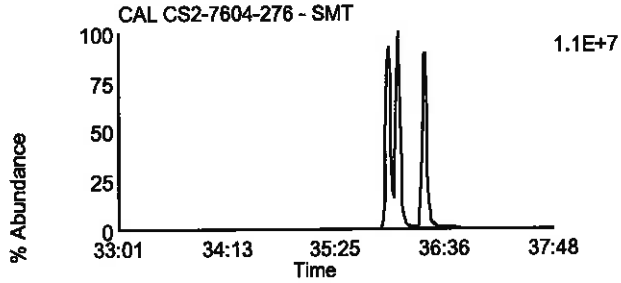
CAL CS2-7604-276 - SMT



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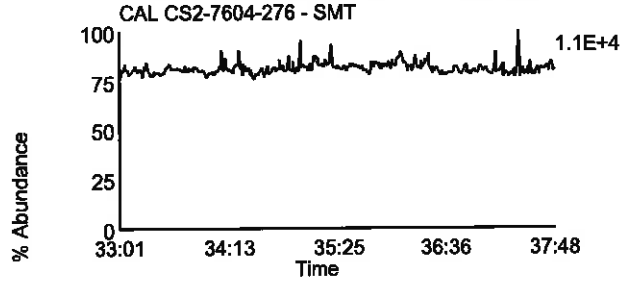
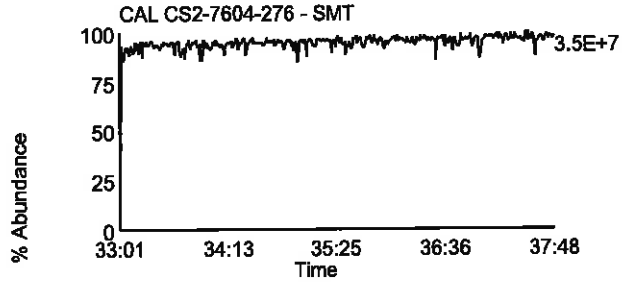
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G3 C3 - 380.976
CAL CS2-7604-276 - SMT

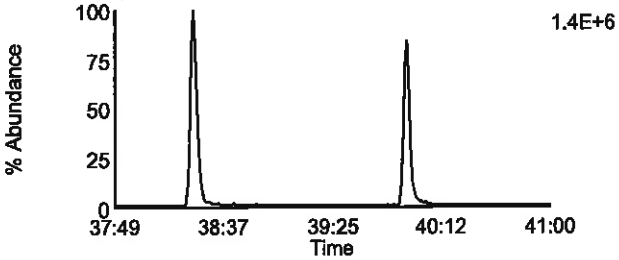


Homologue Group: Heptas

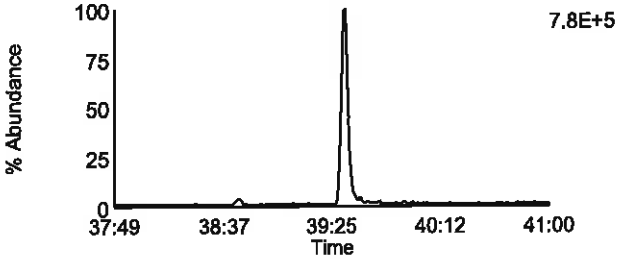
Data File Name: F130918B_03
Date Acquired: 9/18/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR05 (F)

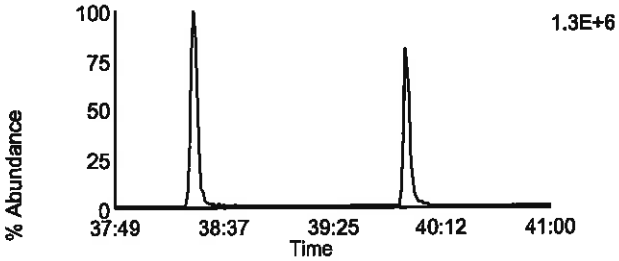
Data File: F130918B_03 G4 C3 - 407.7818
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G4 C8 - 423.7767
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G4 C4 - 409.7788
CAL CS2-7604-276 - SMT



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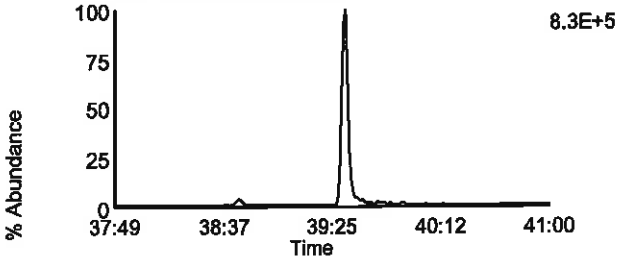
CAL CS2-7604-276 - SMT



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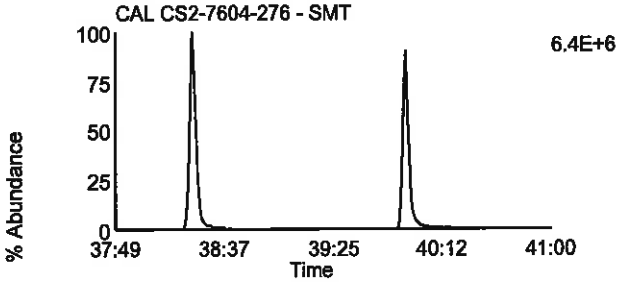
CAL CS2-7604-276 - SMT



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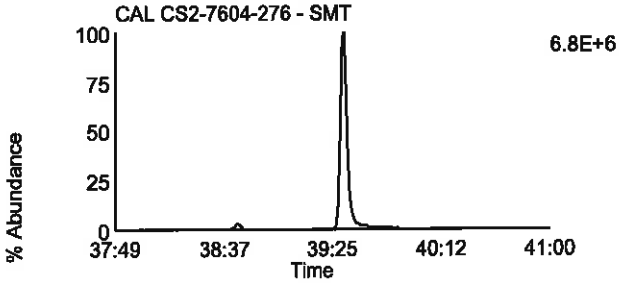
CAL CS2-7604-276 - SMT



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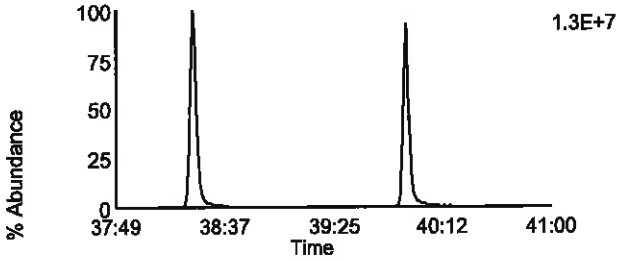
CAL CS2-7604-276 - SMT



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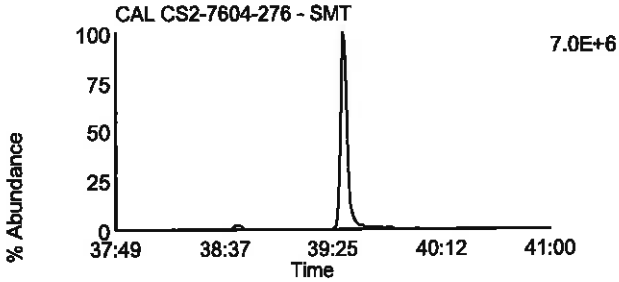
CAL CS2-7604-276 - SMT



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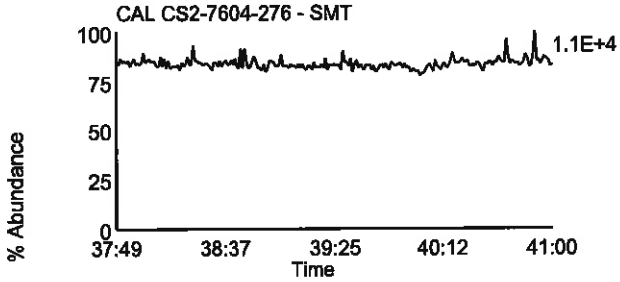
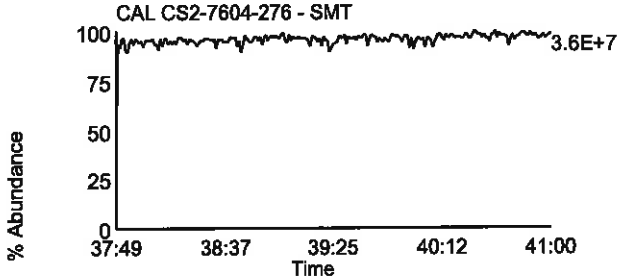
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G4 C1 - 380.976
CAL CS2-7604-276 - SMT

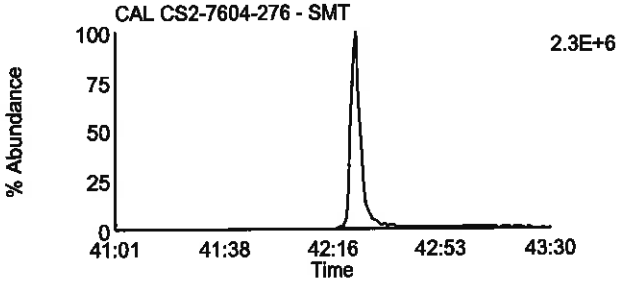


Homologue Group: Octas

Data File Name: F130918B_03
Date Acquired: 9/18/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130918B_03 G5 C4 - 441.7428
CAL CS2-7604-276 - SMT



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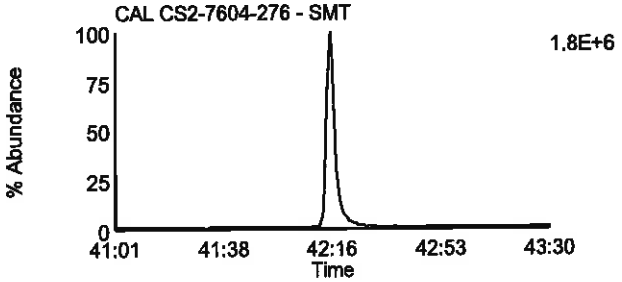
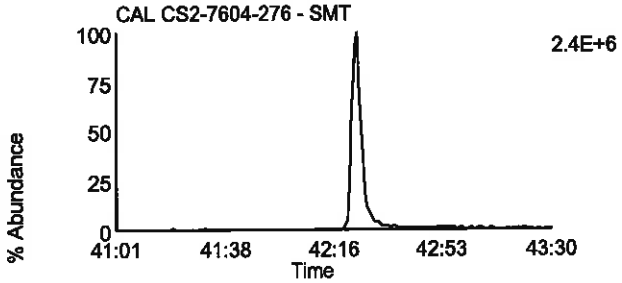
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G5 C5 - 443.7398
CAL CS2-7604-276 - SMT



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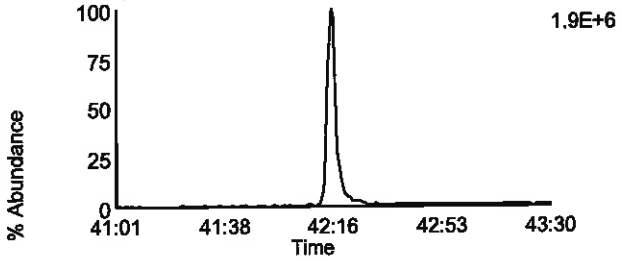
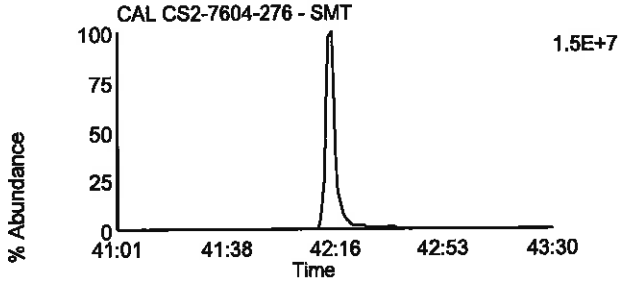
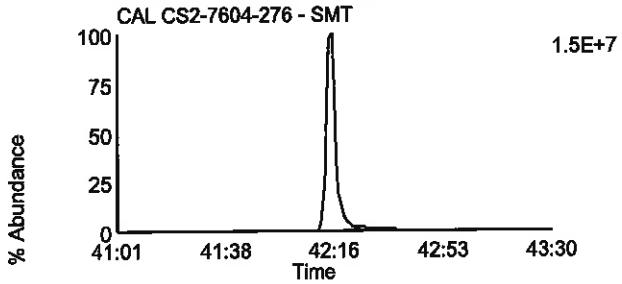
CAL CS2-7604-276 - SMT



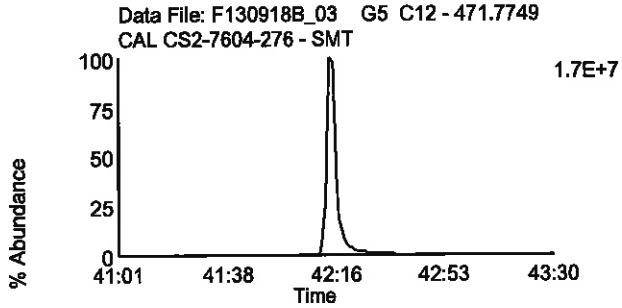
Data File: F130918B_03 G5 C11 - 469.7779
CAL CS2-7604-276 - SMT



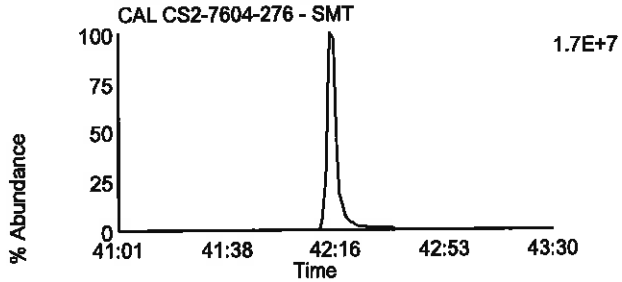
Data File: F130918B_03 G5 C11 - 469.7779
CAL CS2-7604-276 - SMT



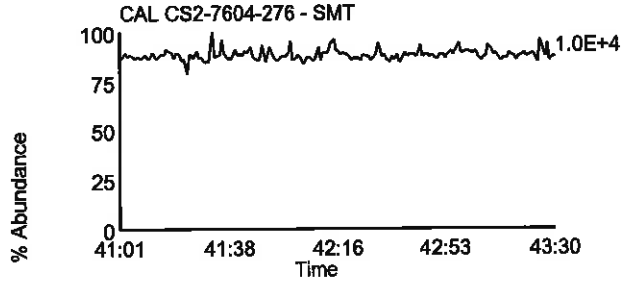
Data File: F130918B_03 G5 C12 - 471.7749
CAL CS2-7604-276 - SMT



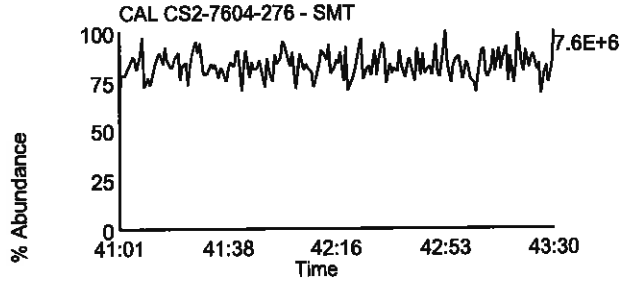
Data File: F130918B_03 G5 C12 - 471.7749
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G5 C13 - 513.6775
CAL CS2-7604-276 - SMT



Data File: F130918B_03 G5 C2 - 430.9728
CAL CS2-7604-276 - SMT

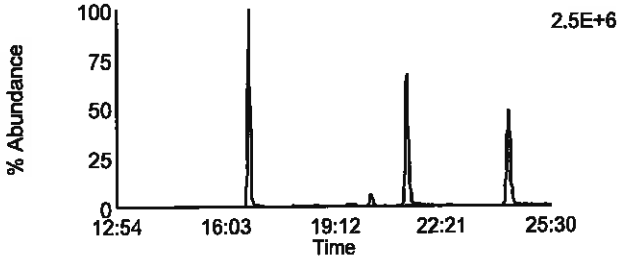


Homologue Group: Tetras

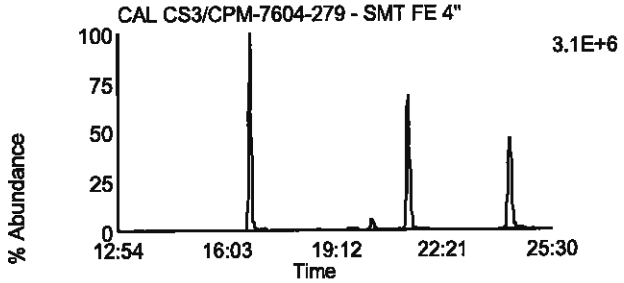
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

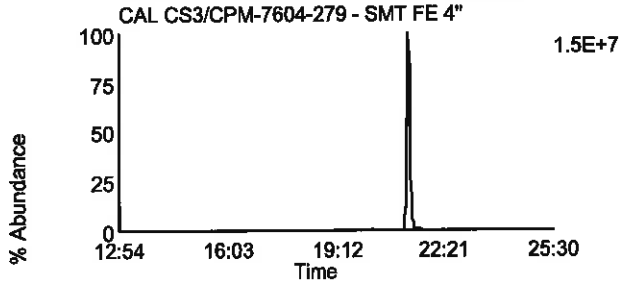
Data File: F130918B_02 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - SMT FE 4"



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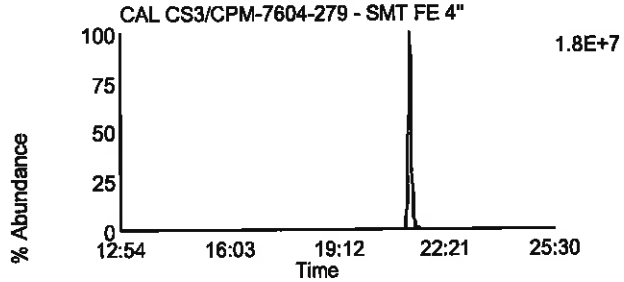
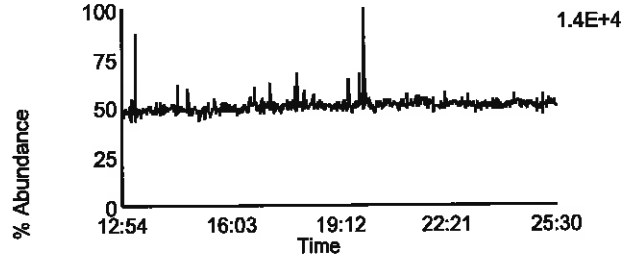
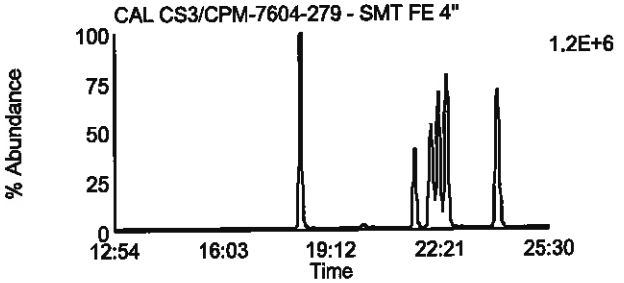
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - SMT FE 4"



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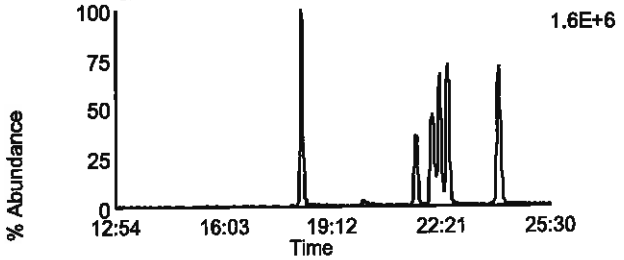
CAL CS3/CPM-7604-279 - SMT FE 4"



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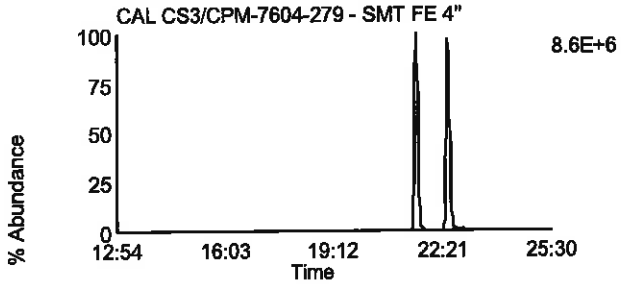
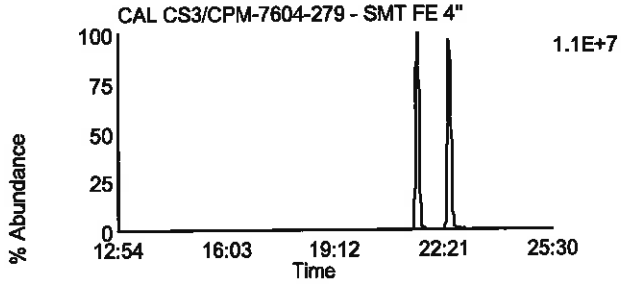
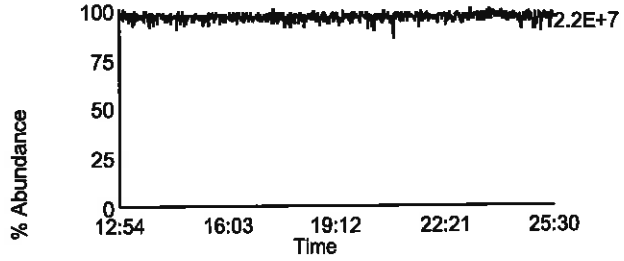
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT FE 4"

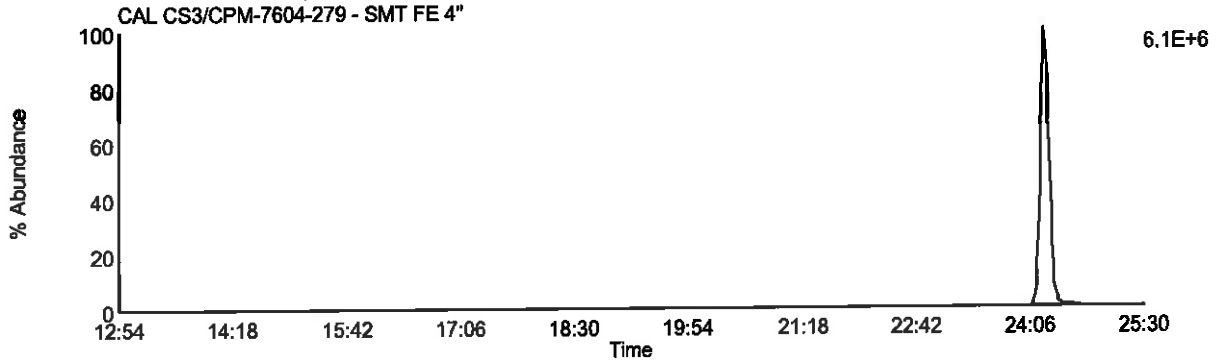


Homologue Group: Penta & Cleanup

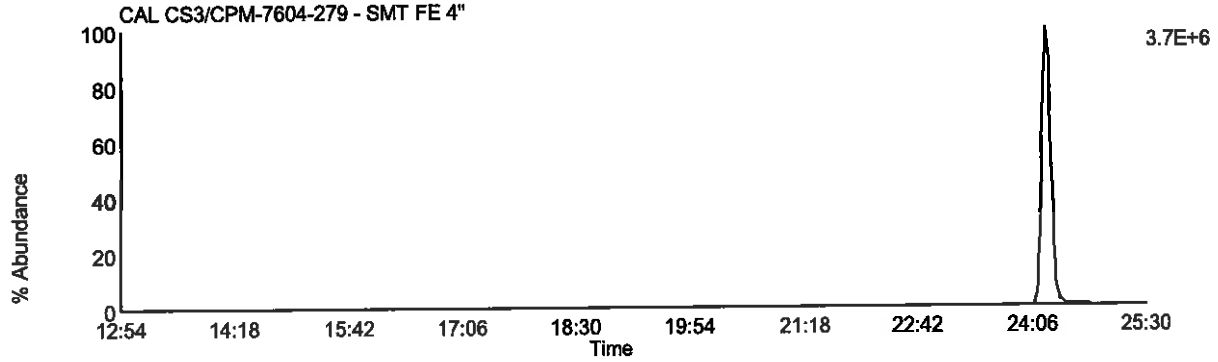
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

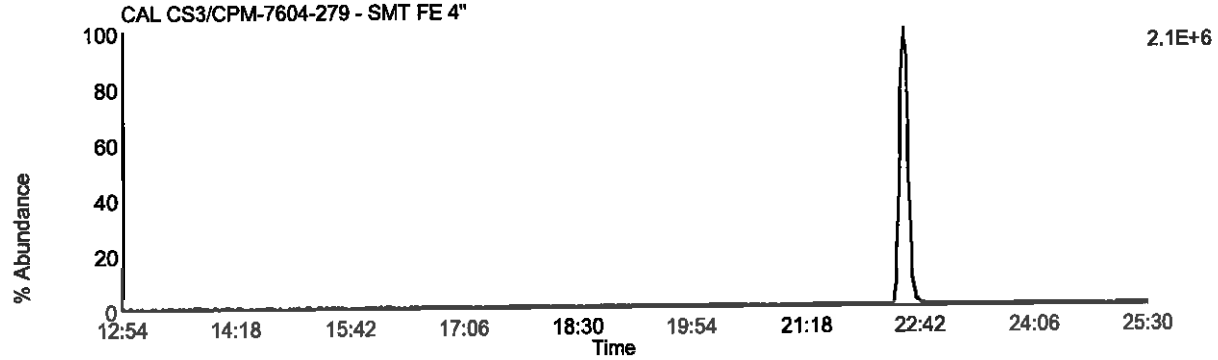
Data File: F130918B_02 G1 C12 - 339.8597
CAL CS3/CPM-7604-279 - SMT FE 4"



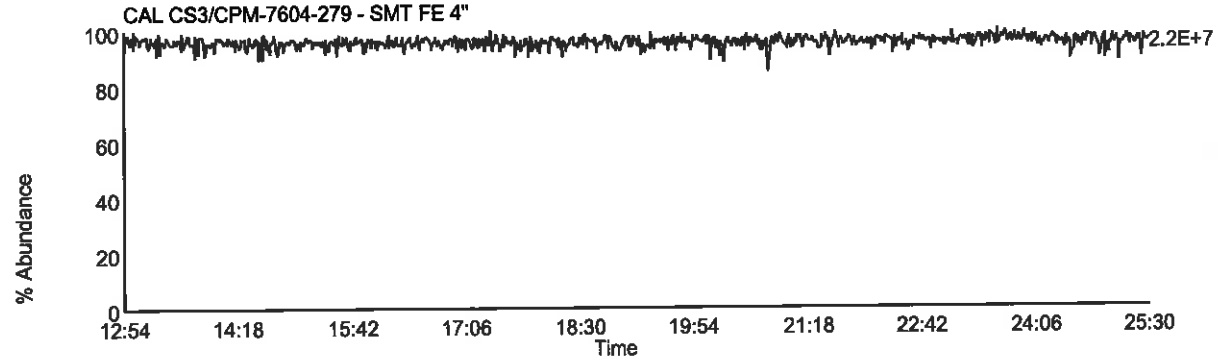
Data File: F130918B_02 G1 C13 - 341.8567
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C9 - 327.8847
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT FE 4"

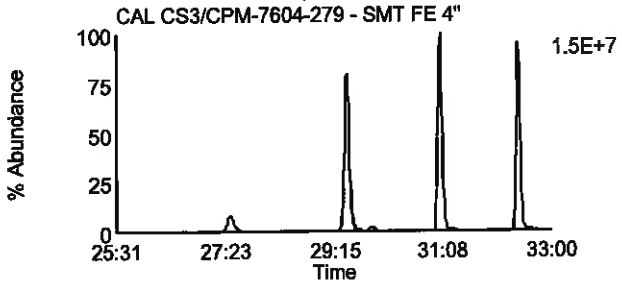


Homologue Group: Pentas

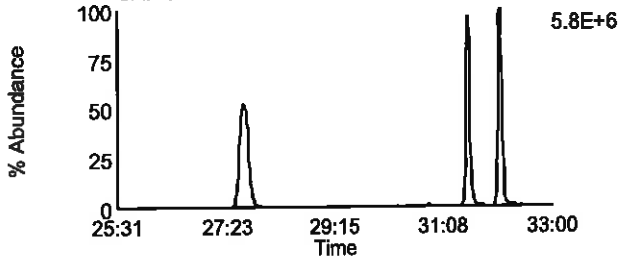
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

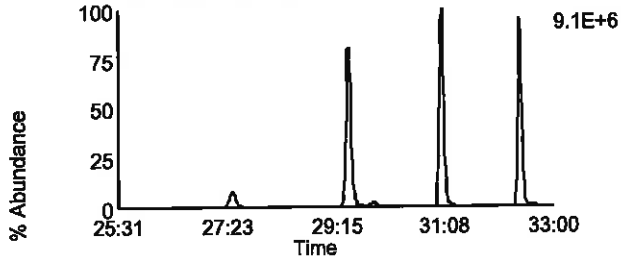
Data File: F130918B_02 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - SMT FE 4"



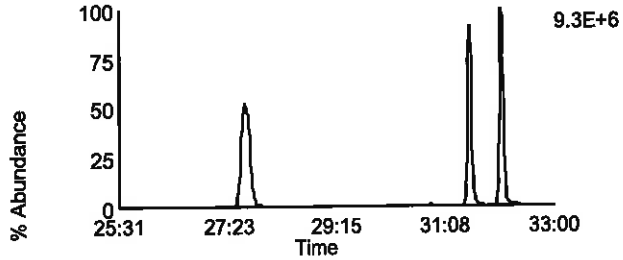
Data File: F130918B_02 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - SMT FE 4"



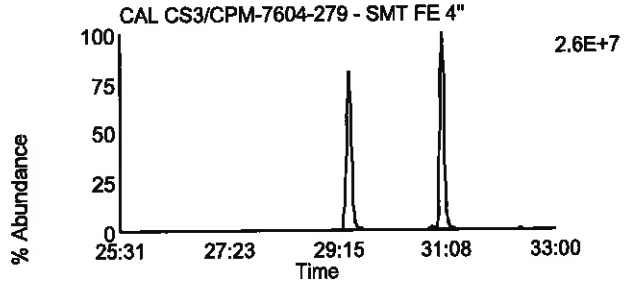
Data File: F130918B_02 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - SMT FE 4"



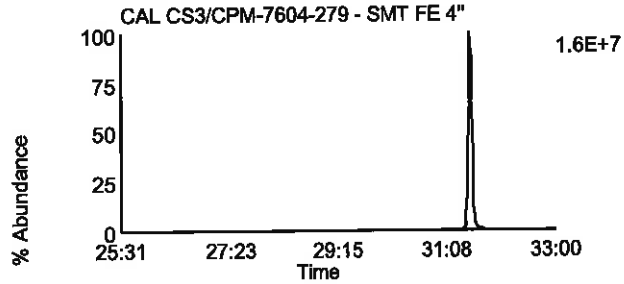
Data File: F130918B_02 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - SMT FE 4"



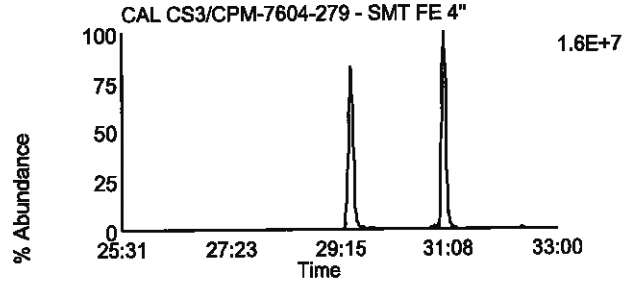
Data File: F130918B_02 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - SMT FE 4"



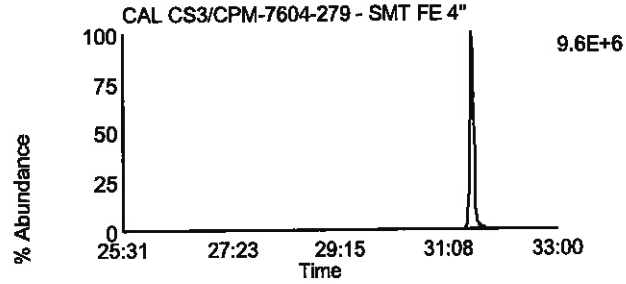
Data File: F130918B_02 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - SMT FE 4"



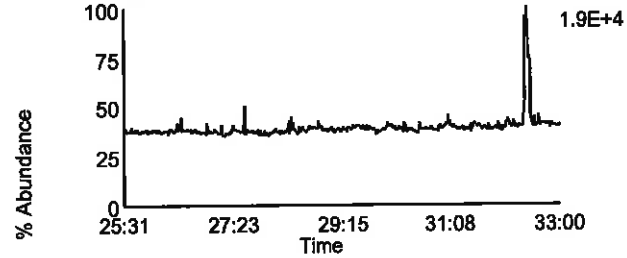
Data File: F130918B_02 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - SMT FE 4"



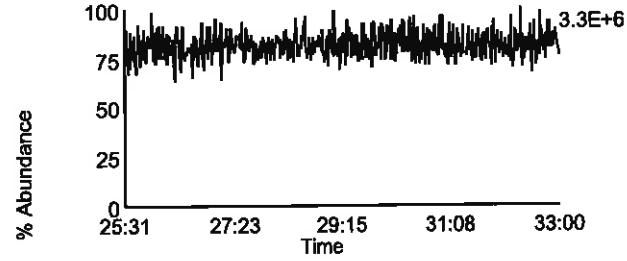
Data File: F130918B_02 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - SMT FE 4"

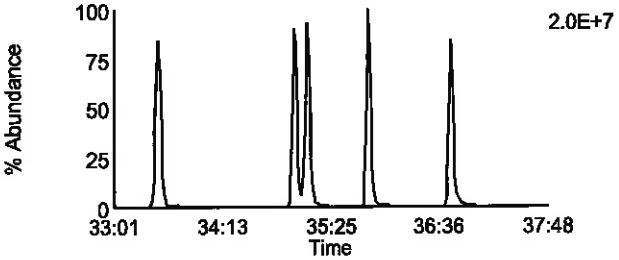


Homologue Group: Hexas

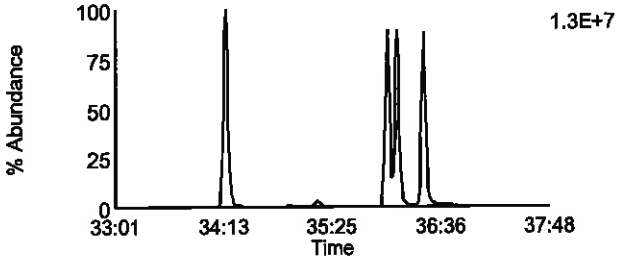
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

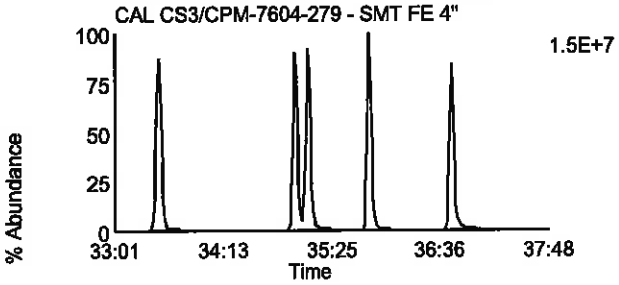
Data File: F130918B_02 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - SMT FE 4"



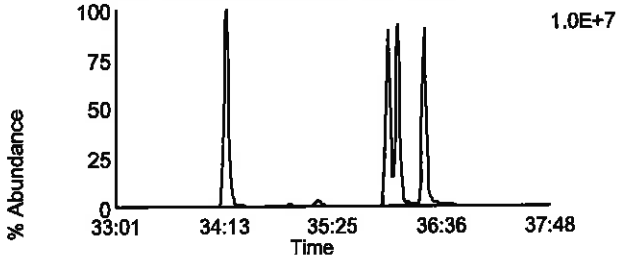
Data File: F130918B_02 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - SMT FE 4"



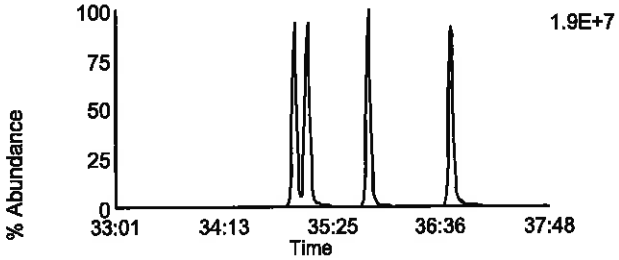
Data File: F130918B_02 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G3 C5 - 383.8639
CAL CS3/CPM-7604-279 - SMT FE 4"



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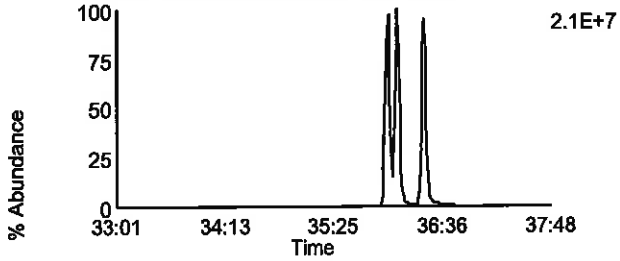
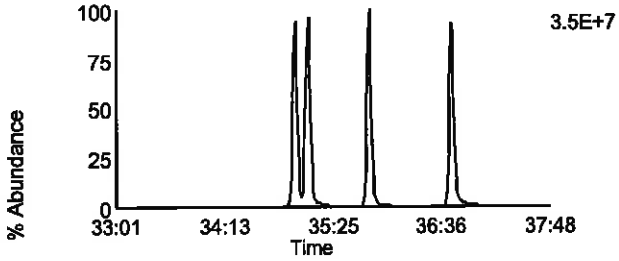
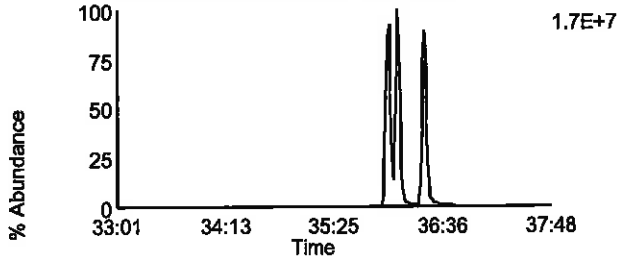
CAL CS3/CPM-7604-279 - SMT FE 4"



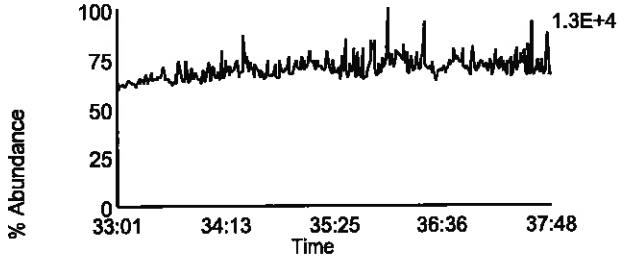
Data File: F130918B_02 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - SMT FE 4"



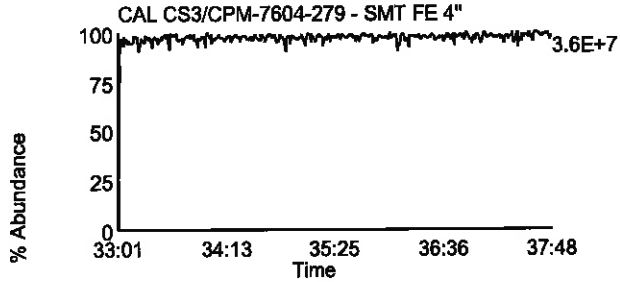
Data File: F130918B_02 G3 C10 - 403.8529
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - SMT FE 4"

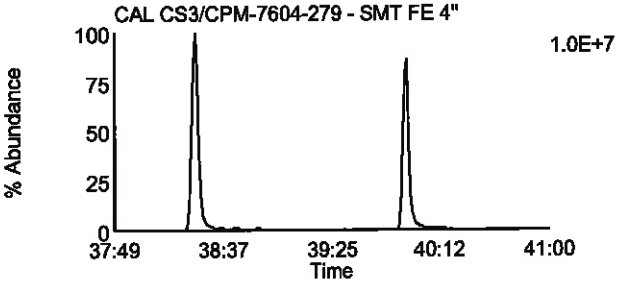


Homologue Group: Heptas

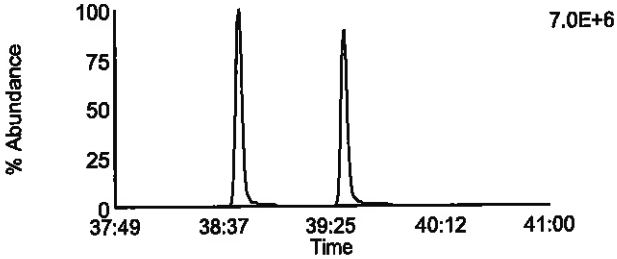
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

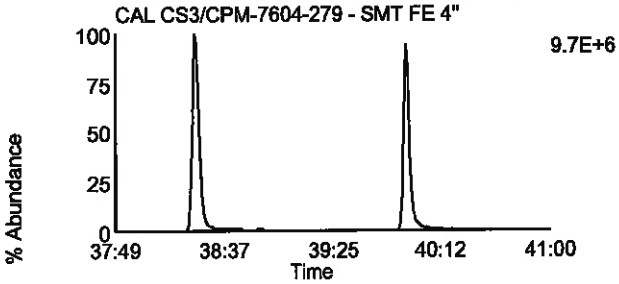
Data File: F130918B_02 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - SMT FE 4"



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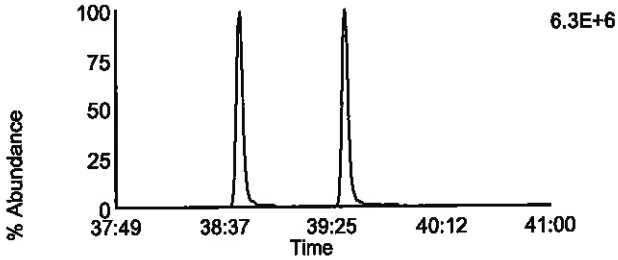
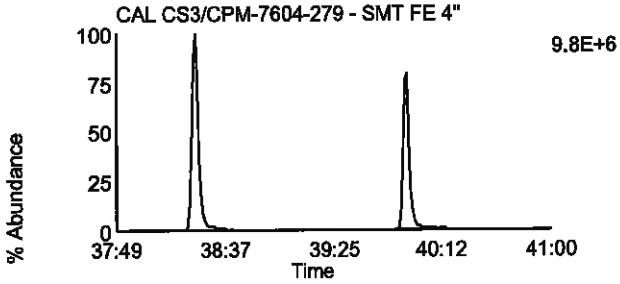
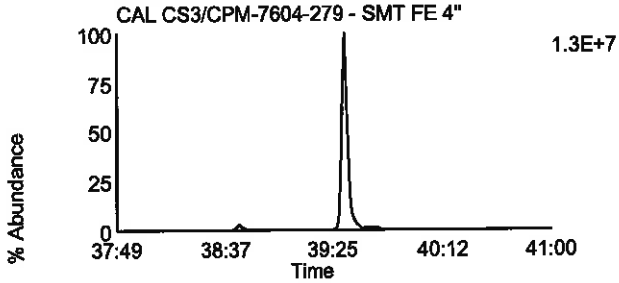
CAL CS3/CPM-7604-279 - SMT FE 4"



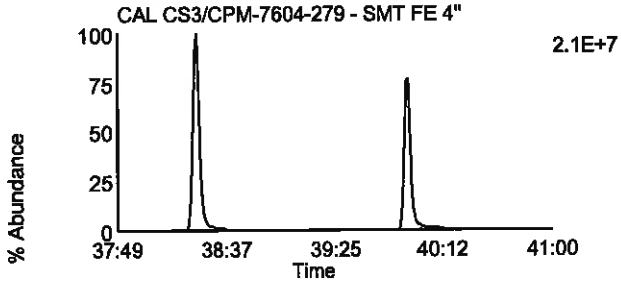
Data File: F130918B_02 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - SMT FE 4"



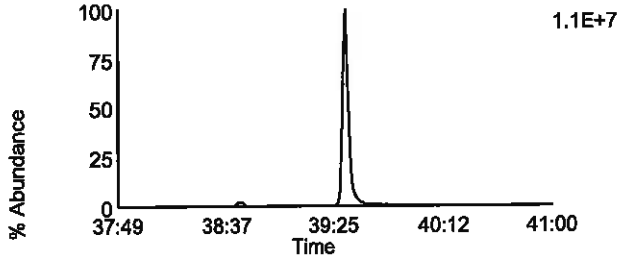
Data File: F130918B_02 G4 C11 - 435.8169
CAL CS3/CPM-7604-279 - SMT FE 4"



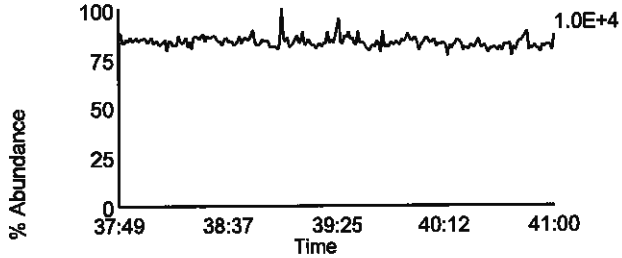
Data File: F130918B_02 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - SMT FE 4"



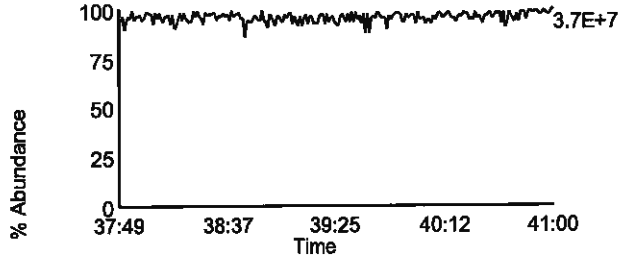
Data File: F130918B_02 G4 C12 - 437.814
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G4 C13 - 479.7165
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - SMT FE 4"

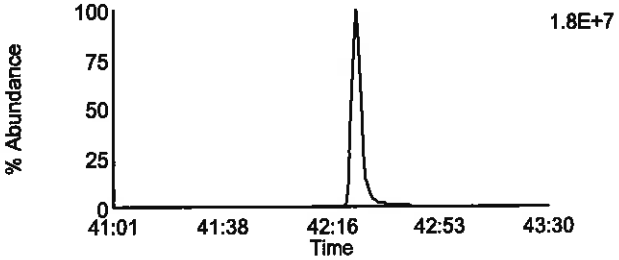


Homologue Group: Octas

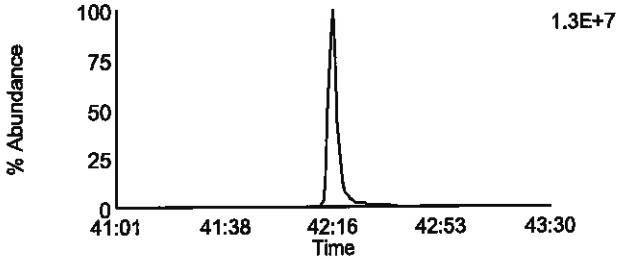
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

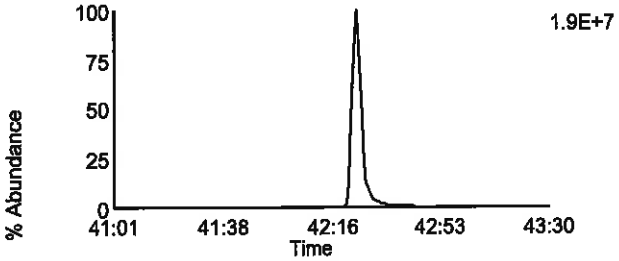
Data File: F130918B_02 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - SMT FE 4"



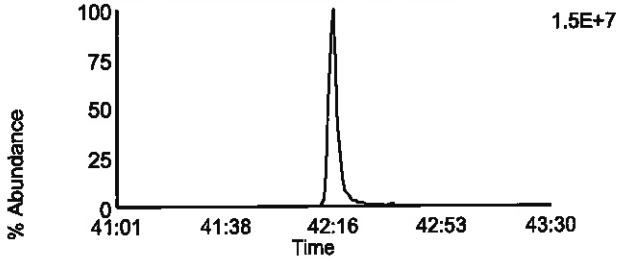
Data File: F130918B_02 G5 C8 - 457.7377
CAL CS3/CPM-7604-279 - SMT FE 4"



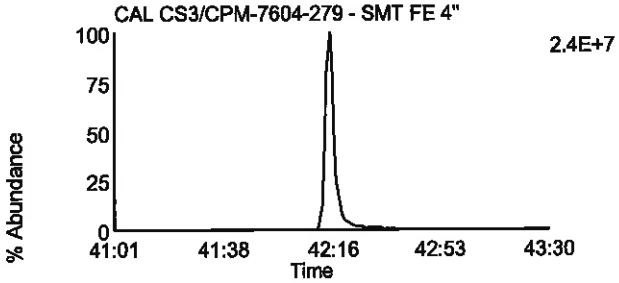
Data File: F130918B_02 G5 C5 - 443.7398
CAL CS3/CPM-7604-279 - SMT FE 4"



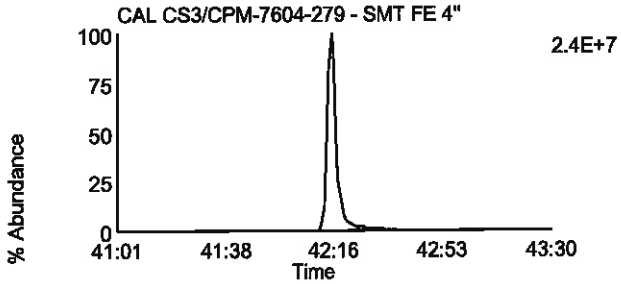
Data File: F130918B_02 G5 C9 - 459.7347
CAL CS3/CPM-7604-279 - SMT FE 4"



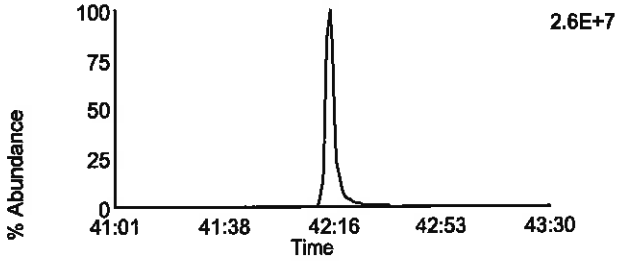
Data File: F130918B_02 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT FE 4"



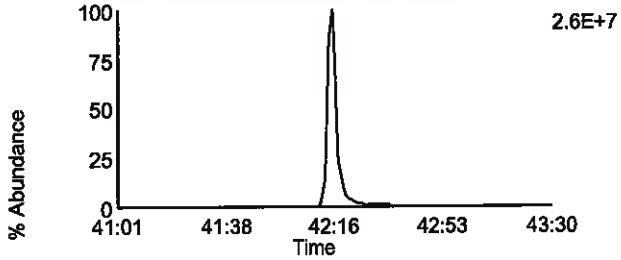
Data File: F130918B_02 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT FE 4"



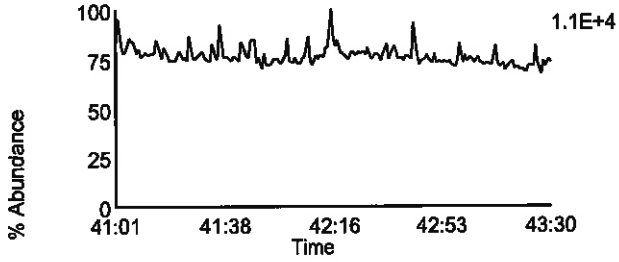
Data File: F130918B_02 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT FE 4"



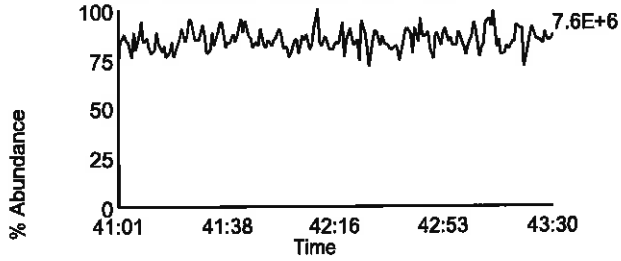
Data File: F130918B_02 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G5 C2 - 430.9728
CAL CS3/CPM-7604-279 - SMT FE 4"

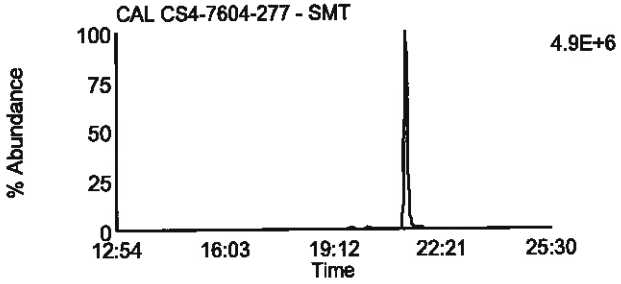


Homologue Group: Tetras

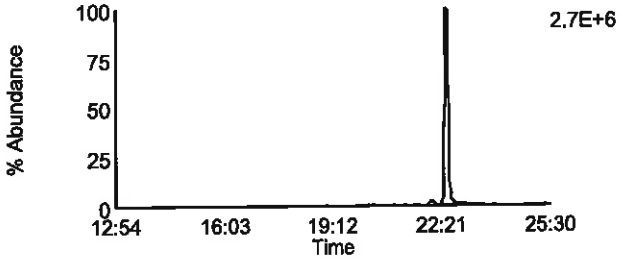
Data File Name: F130918B_06
Date Acquired: 9/18/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR05 (F)

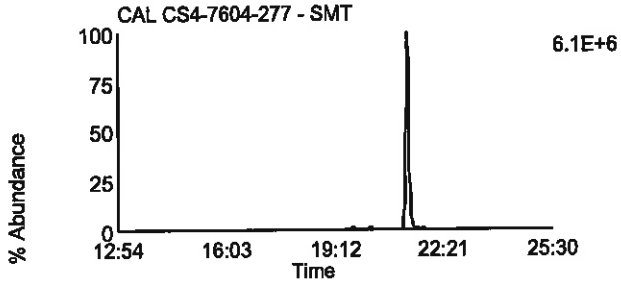
Data File: F130918B_06 G1 C1 - 303.9016
CAL CS4-7604-277 - SMT



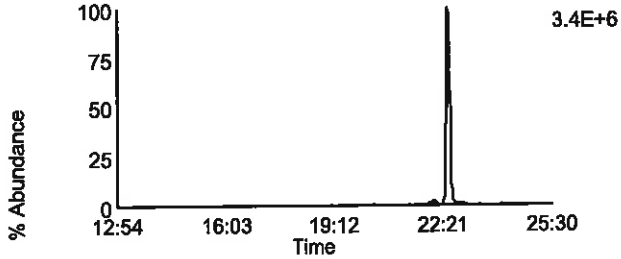
Data File: F130918B_06 G1 C7 - 319.8965
CAL CS4-7604-277 - SMT



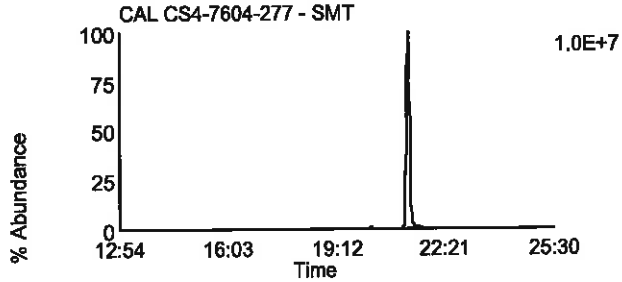
Data File: F130918B_06 G1 C2 - 305.8987
CAL CS4-7604-277 - SMT



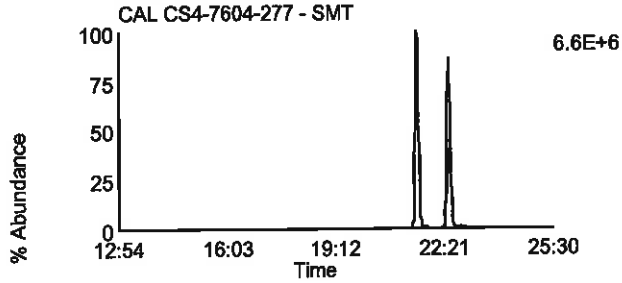
Data File: F130918B_06 G1 C8 - 321.8936
CAL CS4-7604-277 - SMT



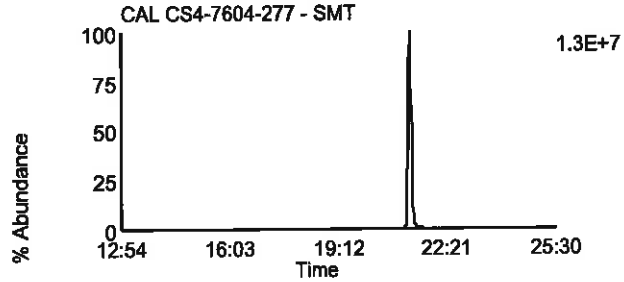
Data File: F130918B_06 G1 C3 - 315.9418
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G1 C10 - 331.9367
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G1 C4 - 317.9389
CAL CS4-7604-277 - SMT



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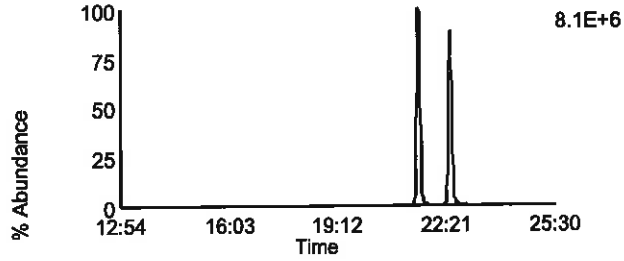
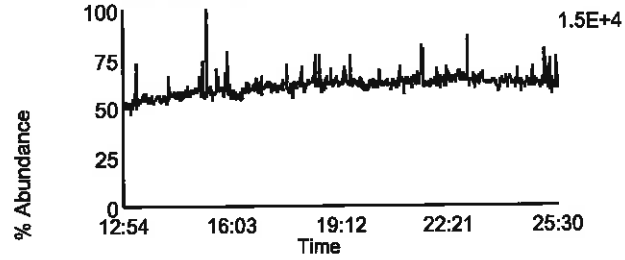
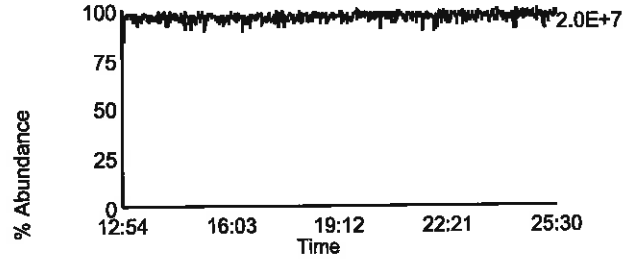
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G1 C14 - 375.8364
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G1 C5 - 318.9792
CAL CS4-7604-277 - SMT

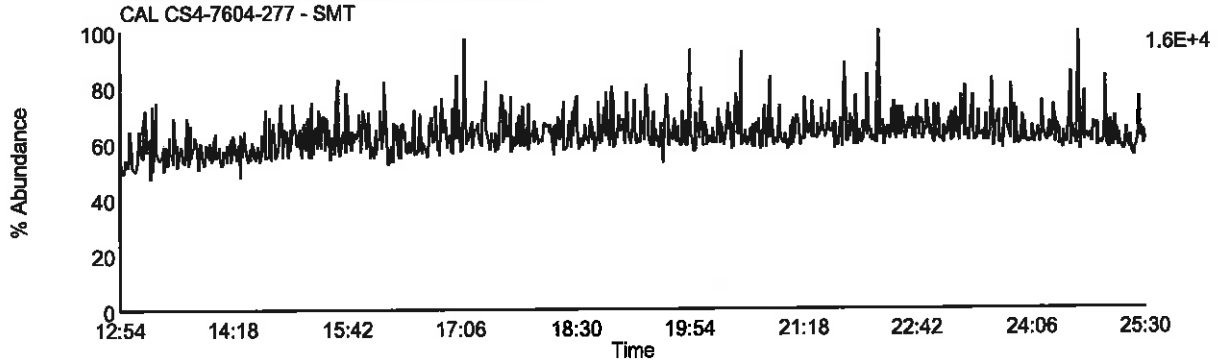


Homologue Group: Penta & Cleanup

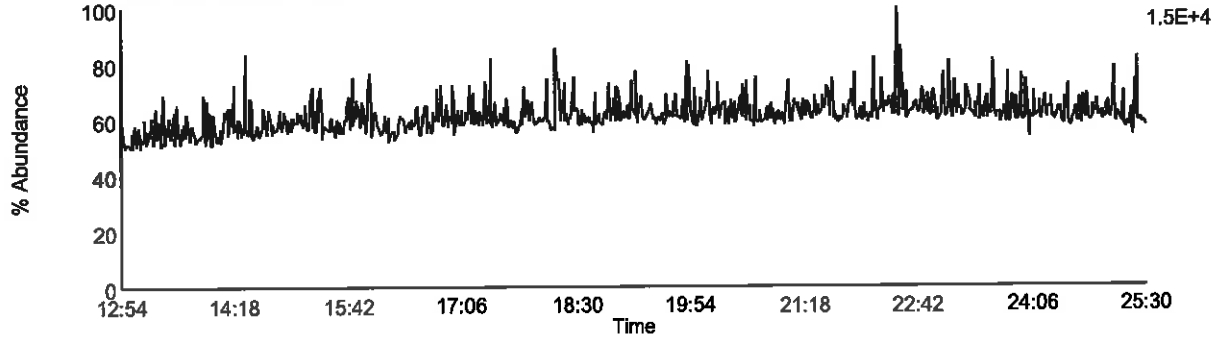
Data File Name: F130918B_06
Date Acquired: 9/18/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR05 (F)

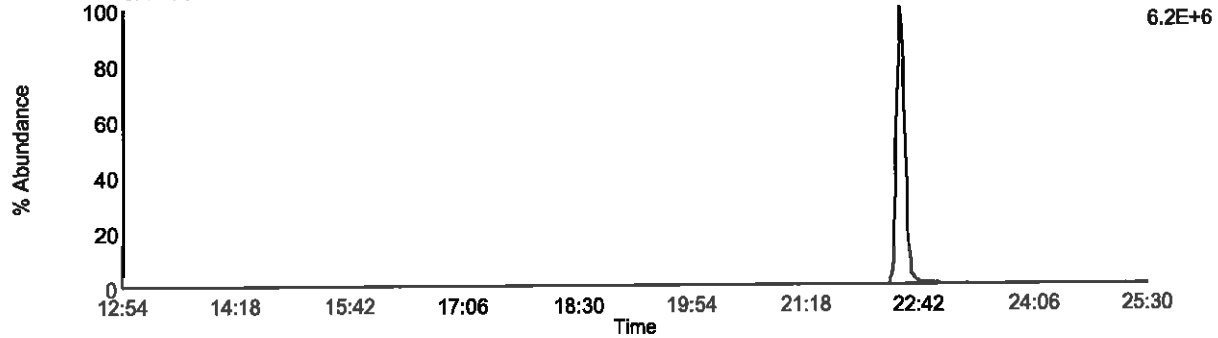
Data File: F130918B_06 G1 C12 - 339.8597
CAL CS4-7604-277 - SMT



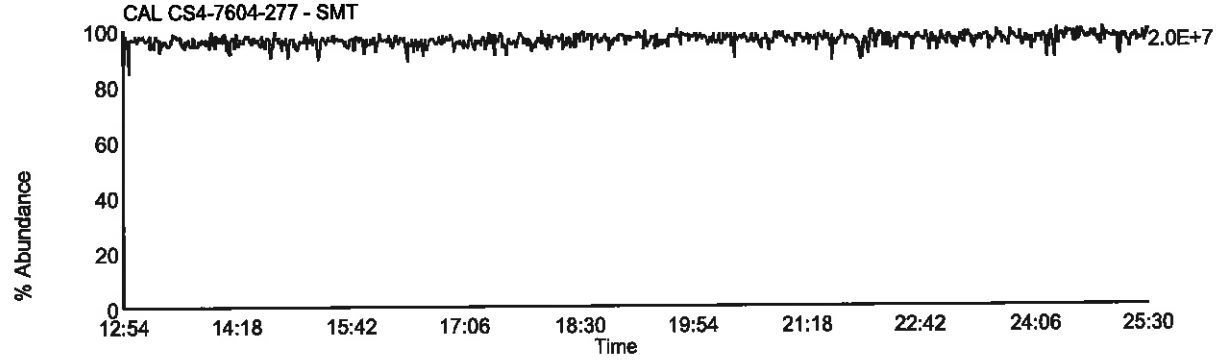
Data File: F130918B_06 G1 C13 - 341.8567
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G1 C9 - 327.8847
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G1 C5 - 318.9792
CAL CS4-7604-277 - SMT

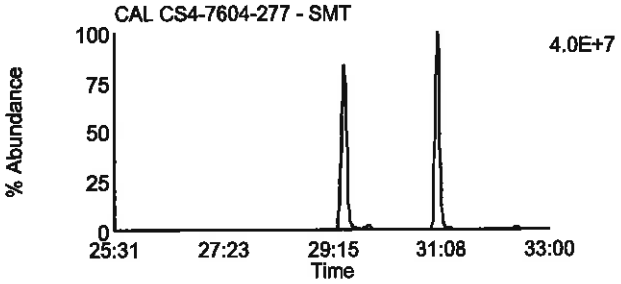


Homologue Group: Pentas

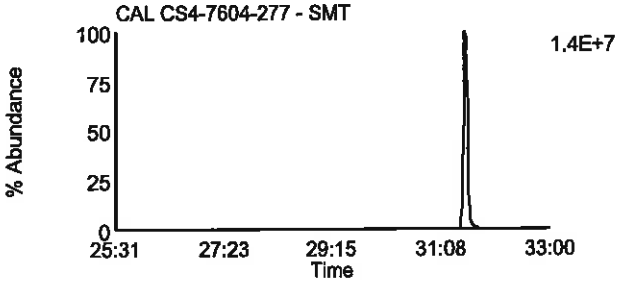
Data File Name: F130918B_06
Date Acquired: 9/18/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR05 (F)

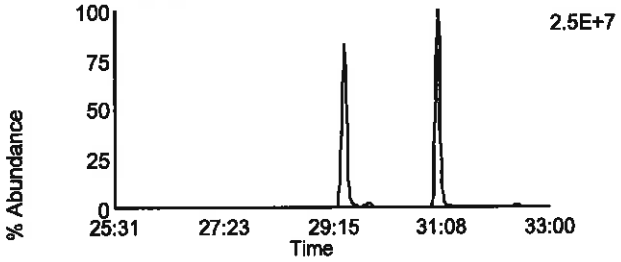
Data File: F130918B_06 G2 C1 - 339.8597
CAL CS4-7604-277 - SMT



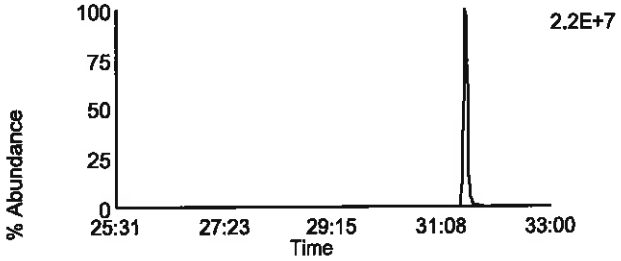
Data File: F130918B_06 G2 C4 - 353.8576
CAL CS4-7604-277 - SMT



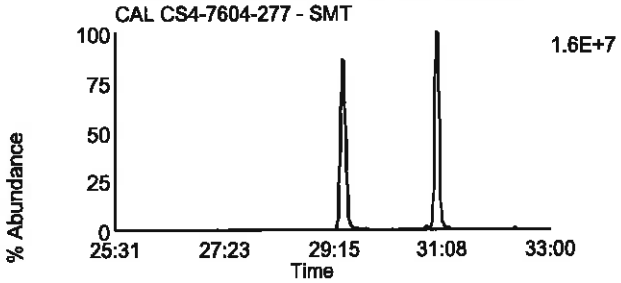
Data File: F130918B_06 G2 C2 - 341.8567
CAL CS4-7604-277 - SMT



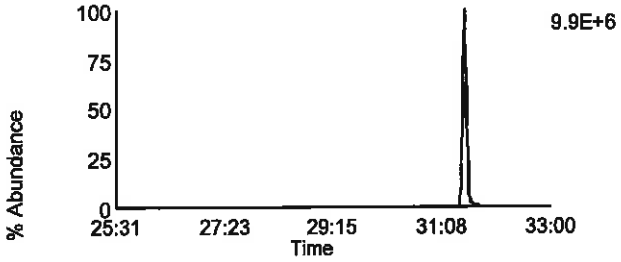
Data File: F130918B_06 G2 C8 - 355.8546
CAL CS4-7604-277 - SMT



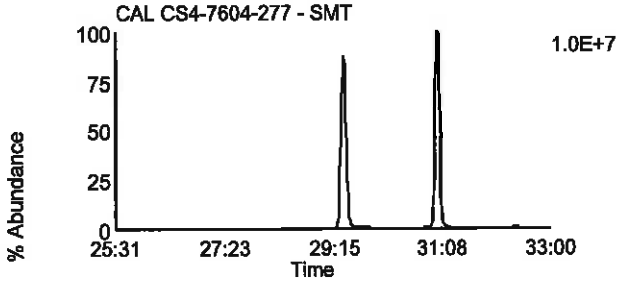
Data File: F130918B_06 G2 C3 - 351.8999
CAL CS4-7604-277 - SMT



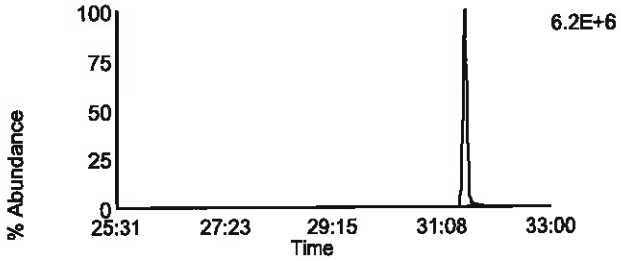
Data File: F130918B_06 G2 C10 - 367.8948
CAL CS4-7604-277 - SMT



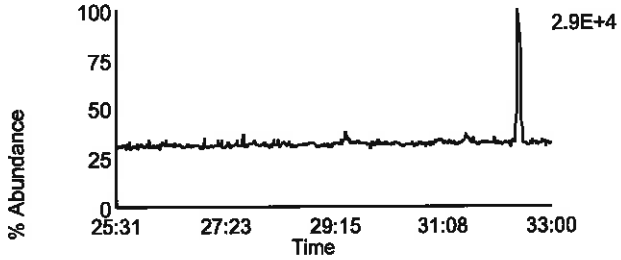
Data File: F130918B_06 G2 C5 - 353.8969
CAL CS4-7604-277 - SMT



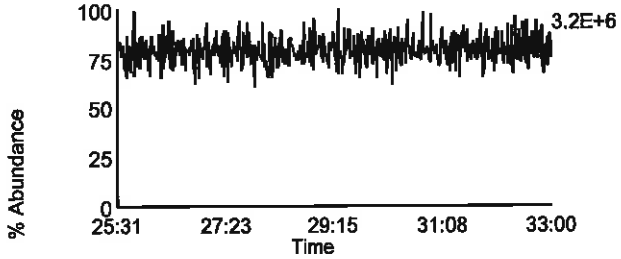
Data File: F130918B_06 G2 C11 - 369.8918
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G2 C12 - 409.7974
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G2 C6 - 354.9792
CAL CS4-7604-277 - SMT

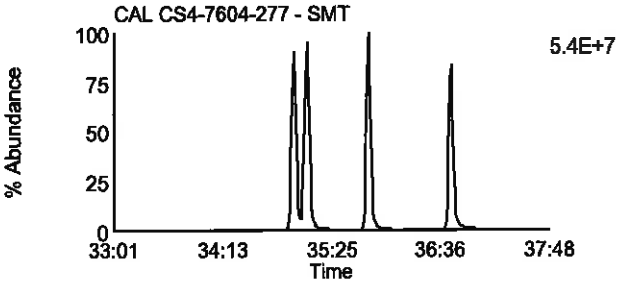


Homologue Group: Hexas

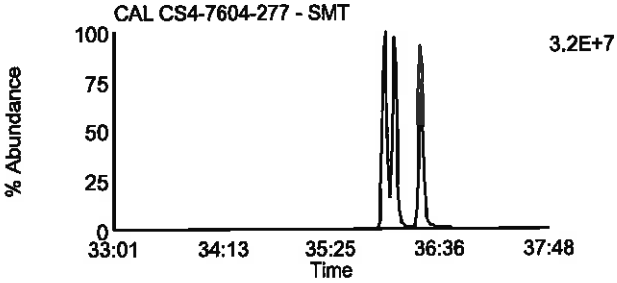
Data File Name: F130918B_06
Date Acquired: 9/18/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR05 (F)

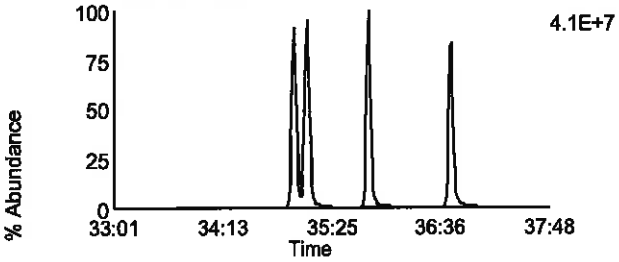
Data File: F130918B_06 G3 C1 - 373.8207
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G3 C7 - 389.8156
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G3 C2 - 375.8178
CAL CS4-7604-277 - SMT



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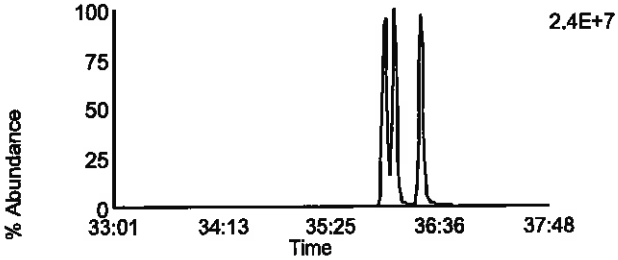
CAL CS4-7604-277 - SMT



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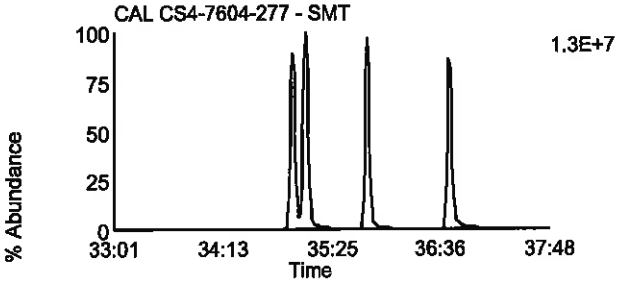
CAL CS4-7604-277 - SMT



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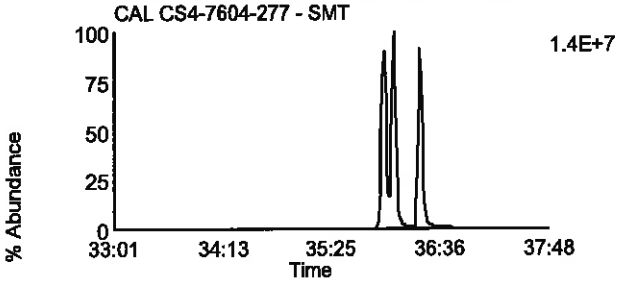
CAL CS4-7604-277 - SMT



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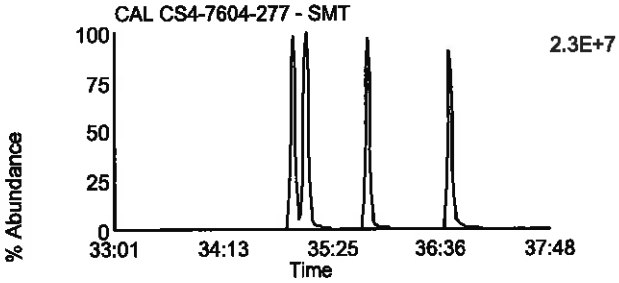
CAL CS4-7604-277 - SMT



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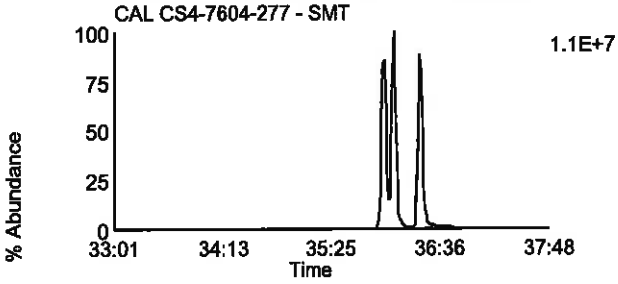
CAL CS4-7604-277 - SMT



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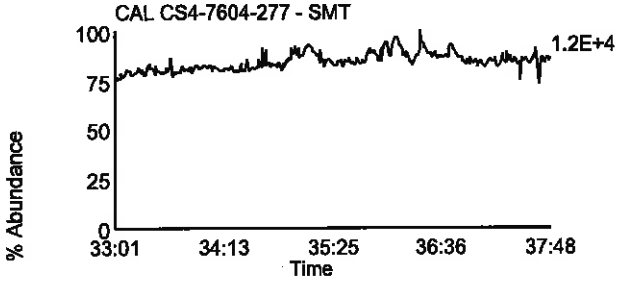
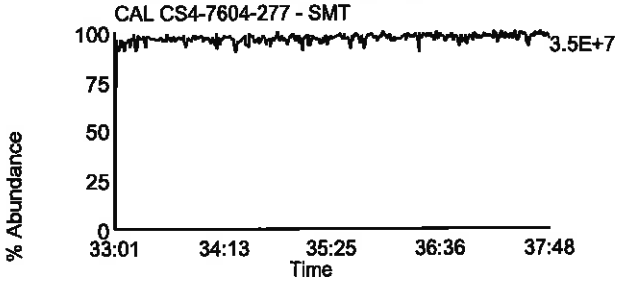
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G3 C3 - 380.976
CAL CS4-7604-277 - SMT

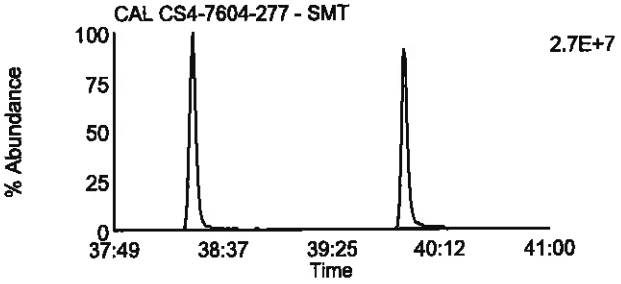


Homologue Group: Heptas

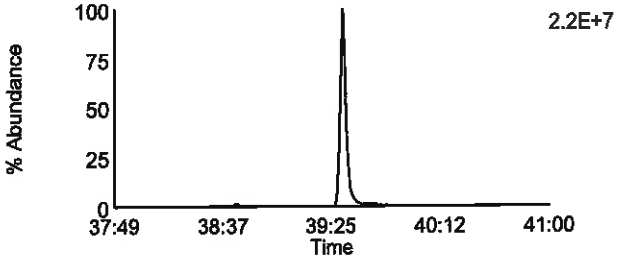
Data File Name: F130918B_06
Date Acquired: 9/18/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR05 (F)

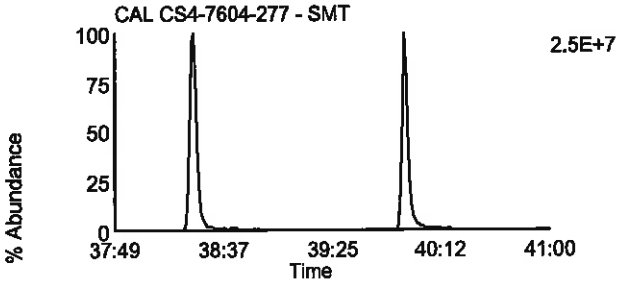
Data File: F130918B_06 G4 C3 - 407.7818
CAL CS4-7604-277 - SMT



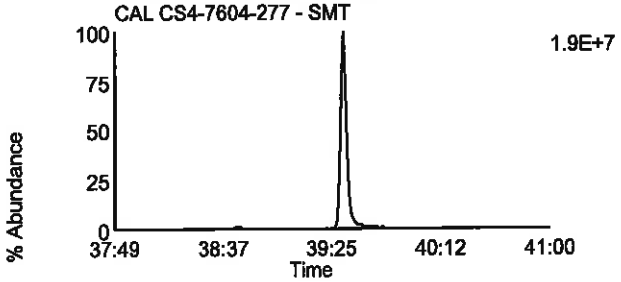
Data File: F130918B_06 G4 C8 - 423.7767
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G4 C4 - 409.7788
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G4 C9 - 425.7737
CAL CS4-7604-277 - SMT



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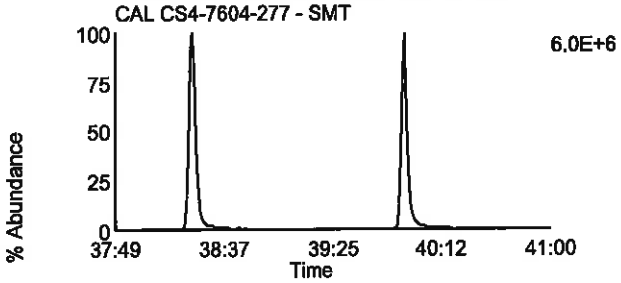
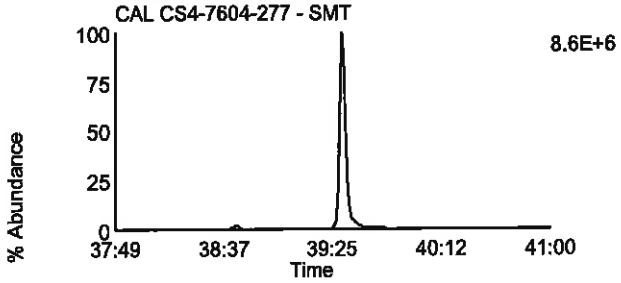
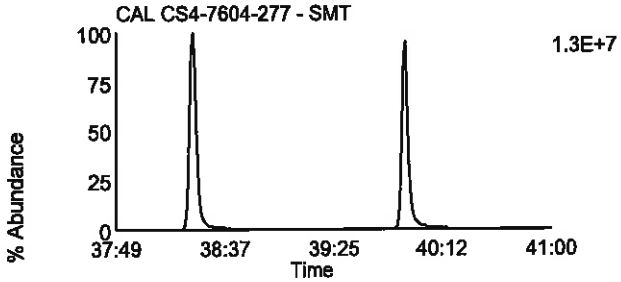
CAL CS4-7604-277 - SMT



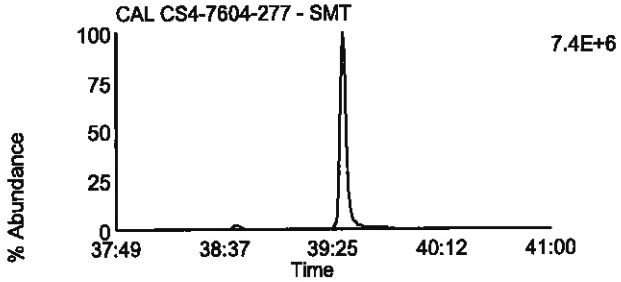
Data File: F130918B_06 G4 C11 - 435.8169
CAL CS4-7604-277 - SMT



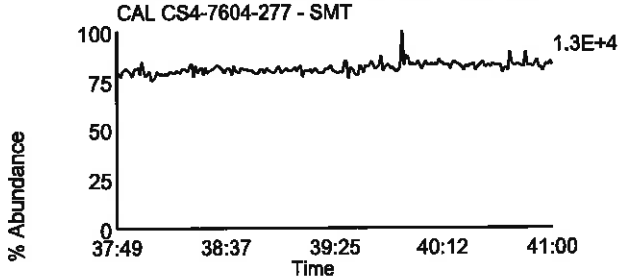
Data File: F130918B_06 G4 C7 - 419.822
CAL CS4-7604-277 - SMT



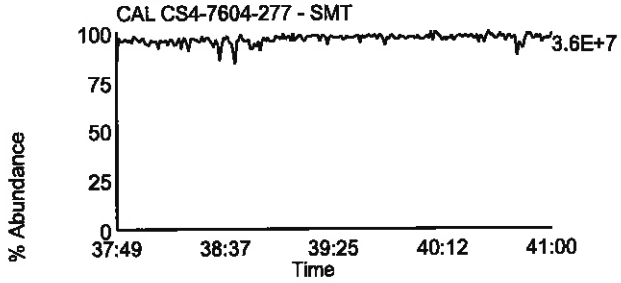
Data File: F130918B_06 G4 C12 - 437.814
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G4 C13 - 479.7165
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G4 C1 - 380.976
CAL CS4-7604-277 - SMT

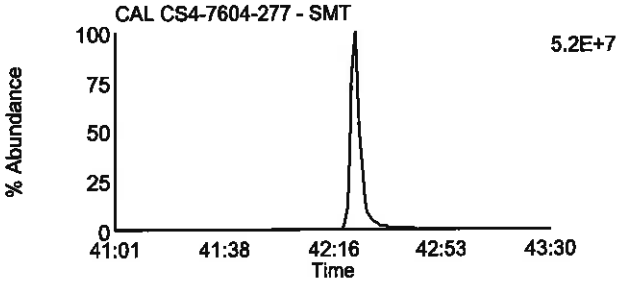


Homologue Group: Octas

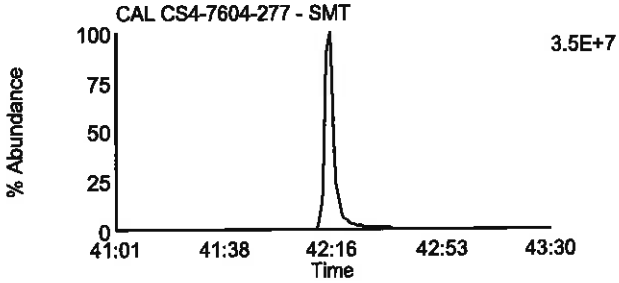
Data File Name: F130918B_06
Date Acquired: 9/18/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR05 (F)

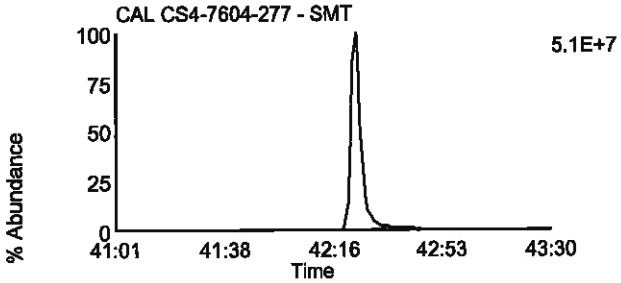
Data File: F130918B_06 G5 C4 - 441.7428
CAL CS4-7604-277 - SMT



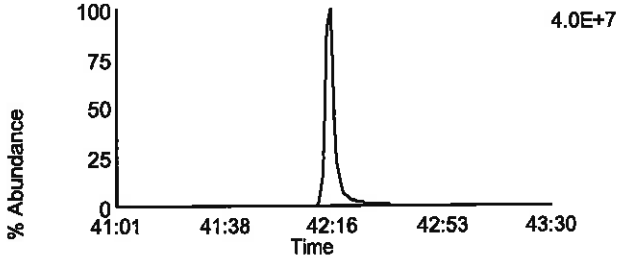
Data File: F130918B_06 G5 C8 - 457.7377
CAL CS4-7604-277 - SMT



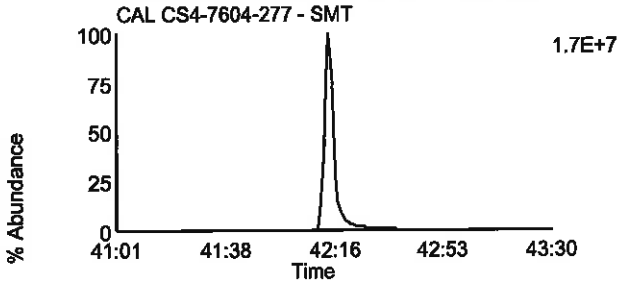
Data File: F130918B_06 G5 C5 - 443.7398
CAL CS4-7604-277 - SMT



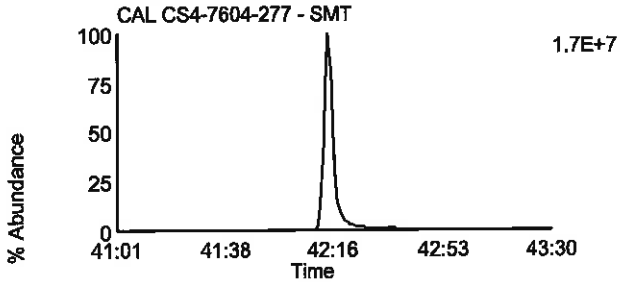
Data File: F130918B_06 G5 C9 - 459.7347
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G5 C11 - 469.7779
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G5 C11 - 469.7779
CAL CS4-7604-277 - SMT



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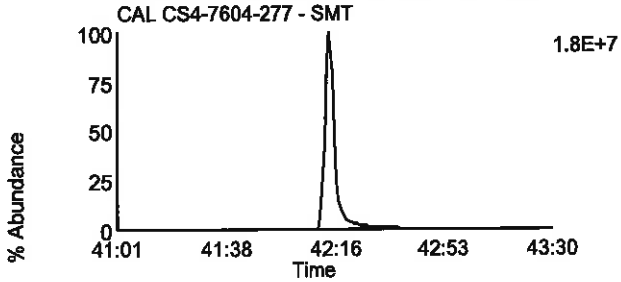
CAL CS4-7604-277 - SMT



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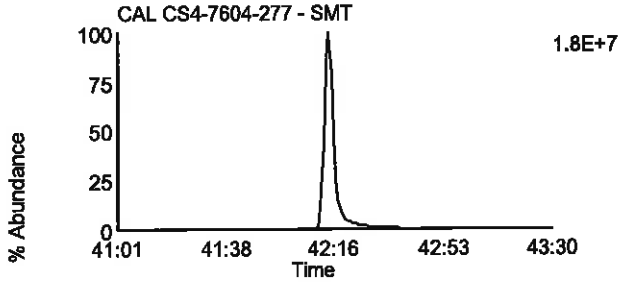
CAL CS4-7604-277 - SMT



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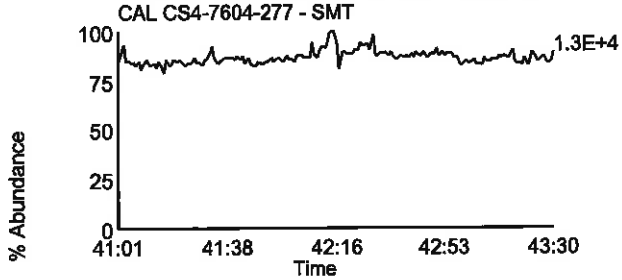
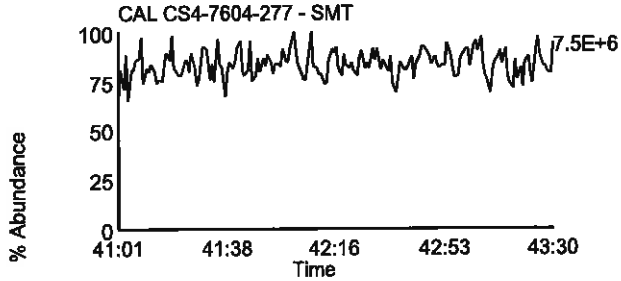
CAL CS4-7604-277 - SMT



Data File: F130918B_06 G5 C2 - 430.9728
CAL CS4-7604-277 - SMT

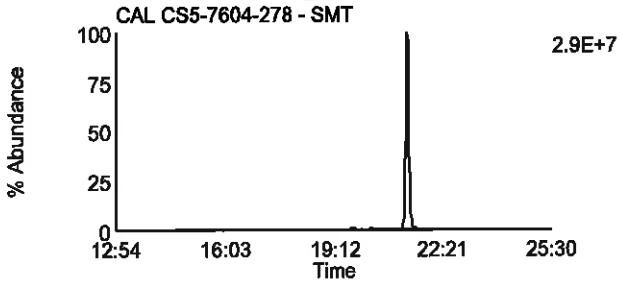


Homologue Group: Tetras

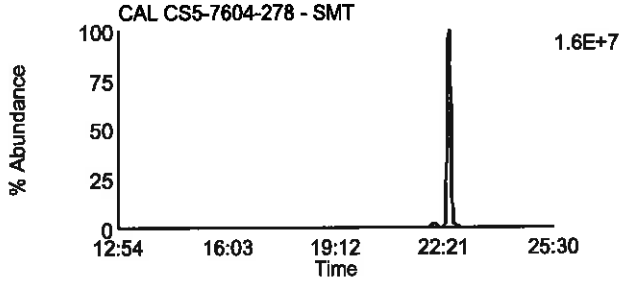
Data File Name: F130918B_05
Date Acquired: 9/18/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130918B_05 G1 C1 - 303.9016
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C7 - 319.8965
CAL CS5-7604-278 - SMT



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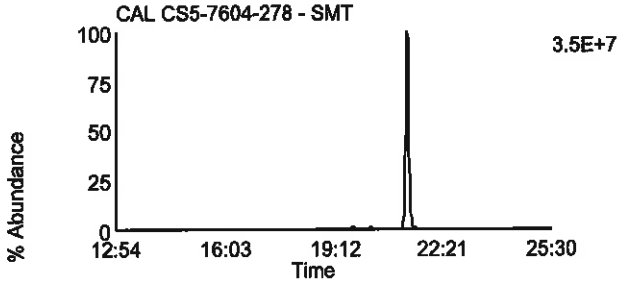
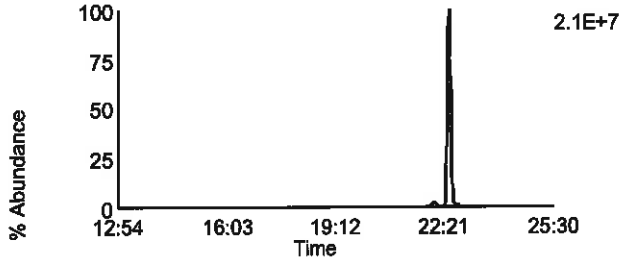
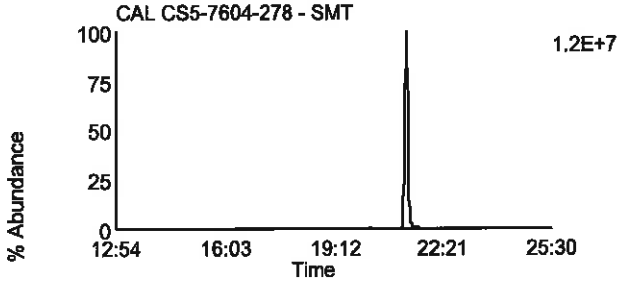
CAL CS5-7604-278 - SMT



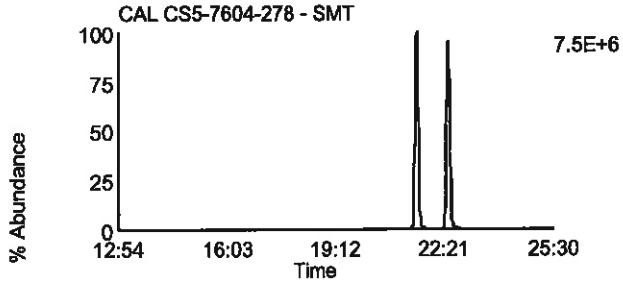
Data File: F130918B_05 G1 C8 - 321.8936
CAL CS5-7604-278 - SMT



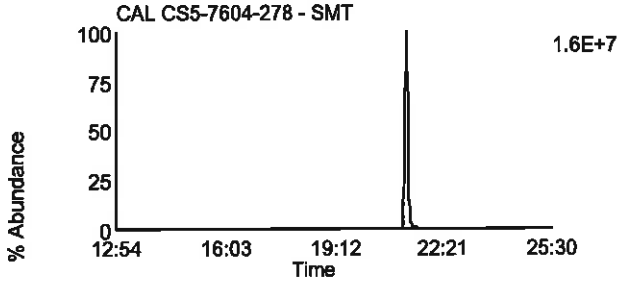
Data File: F130918B_05 G1 C3 - 315.9418
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C10 - 331.9367
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C4 - 317.9389
CAL CS5-7604-278 - SMT



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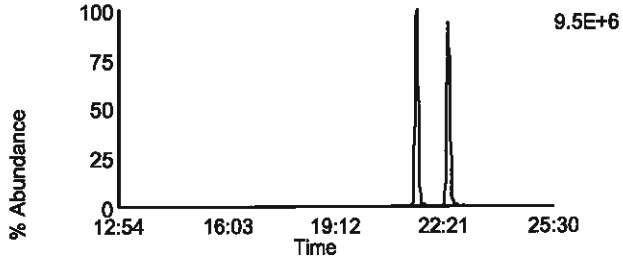
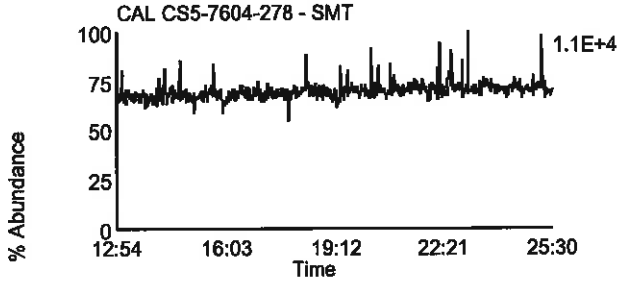
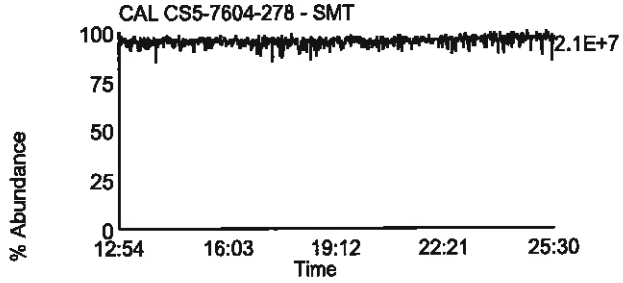
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C14 - 375.8364
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C5 - 318.9792
CAL CS5-7604-278 - SMT

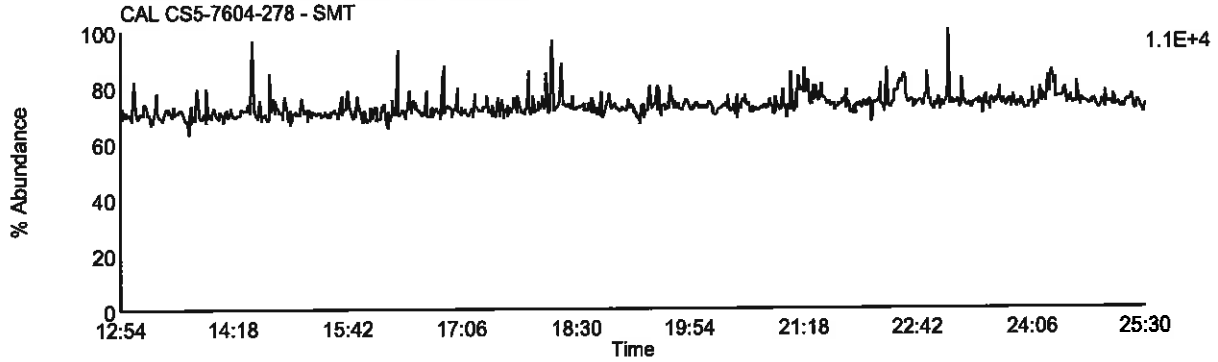


Homologue Group: Penta & Cleanup

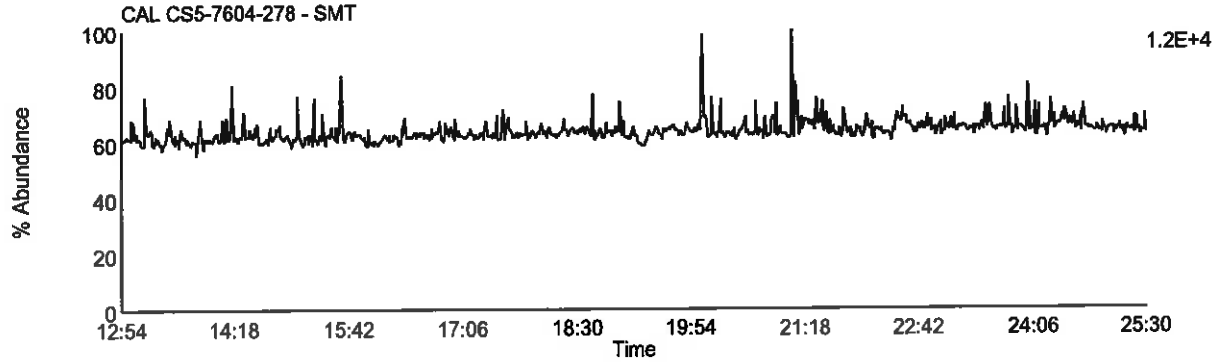
Data File Name: F130918B_05
Date Acquired: 9/18/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130918B_05 G1 C12 - 339.8597
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C13 - 341.8567
CAL CS5-7604-278 - SMT



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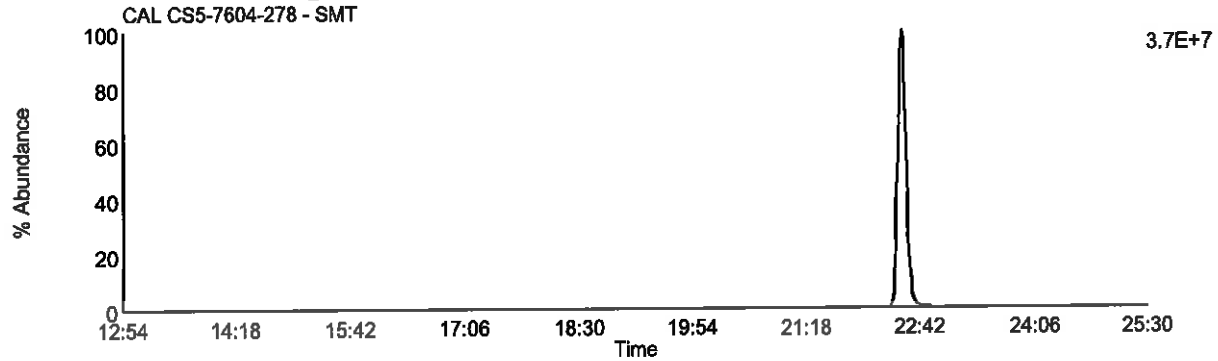
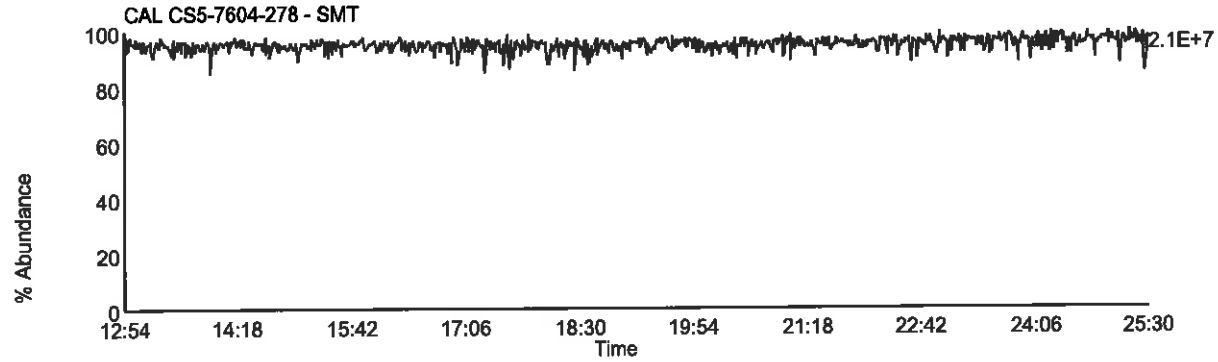
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G1 C5 - 318.9792
CAL CS5-7604-278 - SMT

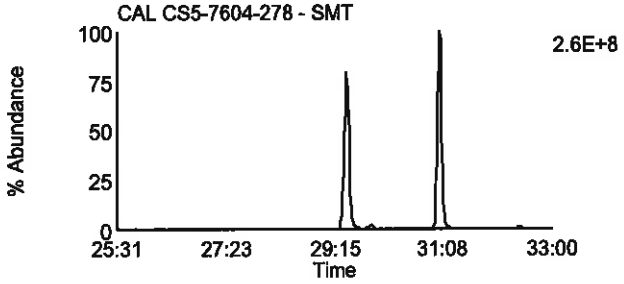


Homologue Group: Pentas

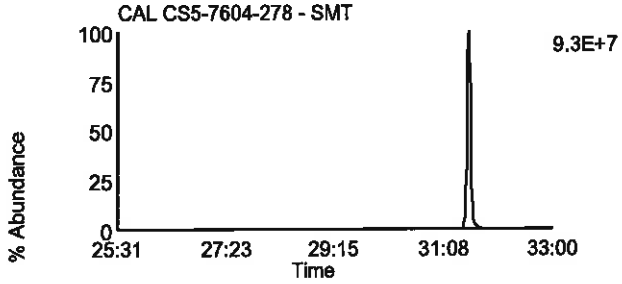
Data File Name: F130918B_05
Date Acquired: 9/18/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR05 (F)

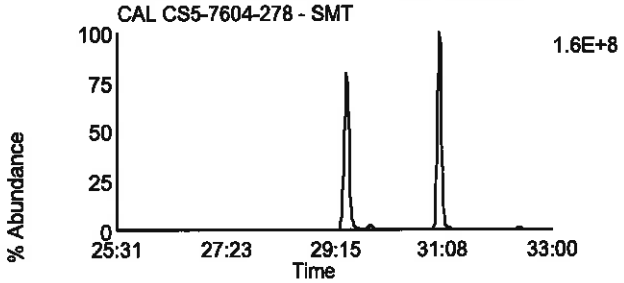
Data File: F130918B_05 G2 C1 - 339.8597
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G2 C4 - 353.8576
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G2 C2 - 341.8567
CAL CS5-7604-278 - SMT



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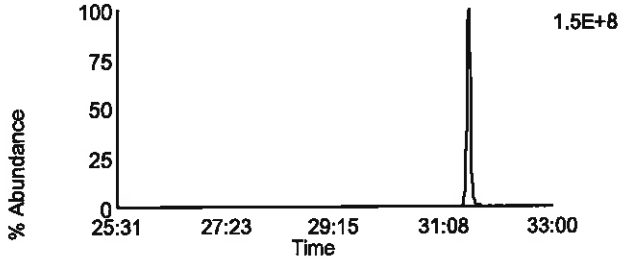
CAL CS5-7604-278 - SMT



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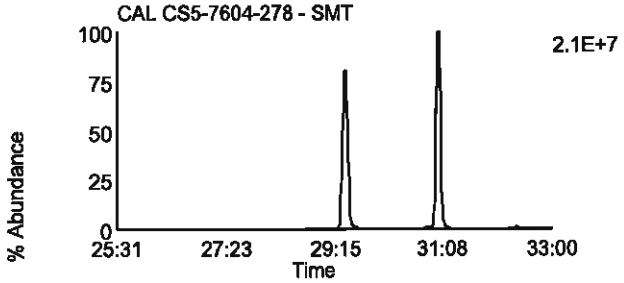
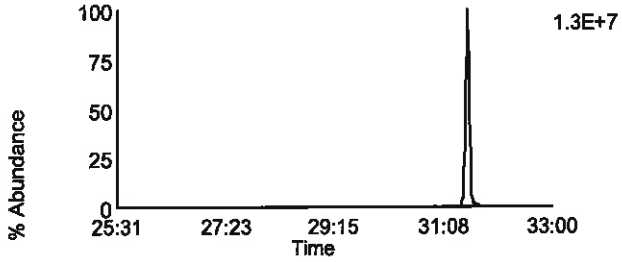
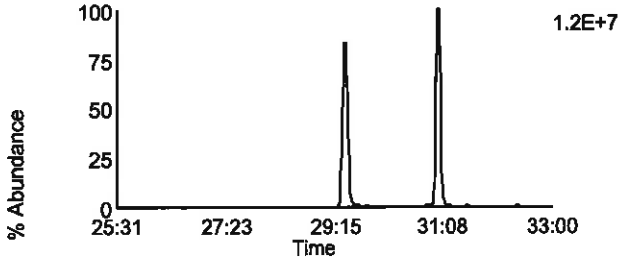
CAL CS5-7604-278 - SMT



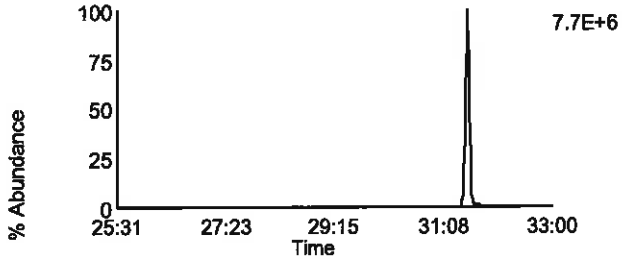
Data File: F130918B_05 G2 C10 - 367.8948
CAL CS5-7604-278 - SMT



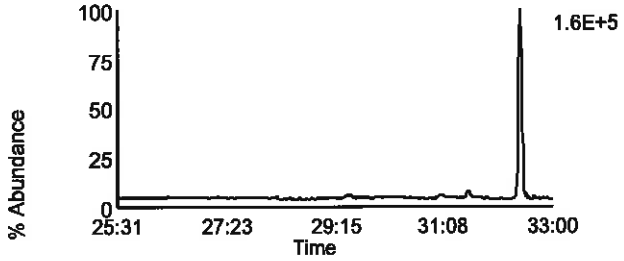
Data File: F130918B_05 G2 C5 - 353.8969
CAL CS5-7604-278 - SMT



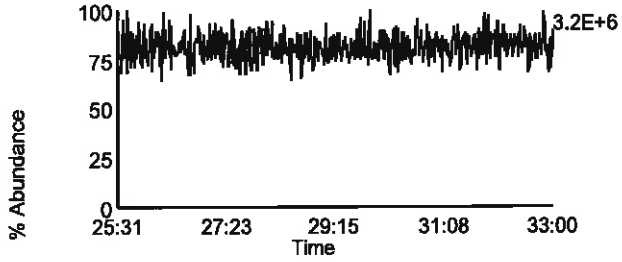
Data File: F130918B_05 G2 C11 - 369.8918
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G2 C12 - 409.7974
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G2 C6 - 354.9792
CAL CS5-7604-278 - SMT

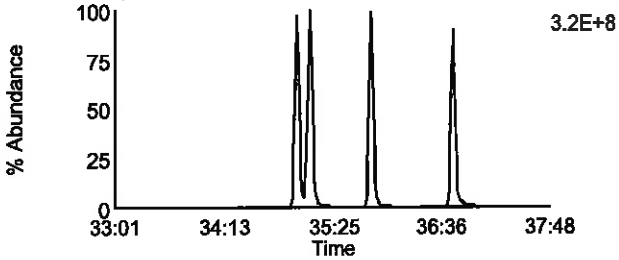


Homologue Group: Hexas

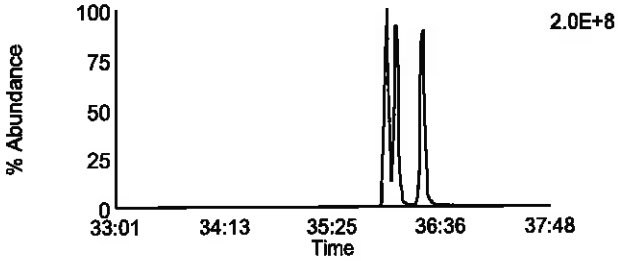
Data File Name: F130918B_05
Date Acquired: 9/18/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR05 (F)

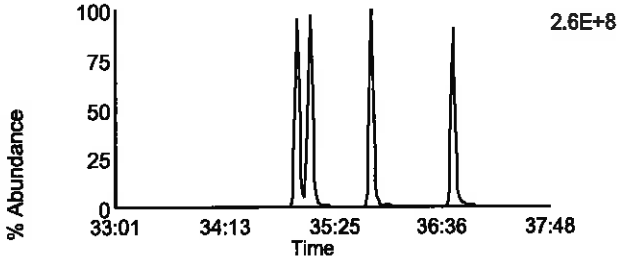
Data File: F130918B_05 G3 C1 - 373.8207
CAL CS5-7604-278 - SMT



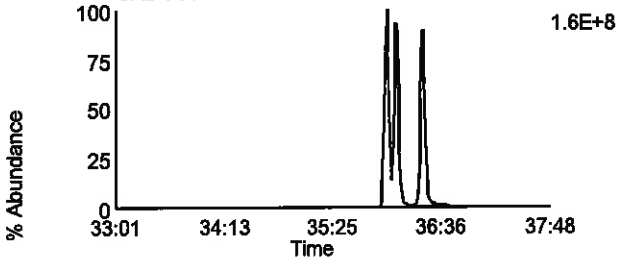
Data File: F130918B_05 G3 C7 - 389.8156
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G3 C2 - 375.8178
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G3 C8 - 391.8127
CAL CS5-7604-278 - SMT



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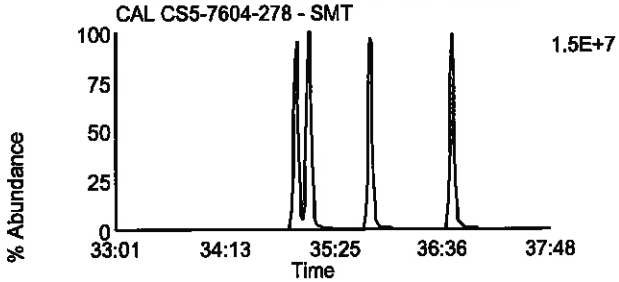
CAL CS5-7604-278 - SMT



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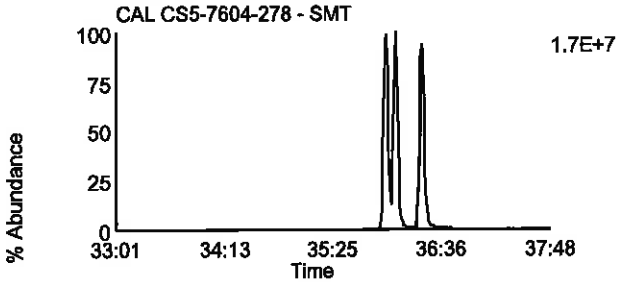
CAL CS5-7604-278 - SMT



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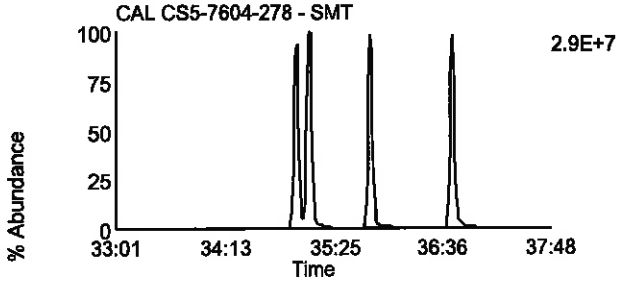
CAL CS5-7604-278 - SMT



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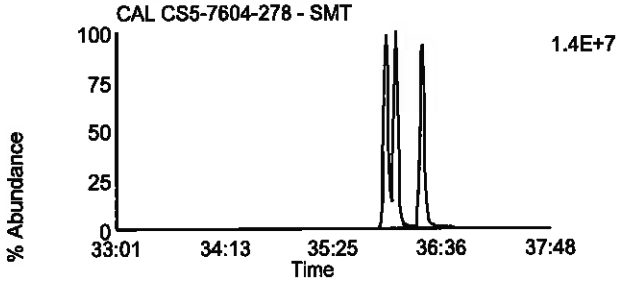
CAL CS5-7604-278 - SMT



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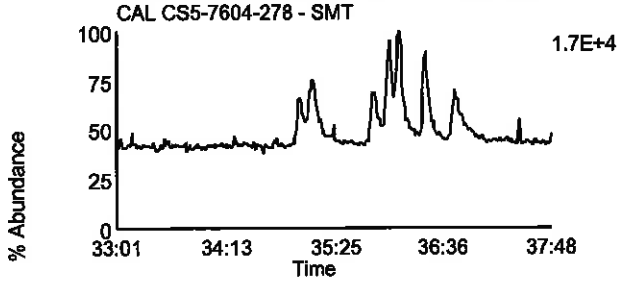
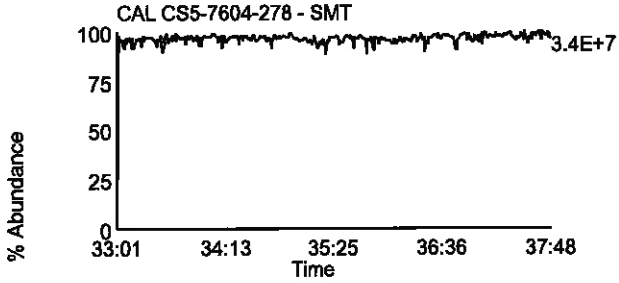
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G3 C3 - 380.976
CAL CS5-7604-278 - SMT

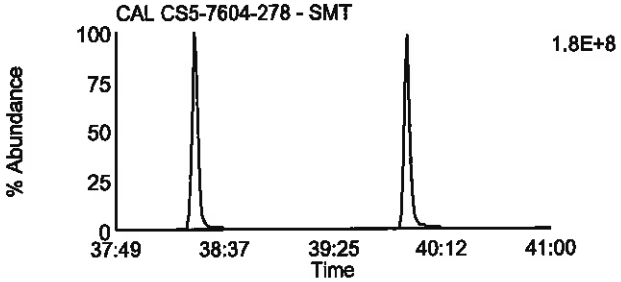


Homologue Group: Heptas

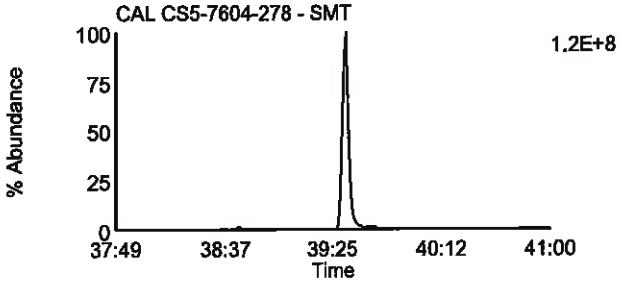
Data File Name: F130918B_05
Date Acquired: 9/18/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR05 (F)

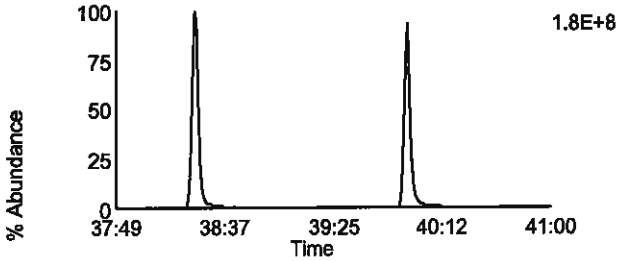
Data File: F130918B_05 G4 C3 - 407.7818
CAL CS5-7604-278 - SMT



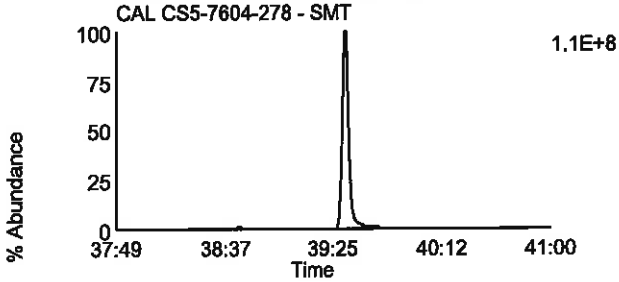
Data File: F130918B_05 G4 C8 - 423.7767
CAL CS5-7604-278 - SMT



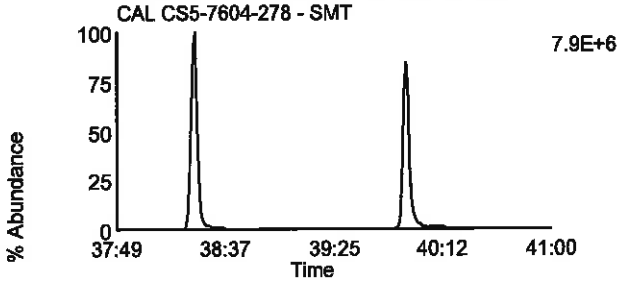
Data File: F130918B_05 G4 C4 - 409.7788
CAL CS5-7604-278 - SMT



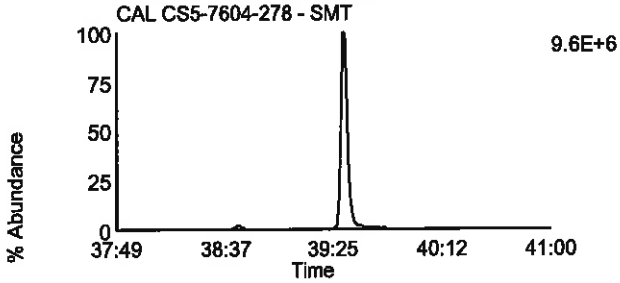
Data File: F130918B_05 G4 C9 - 425.7737
CAL CS5-7604-278 - SMT



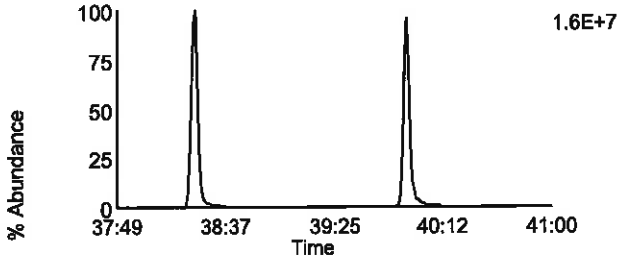
Data File: F130918B_05 G4 C6 - 417.825
CAL CS5-7604-278 - SMT



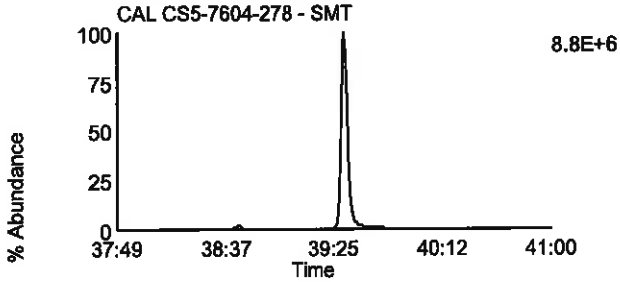
Data File: F130918B_05 G4 C11 - 435.8169
CAL CS5-7604-278 - SMT



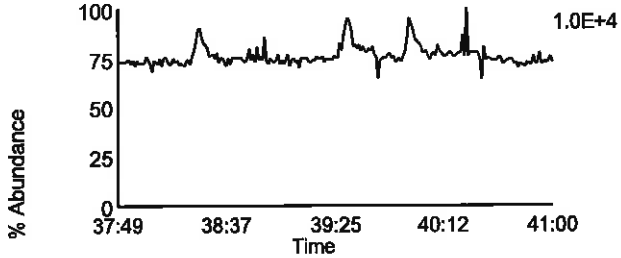
Data File: F130918B_05 G4 C7 - 419.822
CAL CS5-7604-278 - SMT



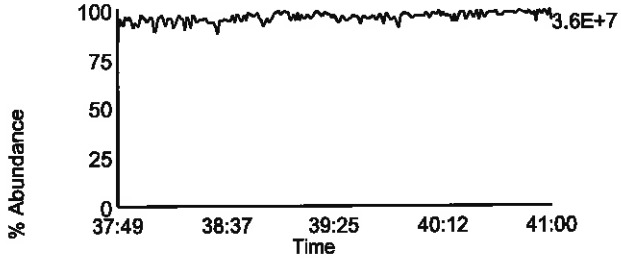
Data File: F130918B_05 G4 C12 - 437.814
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G4 C13 - 479.7165
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G4 C1 - 380.976
CAL CS5-7604-278 - SMT

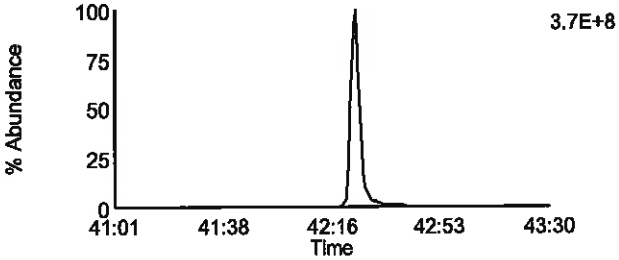


Homologue Group: Octas

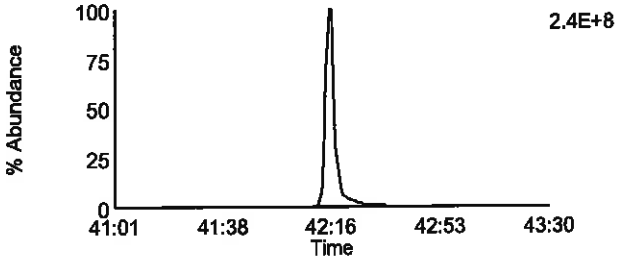
Data File Name: F130918B_05
Date Acquired: 9/18/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR05 (F)

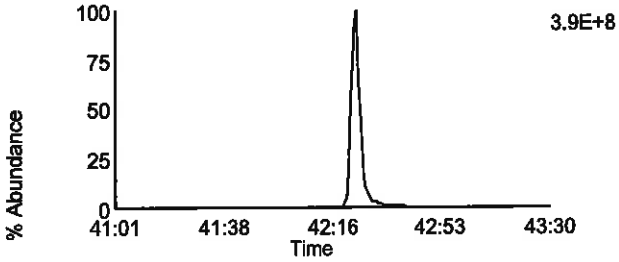
Data File: F130918B_05 G5 C4 - 441.7428
CAL CS5-7604-278 - SMT



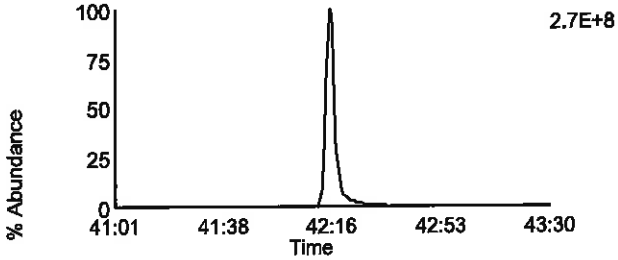
Data File: F130918B_05 G5 C8 - 457.7377
CAL CS5-7604-278 - SMT



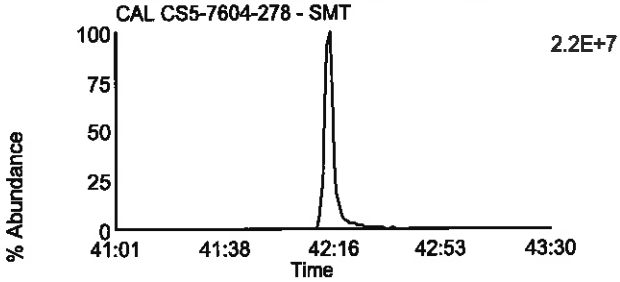
Data File: F130918B_05 G5 C5 - 443.7398
CAL CS5-7604-278 - SMT



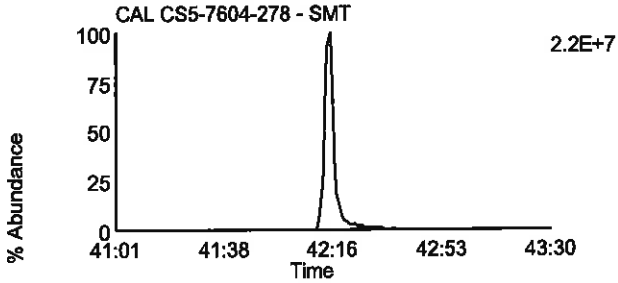
Data File: F130918B_05 G5 C9 - 459.7347
CAL CS5-7604-278 - SMT



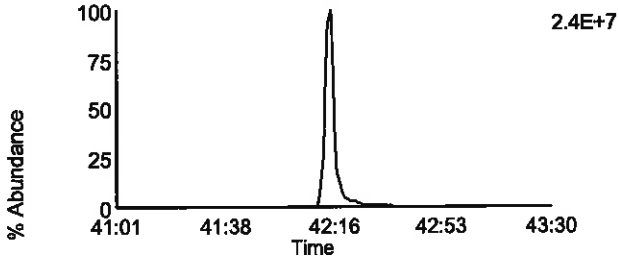
Data File: F130918B_05 G5 C11 - 469.7779
CAL CS5-7604-278 - SMT



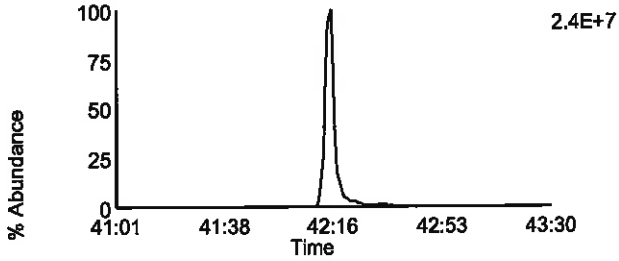
Data File: F130918B_05 G5 C11 - 469.7779
CAL CS5-7604-278 - SMT



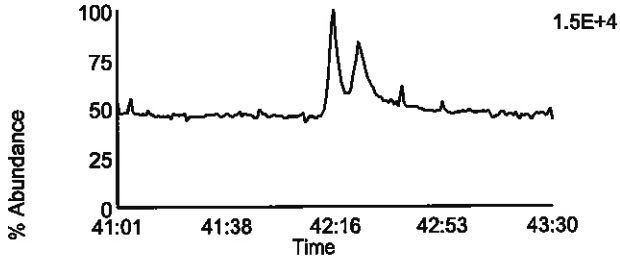
Data File: F130918B_05 G5 C12 - 471.7749
CAL CS5-7604-278 - SMT



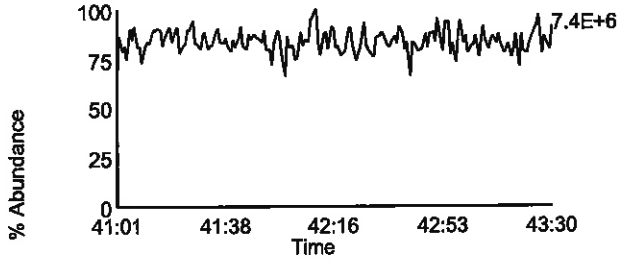
Data File: F130918B_05 G5 C12 - 471.7749
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G5 C13 - 513.6775
CAL CS5-7604-278 - SMT



Data File: F130918B_05 G5 C2 - 430.9728
CAL CS5-7604-278 - SMT

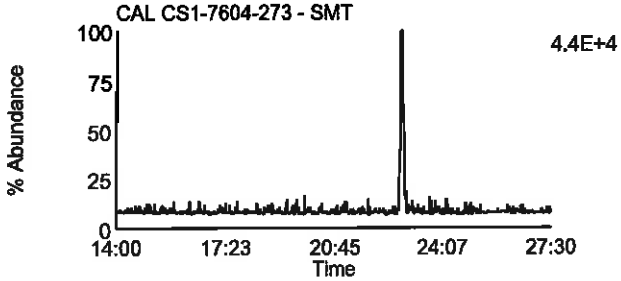


Homologue Group: Tetras

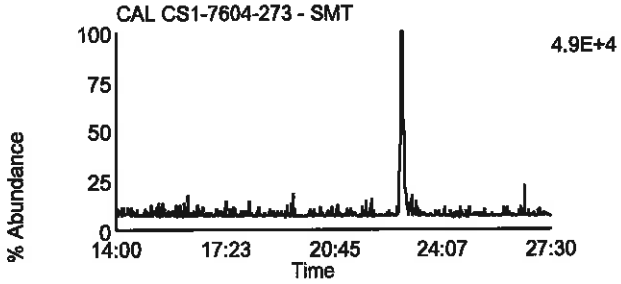
Data File Name: U130729B_11
Date Acquired: 7/29/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR06 (U)

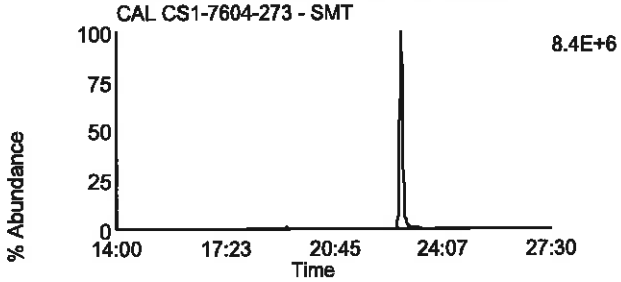
Data File: U130729B_11 G1 C1 - 303.9016
CAL CS1-7604-273 - SMT



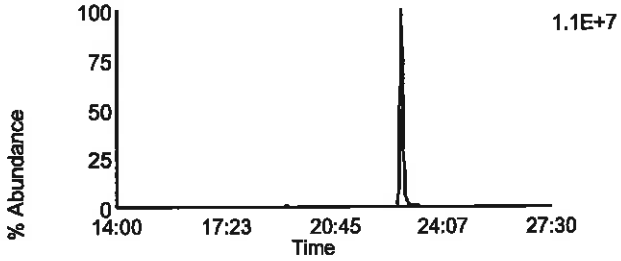
Data File: U130729B_11 G1 C2 - 305.8987
CAL CS1-7604-273 - SMT



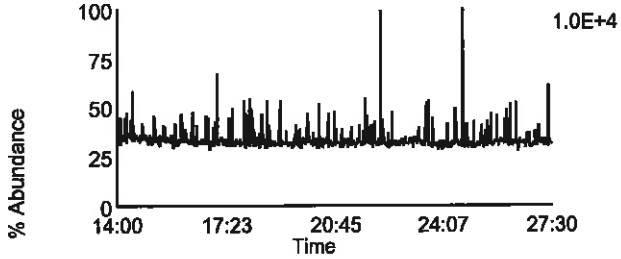
Data File: U130729B_11 G1 C3 - 315.9418
CAL CS1-7604-273 - SMT



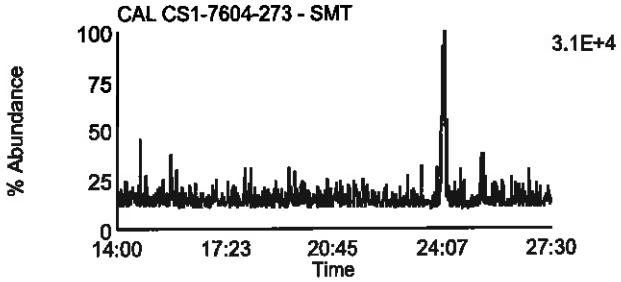
Data File: U130729B_11 G1 C4 - 317.9389
CAL CS1-7604-273 - SMT



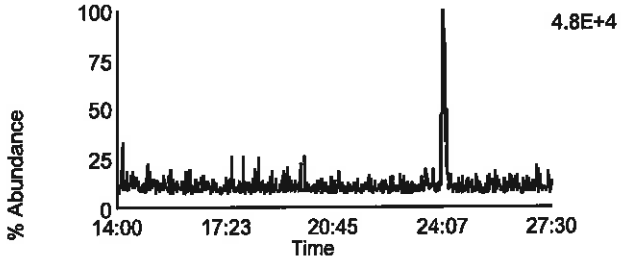
Data File: U130729B_11 G1 C14 - 375.8364
CAL CS1-7604-273 - SMT



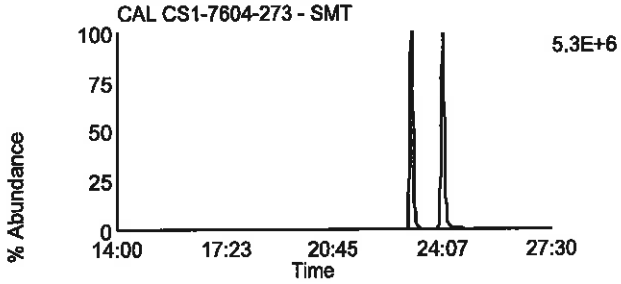
Data File: U130729B_11 G1 C7 - 319.8965
CAL CS1-7604-273 - SMT



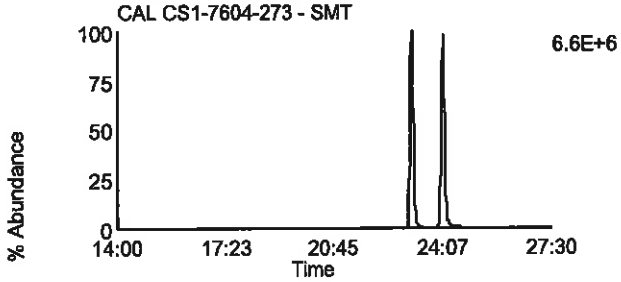
Data File: U130729B_11 G1 C8 - 321.8936
CAL CS1-7604-273 - SMT



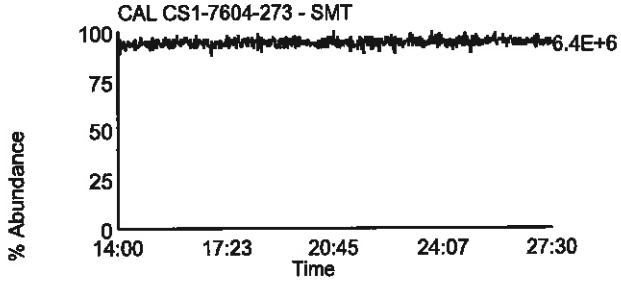
Data File: U130729B_11 G1 C10 - 331.9367
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G1 C11 - 333.9338
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G1 C5 - 318.9792
CAL CS1-7604-273 - SMT

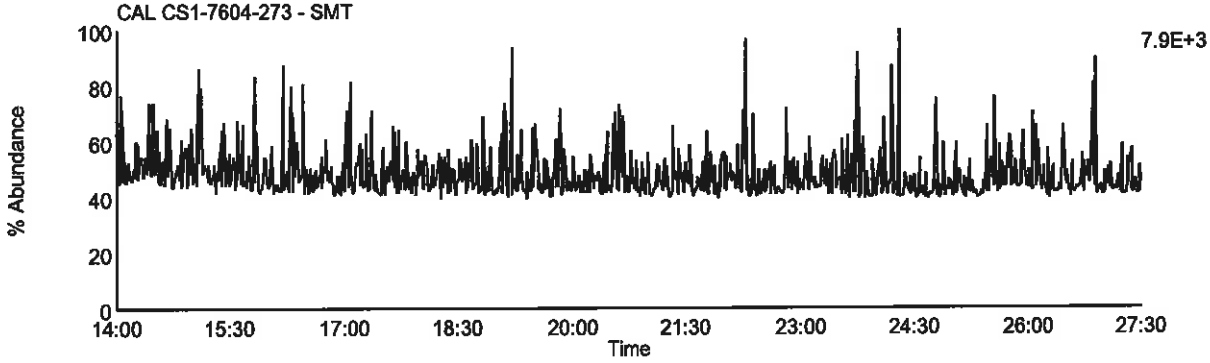


Homologue Group: Penta & Cleanup

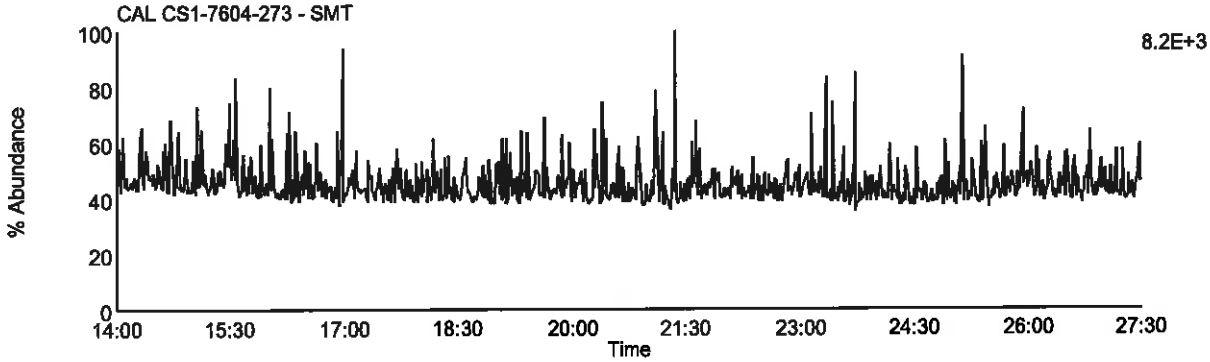
Data File Name: U130729B_11
Date Acquired: 7/29/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR06 (U)

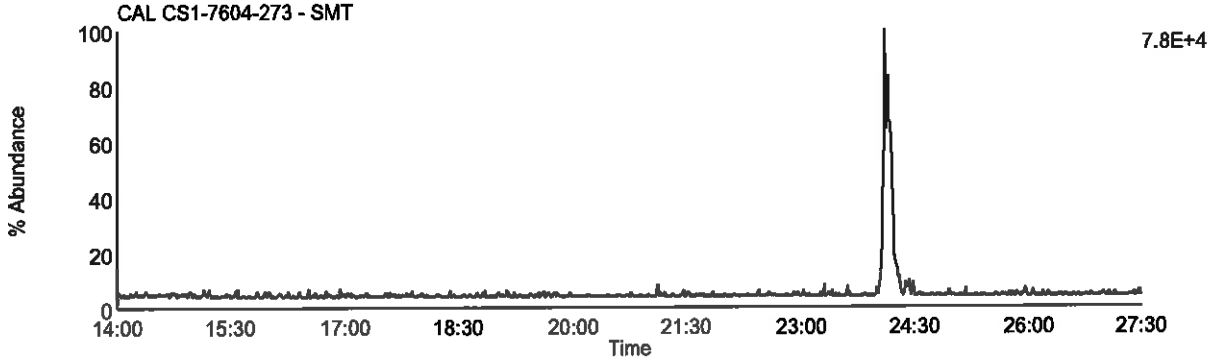
Data File: U130729B_11 G1 C12 - 339.8597
CAL CS1-7604-273 - SMT



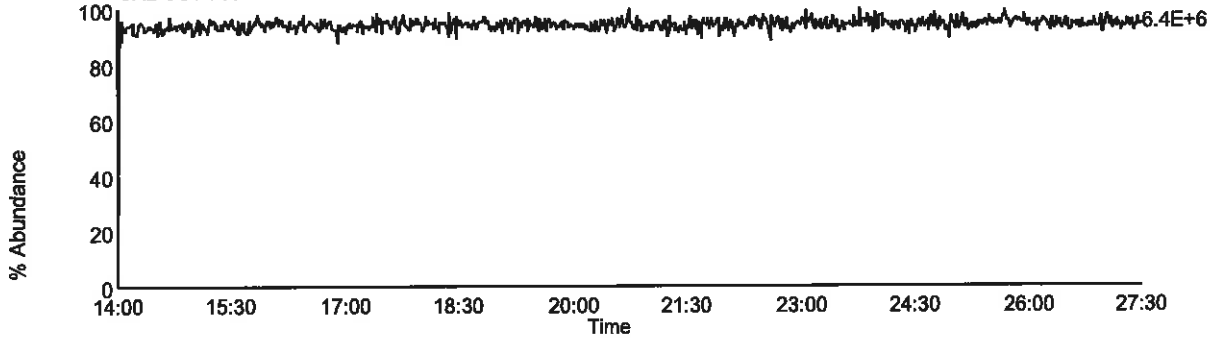
Data File: U130729B_11 G1 C13 - 341.8567
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G1 C9 - 327.8847
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G1 C5 - 318.9792
CAL CS1-7604-273 - SMT

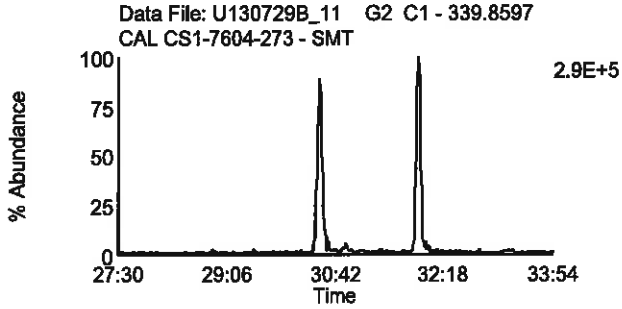


Homologue Group: Pentas

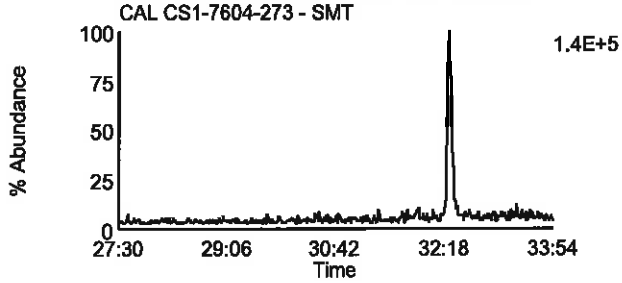
Data File Name: U130729B_11
Date Acquired: 7/29/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR06 (U)

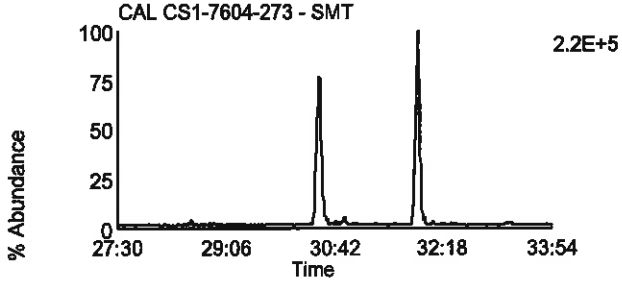
Data File: U130729B_11 G2 C1 - 339.8597
CAL CS1-7604-273 - SMT



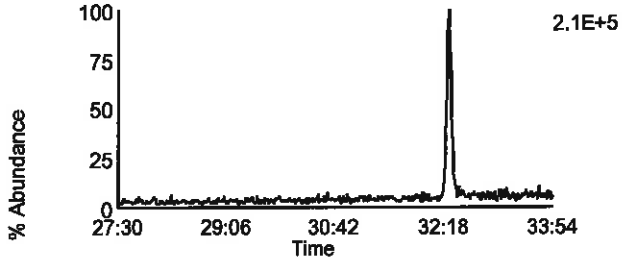
Data File: U130729B_11 G2 C4 - 353.8576
CAL CS1-7604-273 - SMT



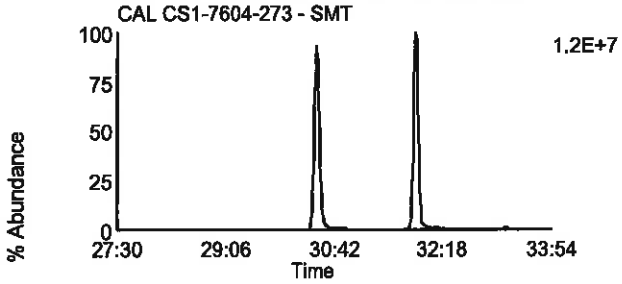
Data File: U130729B_11 G2 C2 - 341.8567
CAL CS1-7604-273 - SMT



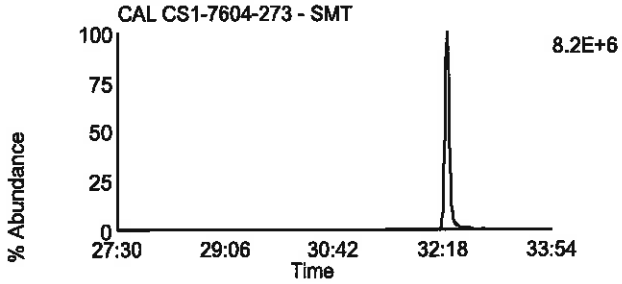
Data File: U130729B_11 G2 C8 - 355.8546
CAL CS1-7604-273 - SMT



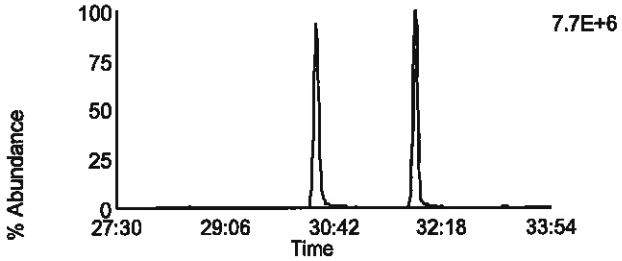
Data File: U130729B_11 G2 C3 - 351.8999
CAL CS1-7604-273 - SMT



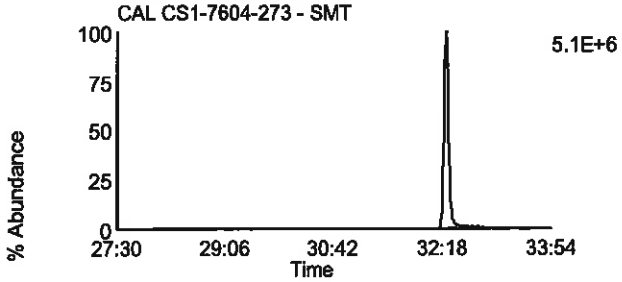
Data File: U130729B_11 G2 C10 - 367.8948
CAL CS1-7604-273 - SMT



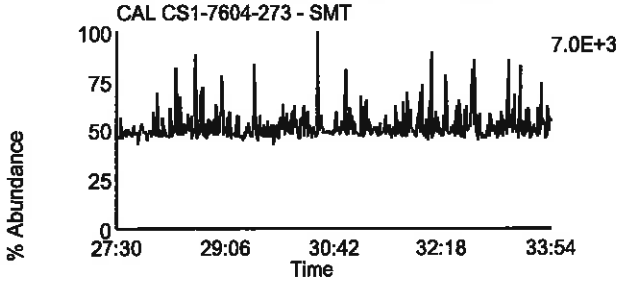
Data File: U130729B_11 G2 C5 - 353.8969
CAL CS1-7604-273 - SMT



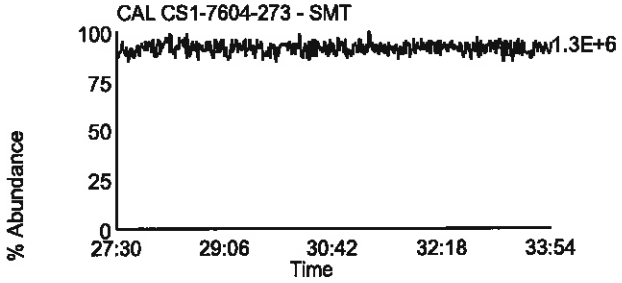
Data File: U130729B_11 G2 C11 - 369.8918
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G2 C12 - 409.7974
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G2 C6 - 354.9792
CAL CS1-7604-273 - SMT

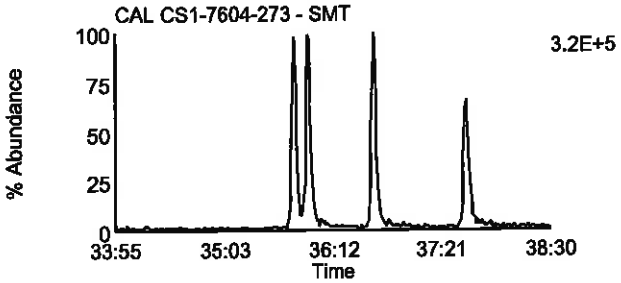


Homologue Group: Hexas

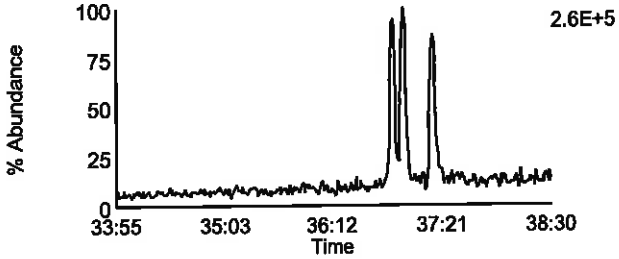
Data File Name: U130729B_11
Date Acquired: 7/29/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR06 (U)

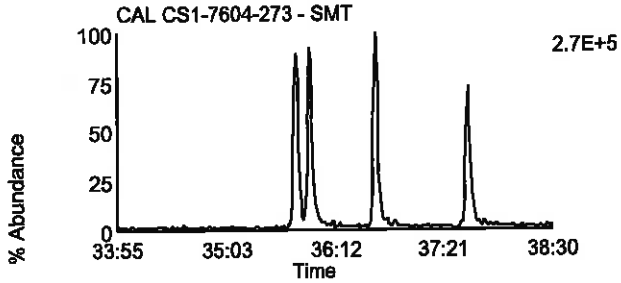
Data File: U130729B_11 G3 C1 - 373.8207
CAL CS1-7604-273 - SMT



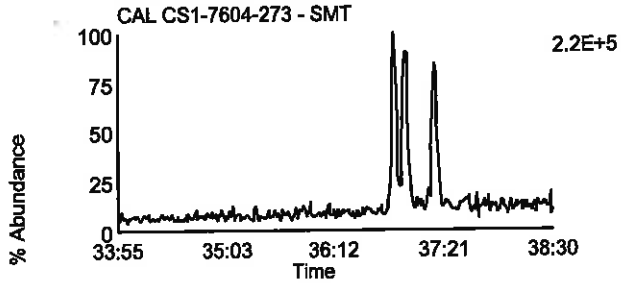
Data File: U130729B_11 G3 C7 - 389.8156
CAL CS1-7604-273 - SMT



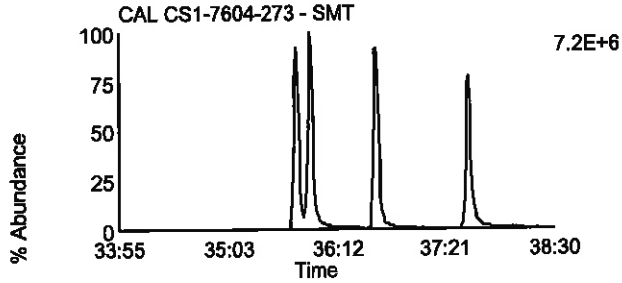
Data File: U130729B_11 G3 C2 - 375.8178
CAL CS1-7604-273 - SMT



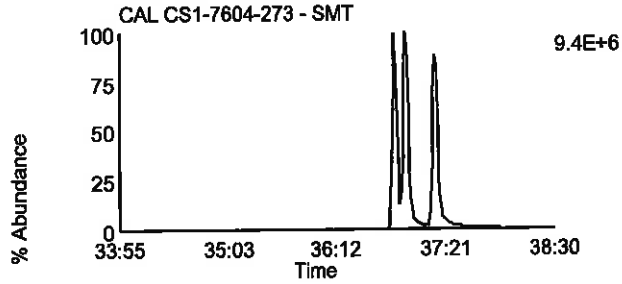
Data File: U130729B_11 G3 C8 - 391.8127
CAL CS1-7604-273 - SMT



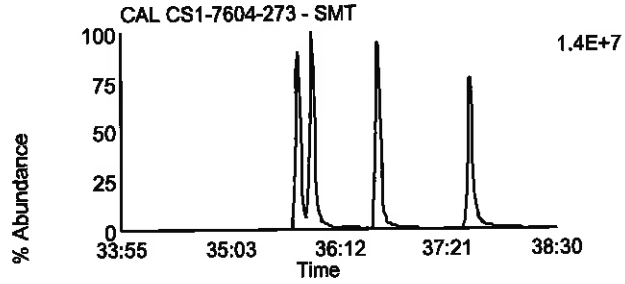
Data File: U130729B_11 G3 C5 - 383.8639
CAL CS1-7604-273 - SMT



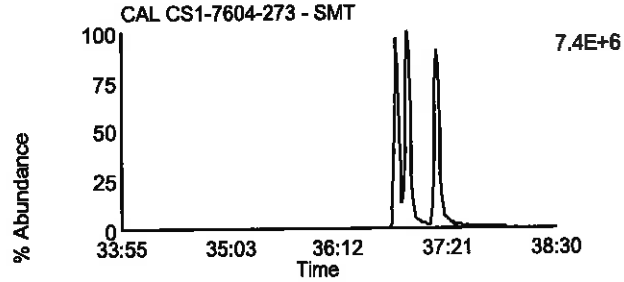
Data File: U130729B_11 G3 C9 - 401.8559
CAL CS1-7604-273 - SMT



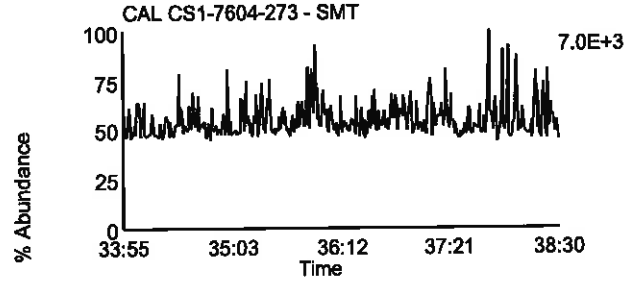
Data File: U130729B_11 G3 C6 - 385.861
CAL CS1-7604-273 - SMT



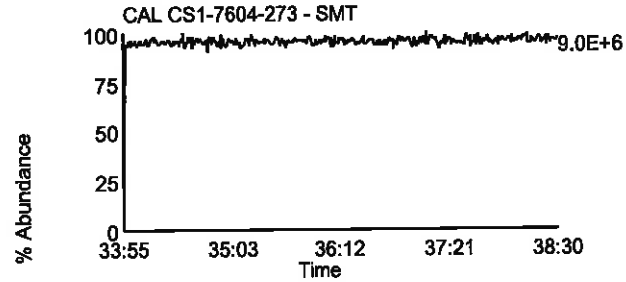
Data File: U130729B_11 G3 C10 - 403.8529
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G3 C11 - 445.7555
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G3 C3 - 380.976
CAL CS1-7604-273 - SMT

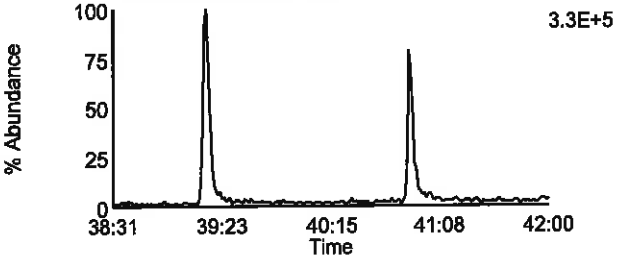


Homologue Group: Heptas

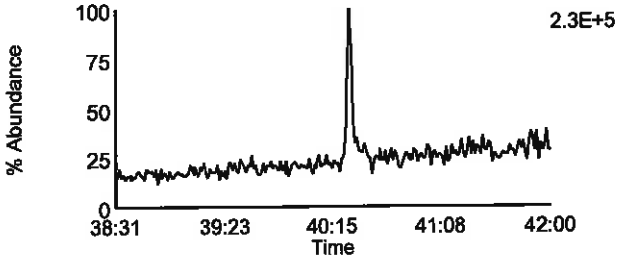
Data File Name: U130729B_11
Date Acquired: 7/29/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR06 (U)

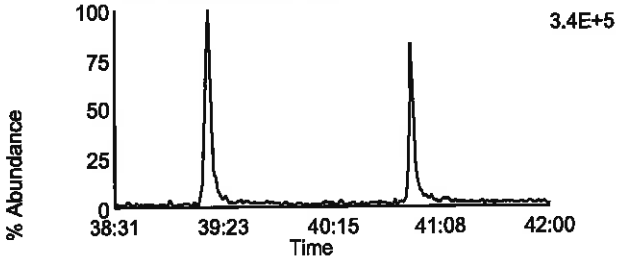
Data File: U130729B_11 G4 C3 - 407.7818
CAL CS1-7604-273 - SMT



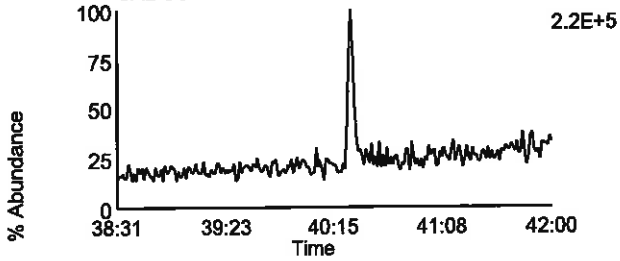
Data File: U130729B_11 G4 C8 - 423.7767
CAL CS1-7604-273 - SMT



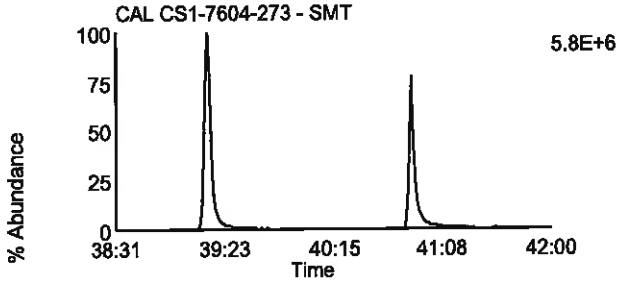
Data File: U130729B_11 G4 C4 - 409.7788
CAL CS1-7604-273 - SMT



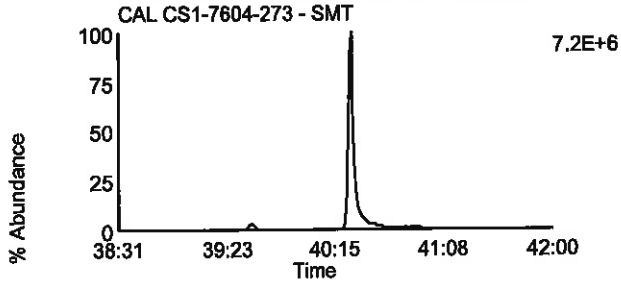
Data File: U130729B_11 G4 C9 - 425.7737
CAL CS1-7604-273 - SMT



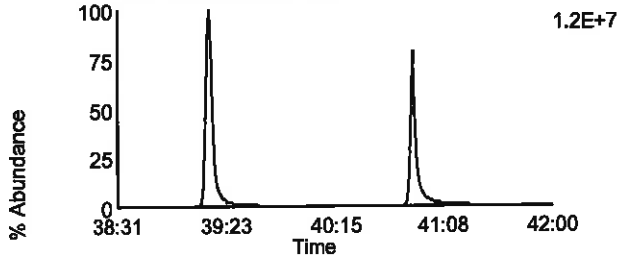
Data File: U130729B_11 G4 C6 - 417.825
CAL CS1-7604-273 - SMT



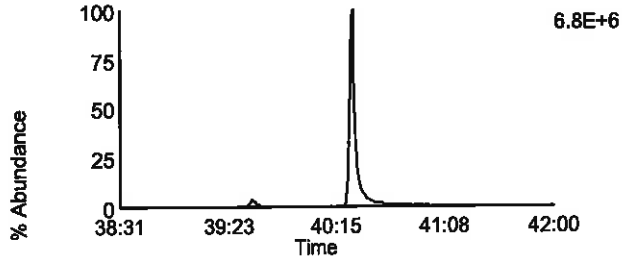
Data File: U130729B_11 G4 C11 - 435.8169
CAL CS1-7604-273 - SMT



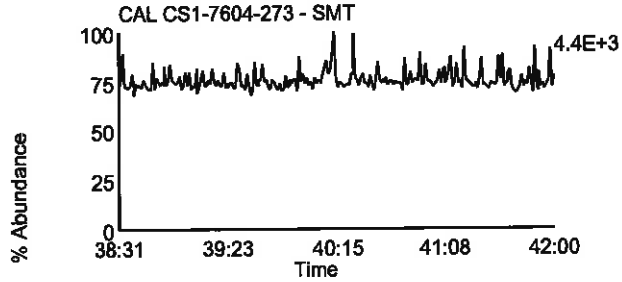
Data File: U130729B_11 G4 C7 - 419.822
CAL CS1-7604-273 - SMT



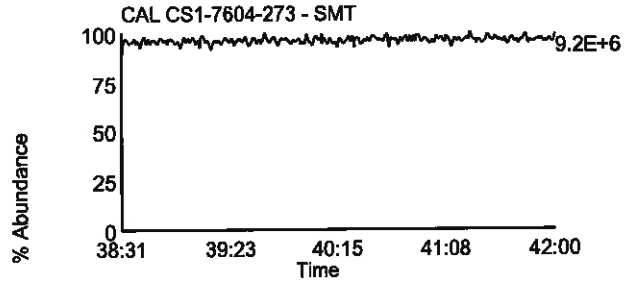
Data File: U130729B_11 G4 C12 - 437.814
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G4 C13 - 479.7165
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G4 C1 - 380.976
CAL CS1-7604-273 - SMT

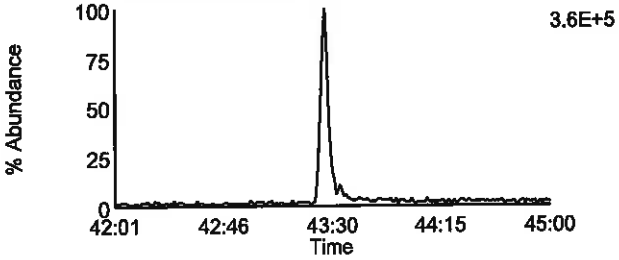


Homologue Group: Octas

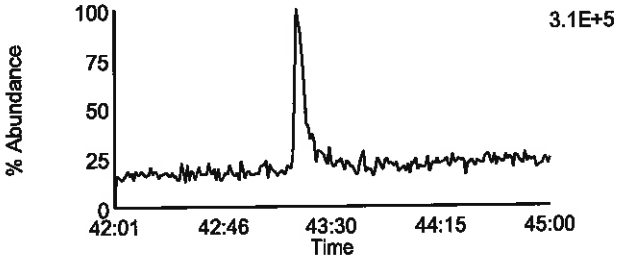
Data File Name: U130729B_11
Date Acquired: 7/29/2013
Sample Description: CAL CS1-7604-273 - SMT

Lab Sample ID: CS1-7604-273
Client Sample ID:
Instrument: 10MSHR06 (U)

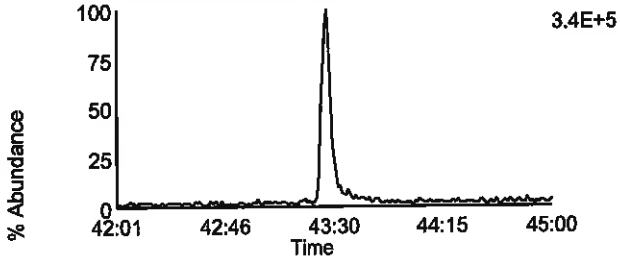
Data File: U130729B_11 G5 C4 - 441.7428
CAL CS1-7604-273 - SMT



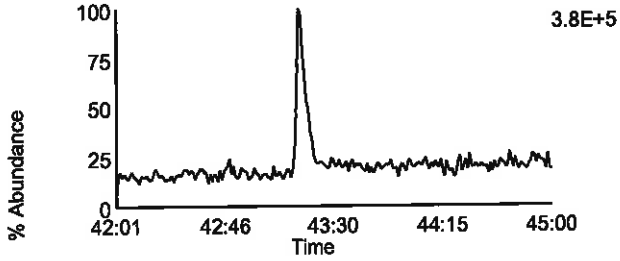
Data File: U130729B_11 G5 C8 - 457.7377
CAL CS1-7604-273 - SMT



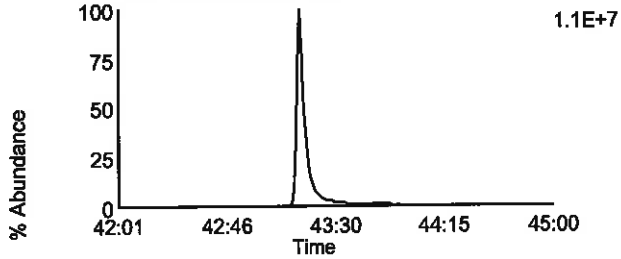
Data File: U130729B_11 G5 C5 - 443.7398
CAL CS1-7604-273 - SMT



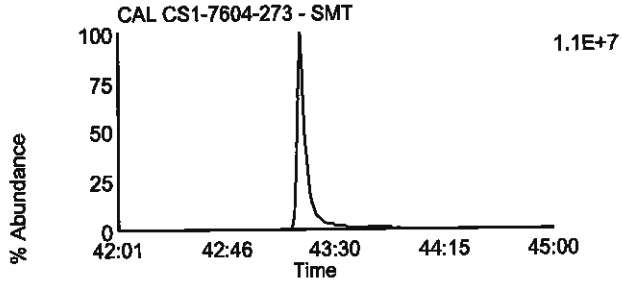
Data File: U130729B_11 G5 C9 - 459.7347
CAL CS1-7604-273 - SMT



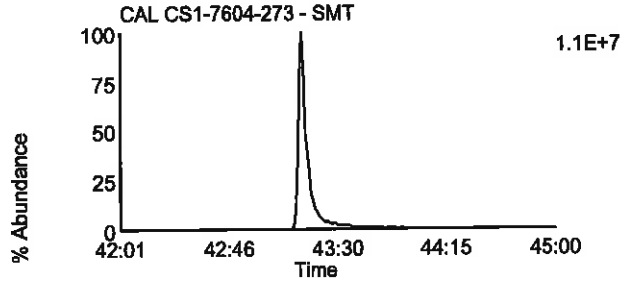
Data File: U130729B_11 G5 C11 - 469.7779
CAL CS1-7604-273 - SMT



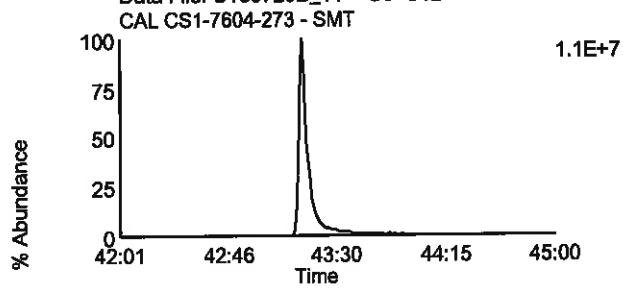
Data File: U130729B_11 G5 C11 - 469.7779
CAL CS1-7604-273 - SMT



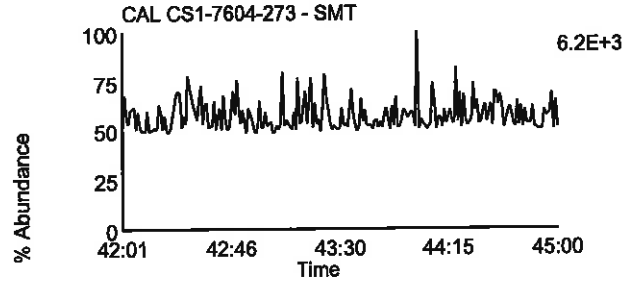
Data File: U130729B_11 G5 C12 - 471.7749
CAL CS1-7604-273 - SMT



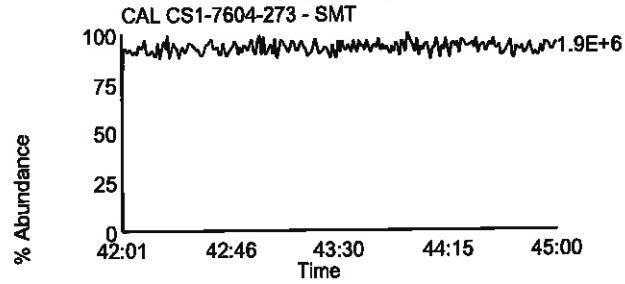
Data File: U130729B_11 G5 C12 - 471.7749
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G5 C13 - 513.6775
CAL CS1-7604-273 - SMT



Data File: U130729B_11 G5 C2 - 430.9728
CAL CS1-7604-273 - SMT

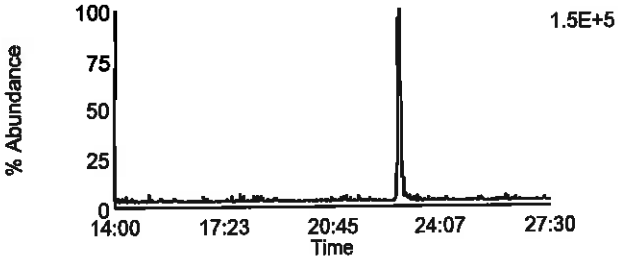


Homologue Group: Tetras

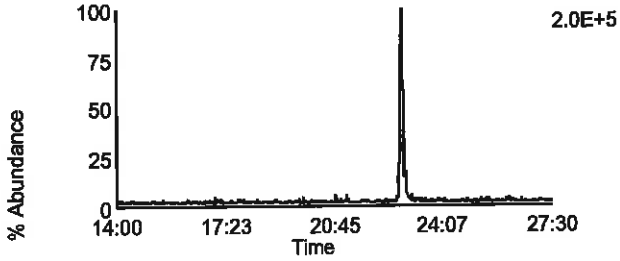
Data File Name: U130729B_10
Date Acquired: 7/29/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR06 (U)

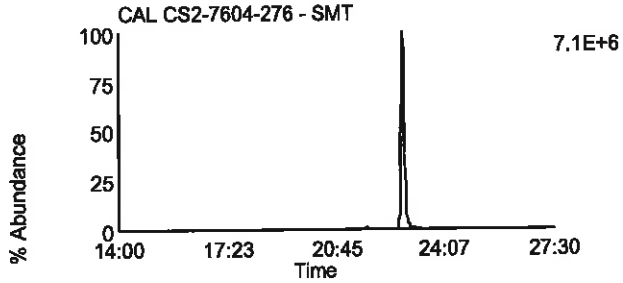
Data File: U130729B_10 G1 C1 - 303.9016
CAL CS2-7604-276 - SMT



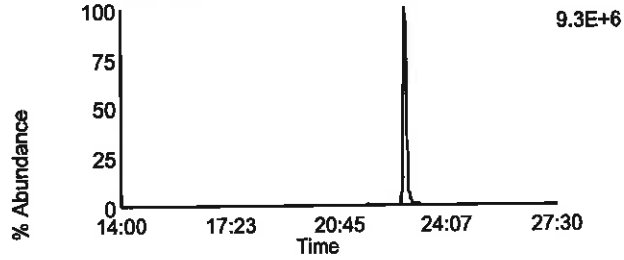
Data File: U130729B_10 G1 C2 - 305.8987
CAL CS2-7604-276 - SMT



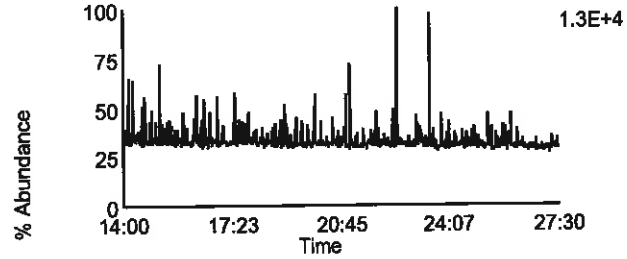
Data File: U130729B_10 G1 C3 - 315.9418
CAL CS2-7604-276 - SMT



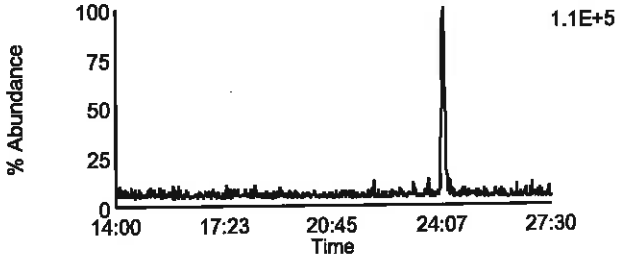
Data File: U130729B_10 G1 C4 - 317.9389
CAL CS2-7604-276 - SMT



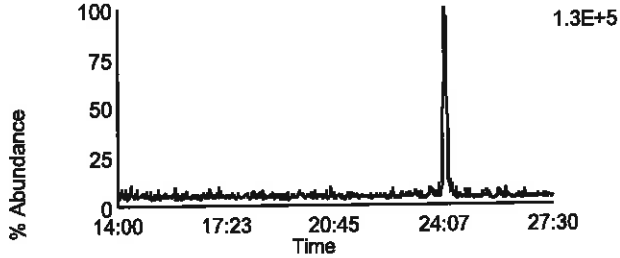
Data File: U130729B_10 G1 C14 - 375.8364
CAL CS2-7604-276 - SMT



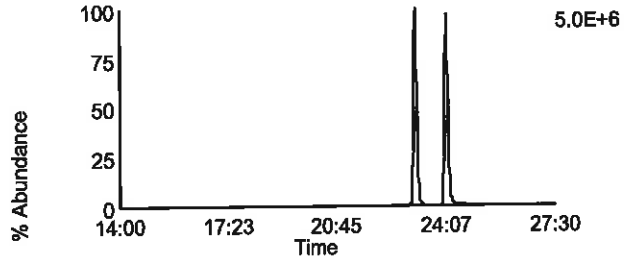
Data File: U130729B_10 G1 C7 - 319.8965
CAL CS2-7604-276 - SMT



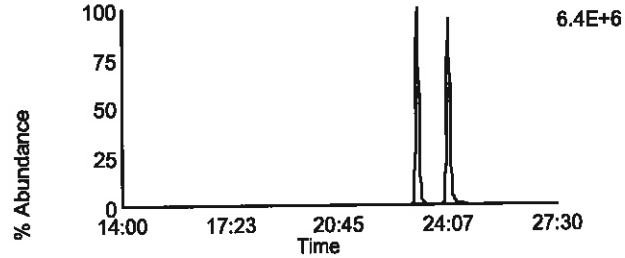
Data File: U130729B_10 G1 C8 - 321.8936
CAL CS2-7604-276 - SMT



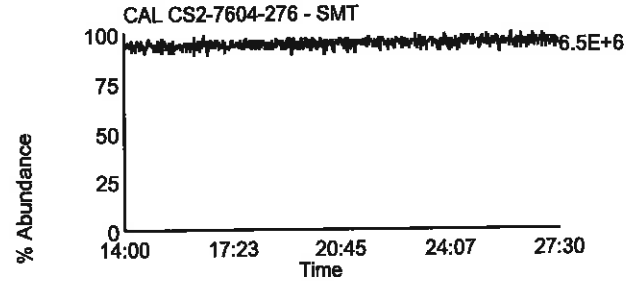
Data File: U130729B_10 G1 C10 - 331.9367
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G1 C11 - 333.9338
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G1 C5 - 318.9792
CAL CS2-7604-276 - SMT

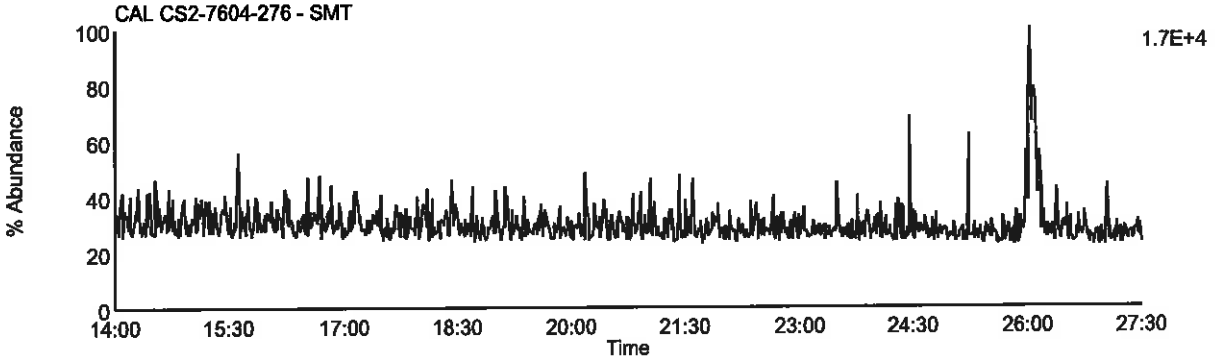


Homologue Group: Penta & Cleanup

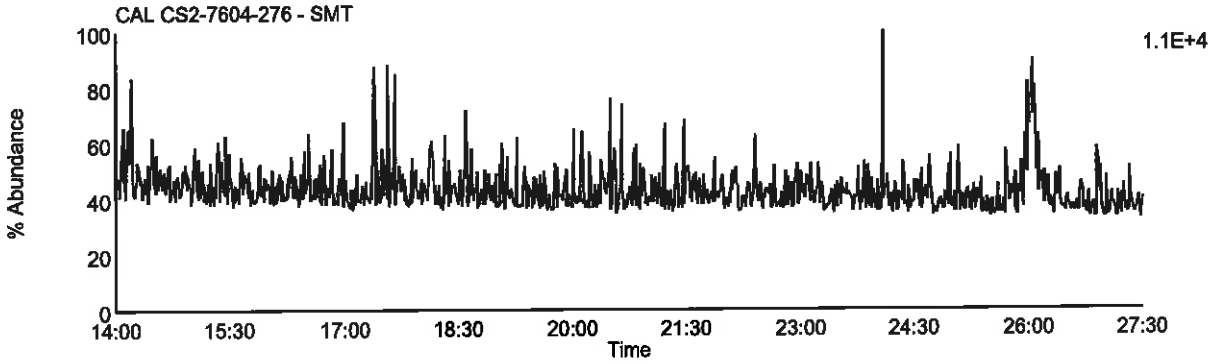
Data File Name: U130729B_10
Date Acquired: 7/29/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR06 (U)

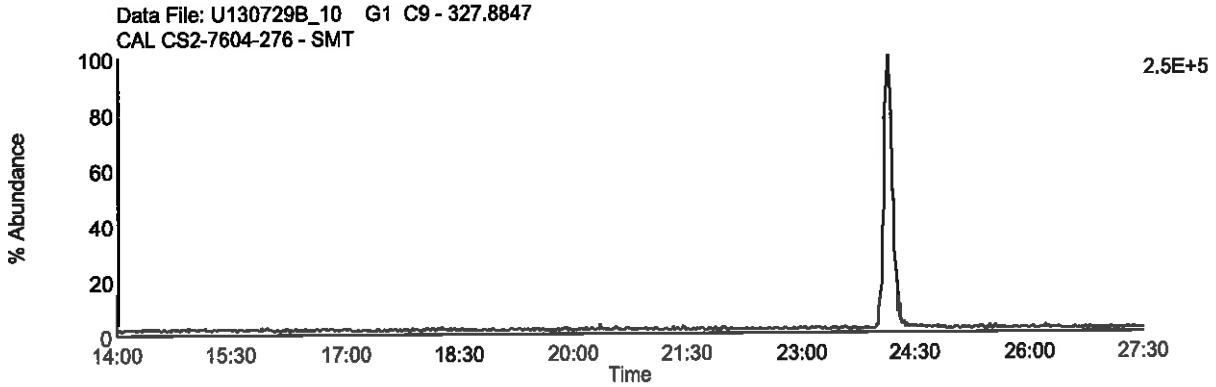
Data File: U130729B_10 G1 C12 - 339.8597
CAL CS2-7604-276 - SMT



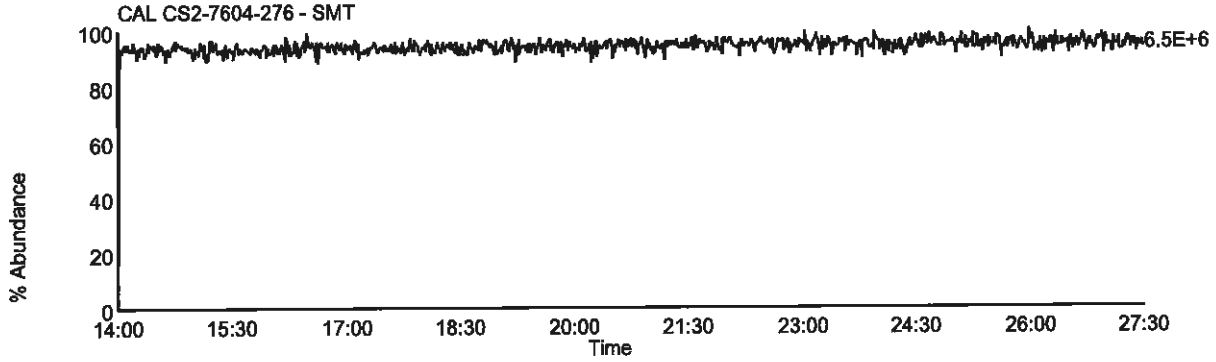
Data File: U130729B_10 G1 C13 - 341.8567
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G1 C9 - 327.8847
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G1 C5 - 318.9792
CAL CS2-7604-276 - SMT

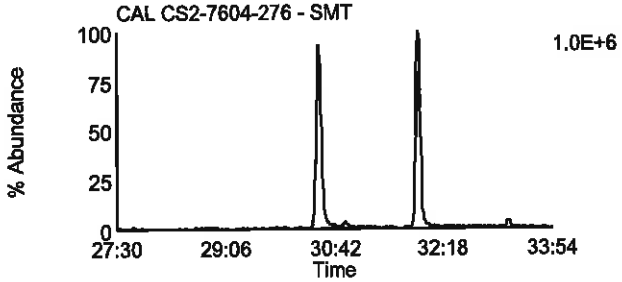


Homologue Group: Pentas

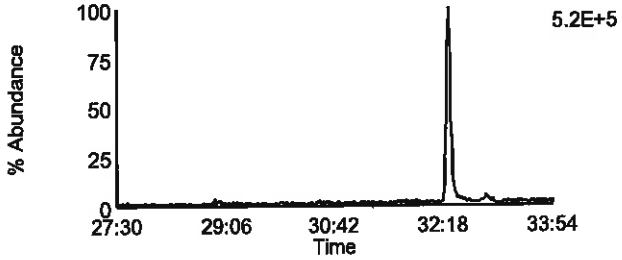
Data File Name: U130729B_10
Date Acquired: 7/29/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR06 (U)

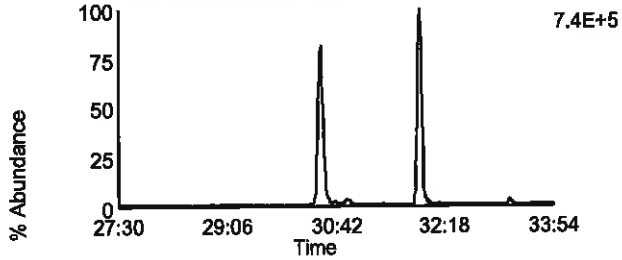
Data File: U130729B_10 G2 C1 - 339.8597
CAL CS2-7604-276 - SMT



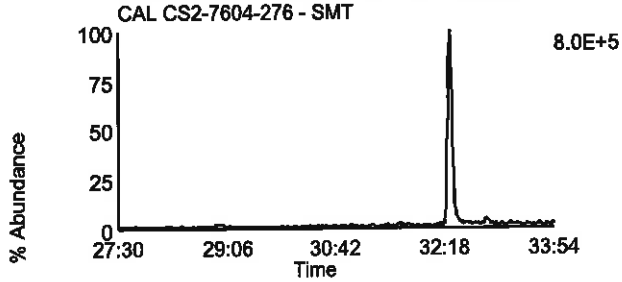
Data File: U130729B_10 G2 C4 - 353.8576
CAL CS2-7604-276 - SMT



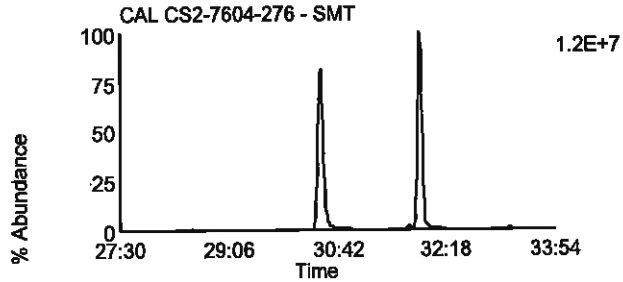
Data File: U130729B_10 G2 C2 - 341.8567
CAL CS2-7604-276 - SMT



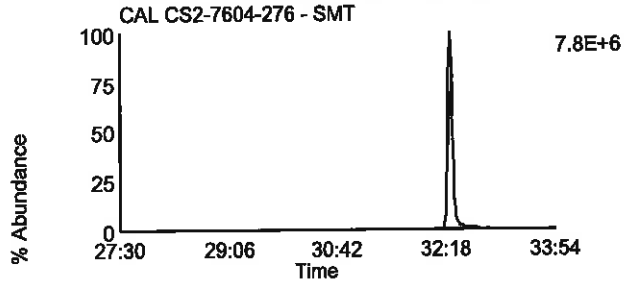
Data File: U130729B_10 G2 C8 - 355.8546
CAL CS2-7604-276 - SMT



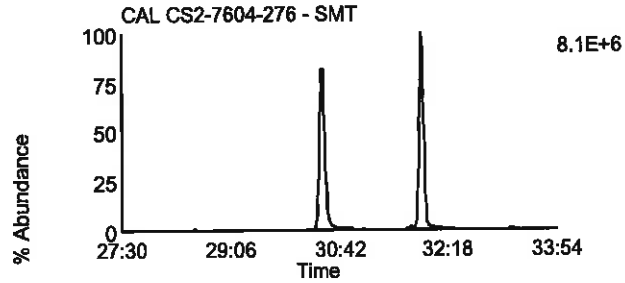
Data File: U130729B_10 G2 C3 - 351.8999
CAL CS2-7604-276 - SMT



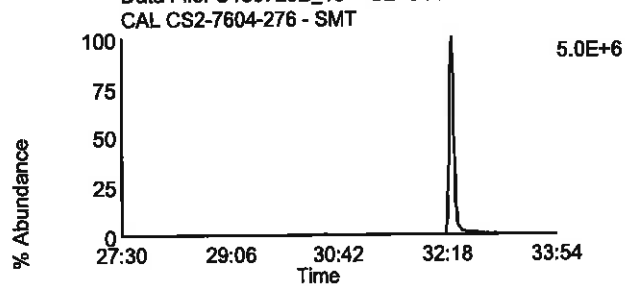
Data File: U130729B_10 G2 C10 - 367.8948
CAL CS2-7604-276 - SMT



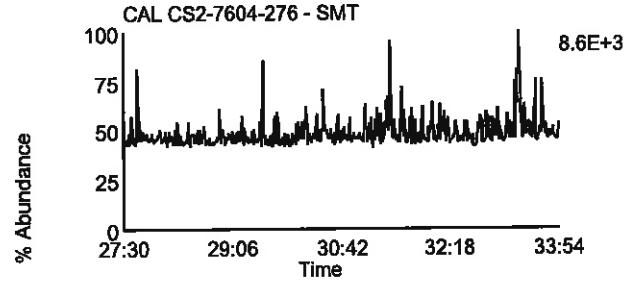
Data File: U130729B_10 G2 C5 - 353.8969
CAL CS2-7604-276 - SMT



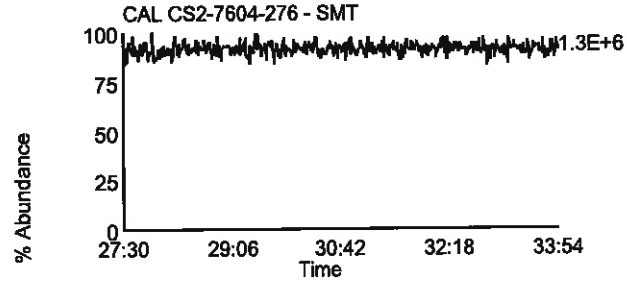
Data File: U130729B_10 G2 C11 - 369.8918
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G2 C12 - 409.7974
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G2 C6 - 354.9792
CAL CS2-7604-276 - SMT

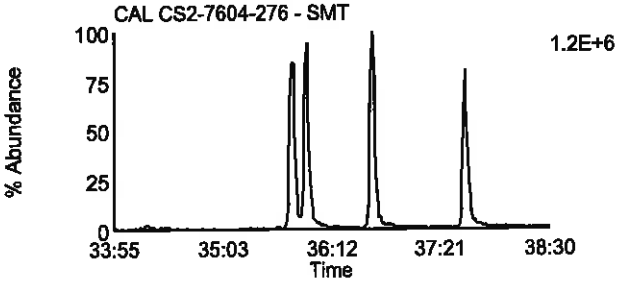


Homologue Group: Hexas

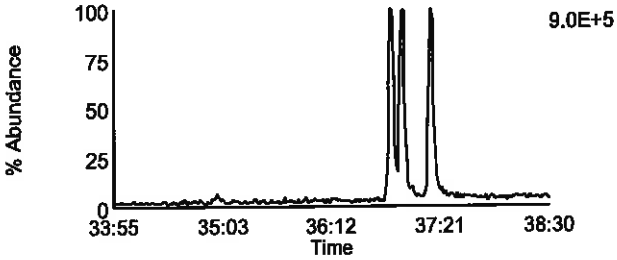
Data File Name: U130729B_10
Date Acquired: 7/29/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR06 (U)

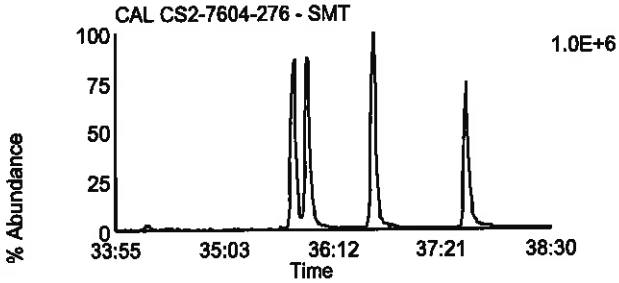
Data File: U130729B_10 G3 C1 - 373.8207
CAL CS2-7604-276 - SMT



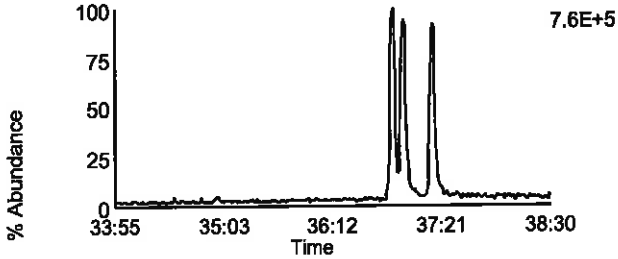
Data File: U130729B_10 G3 C7 - 389.8156
CAL CS2-7604-276 - SMT



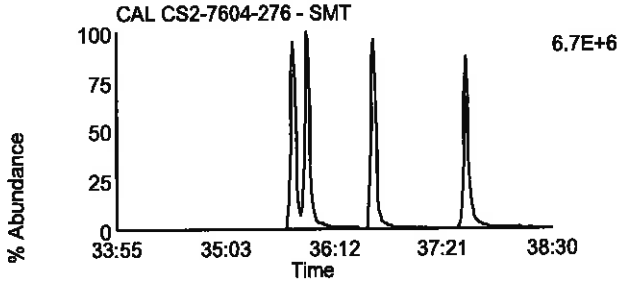
Data File: U130729B_10 G3 C2 - 375.8178
CAL CS2-7604-276 - SMT



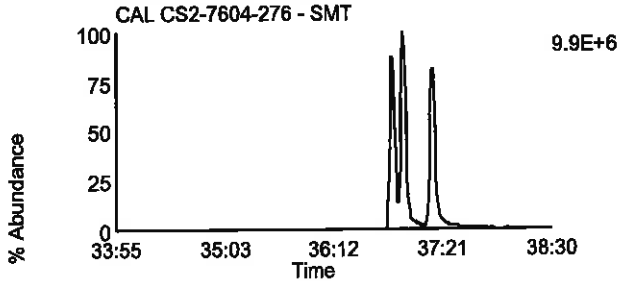
Data File: U130729B_10 G3 C8 - 391.8127
CAL CS2-7604-276 - SMT



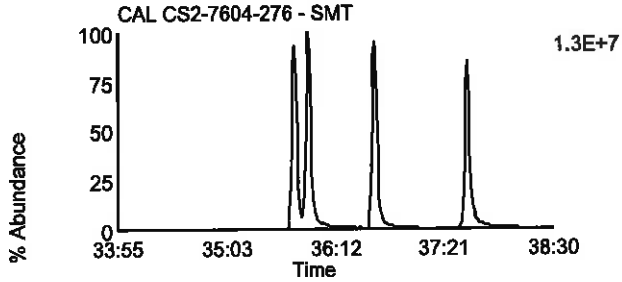
Data File: U130729B_10 G3 C5 - 383.8639
CAL CS2-7604-276 - SMT



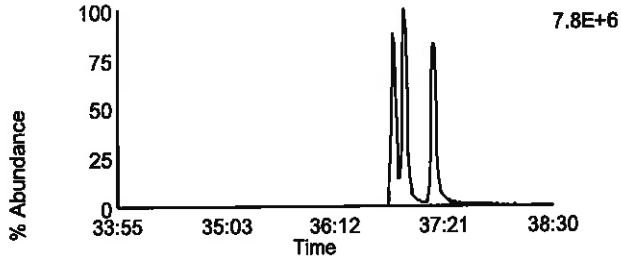
Data File: U130729B_10 G3 C9 - 401.8559
CAL CS2-7604-276 - SMT



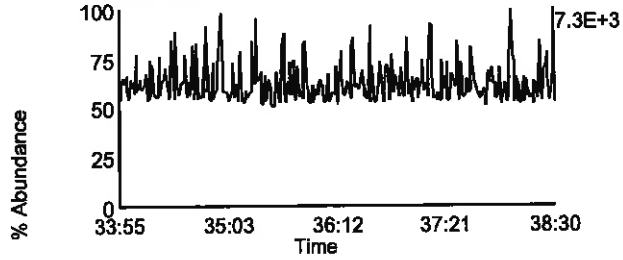
Data File: U130729B_10 G3 C6 - 385.861
CAL CS2-7604-276 - SMT



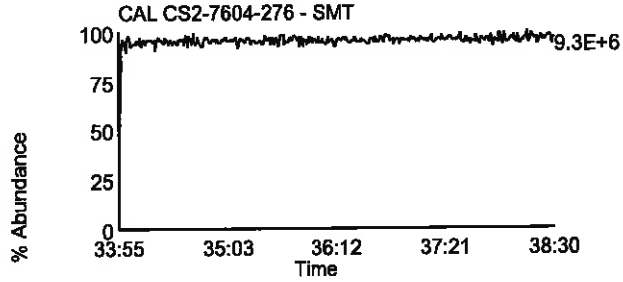
Data File: U130729B_10 G3 C10 - 403.8529
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G3 C11 - 445.7555
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G3 C3 - 380.976
CAL CS2-7604-276 - SMT

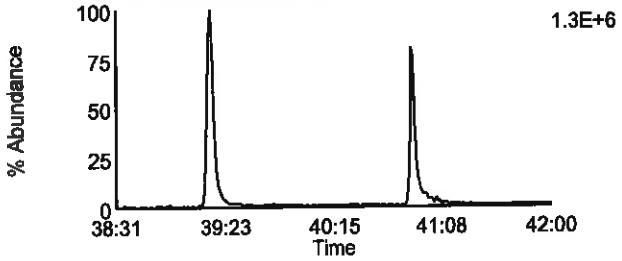


Homologue Group: Heptas

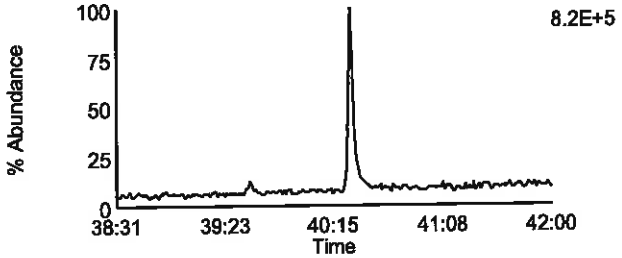
Data File Name: U130729B_10
Date Acquired: 7/29/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR06 (U)

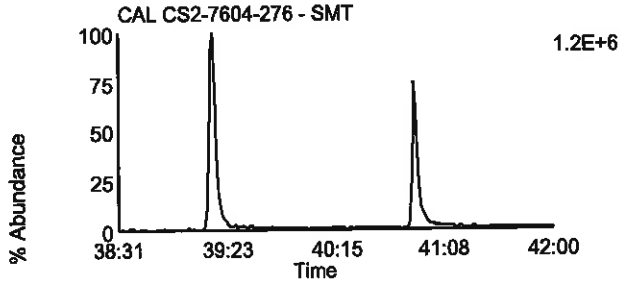
Data File: U130729B_10 G4 C3 - 407.7818
CAL CS2-7604-276 - SMT



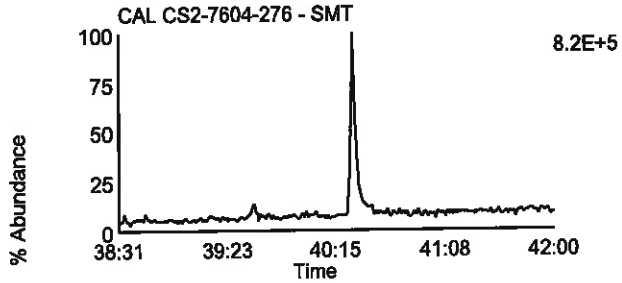
Data File: U130729B_10 G4 C8 - 423.7767
CAL CS2-7604-276 - SMT



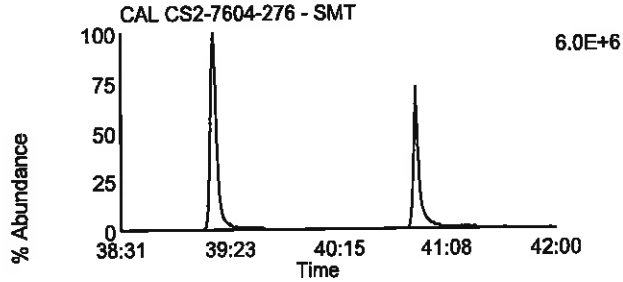
Data File: U130729B_10 G4 C4 - 409.7788
CAL CS2-7604-276 - SMT



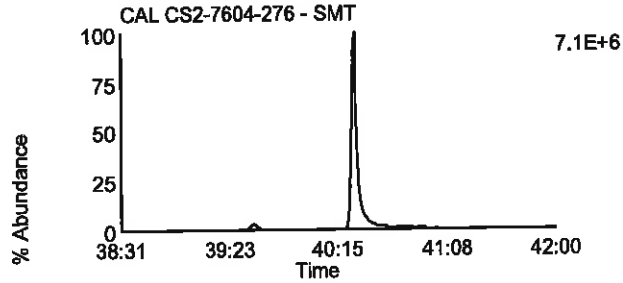
Data File: U130729B_10 G4 C9 - 425.7737
CAL CS2-7604-276 - SMT



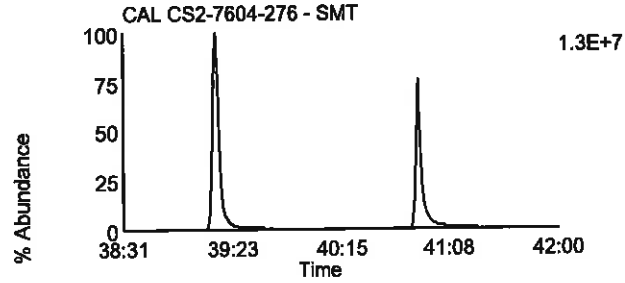
Data File: U130729B_10 G4 C6 - 417.825
CAL CS2-7604-276 - SMT



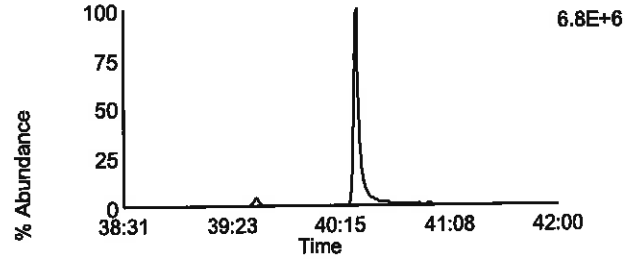
Data File: U130729B_10 G4 C11 - 435.8169
CAL CS2-7604-276 - SMT



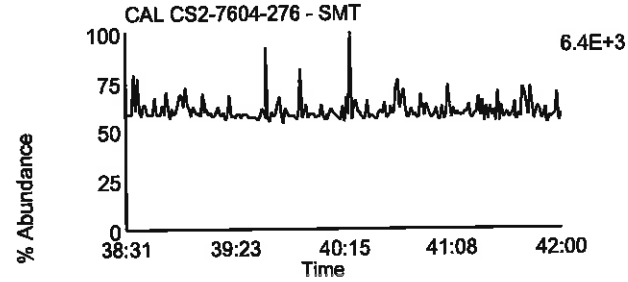
Data File: U130729B_10 G4 C7 - 419.822
CAL CS2-7604-276 - SMT



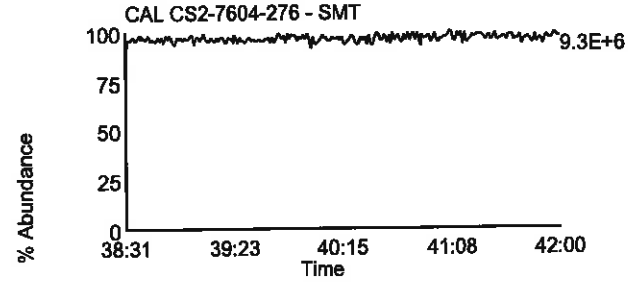
Data File: U130729B_10 G4 C12 - 437.814
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G4 C13 - 479.7165
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G4 C1 - 380.976
CAL CS2-7604-276 - SMT

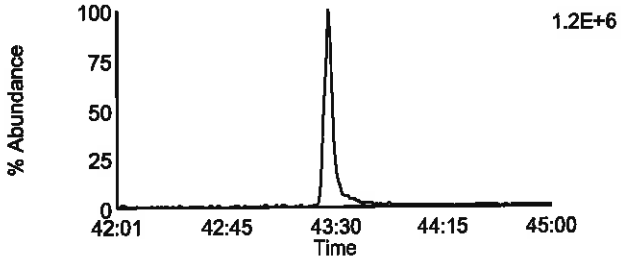


Homologue Group: Octas

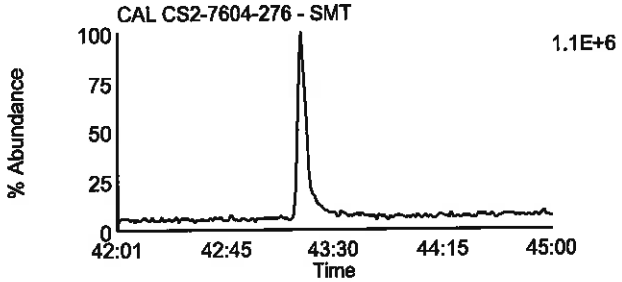
Data File Name: U130729B_10
Date Acquired: 7/29/2013
Sample Description: CAL CS2-7604-276 - SMT

Lab Sample ID: CS2-7604-276
Client Sample ID:
Instrument: 10MSHR06 (U)

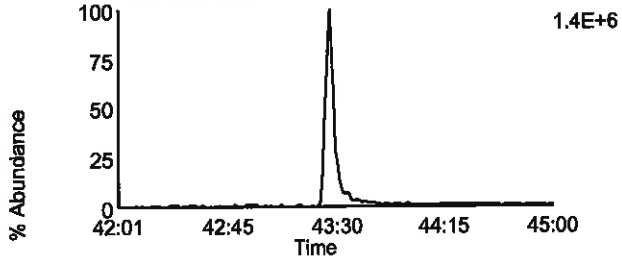
Data File: U130729B_10 G5 C4 - 441.7428
CAL CS2-7604-276 - SMT



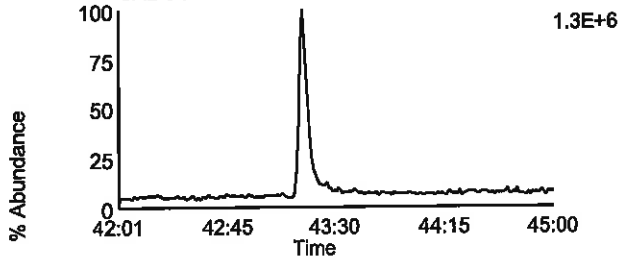
Data File: U130729B_10 G5 C8 - 457.7377
CAL CS2-7604-276 - SMT



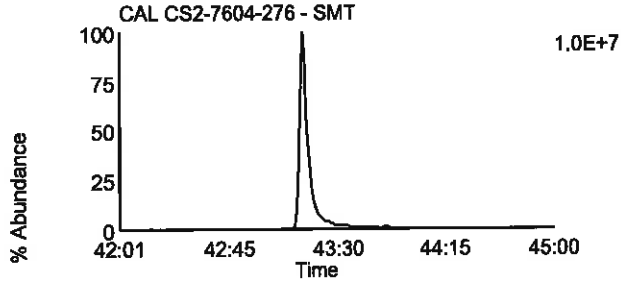
Data File: U130729B_10 G5 C5 - 443.7398
CAL CS2-7604-276 - SMT



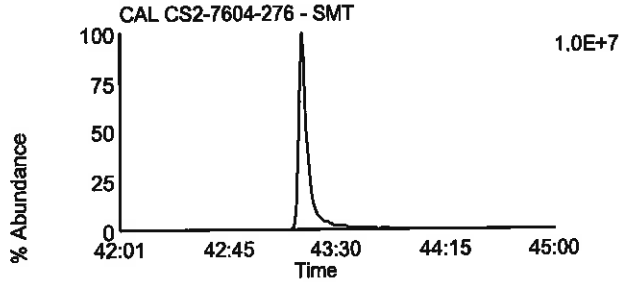
Data File: U130729B_10 G5 C9 - 459.7347
CAL CS2-7604-276 - SMT



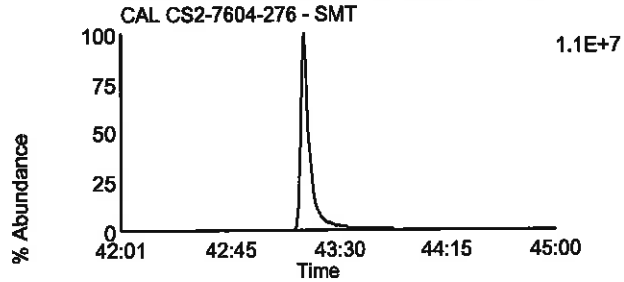
Data File: U130729B_10 G5 C11 - 469.7779
CAL CS2-7604-276 - SMT



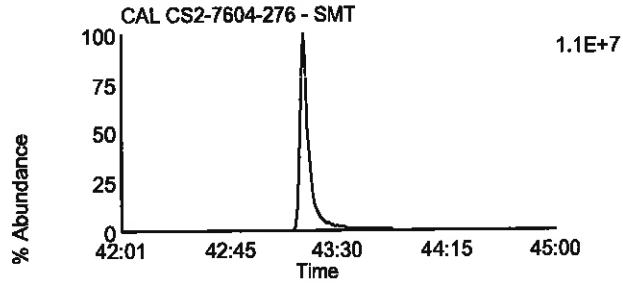
Data File: U130729B_10 G5 C11 - 469.7779
CAL CS2-7604-276 - SMT



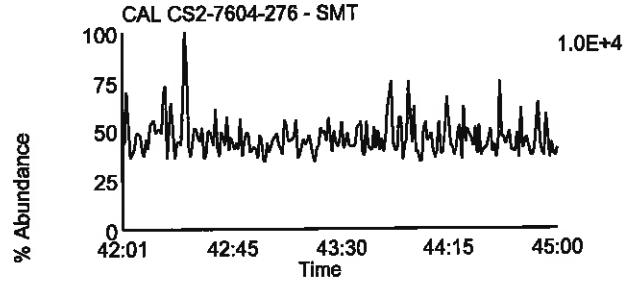
Data File: U130729B_10 G5 C12 - 471.7749
CAL CS2-7604-276 - SMT



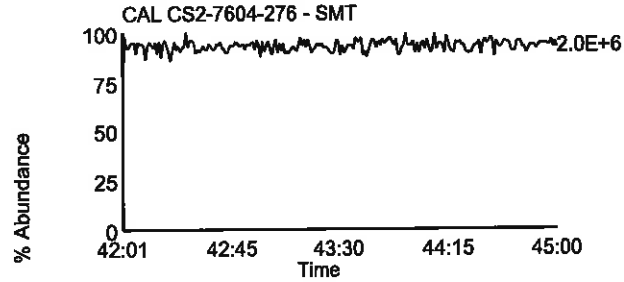
Data File: U130729B_10 G5 C12 - 471.7749
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G5 C13 - 513.6775
CAL CS2-7604-276 - SMT



Data File: U130729B_10 G5 C2 - 430.9728
CAL CS2-7604-276 - SMT

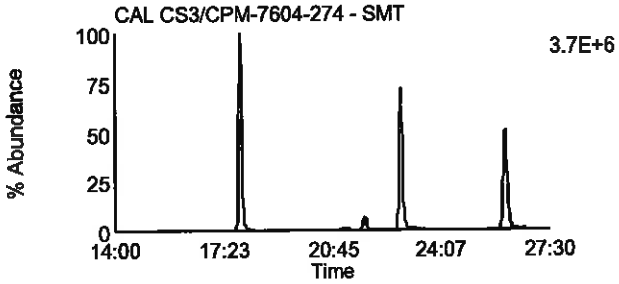


Homologue Group: Tetras

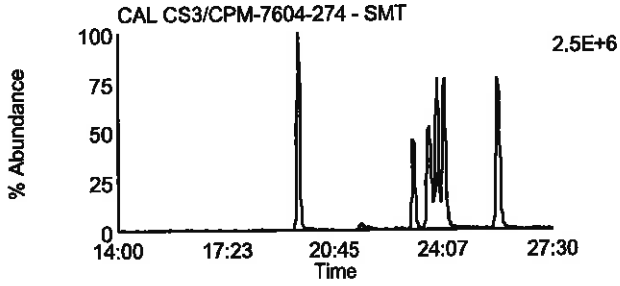
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID:
Instrument: 10MSHR06 (U)

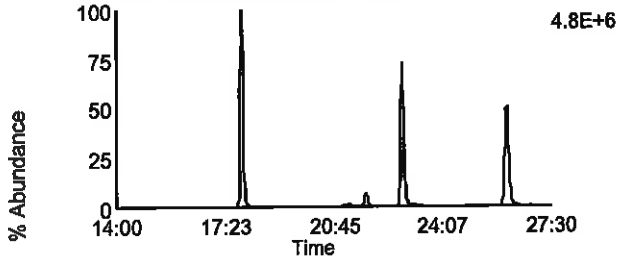
Data File: U130729B_09 G1 C1 - 303.9016
CAL CS3/CPM-7604-274 - SMT



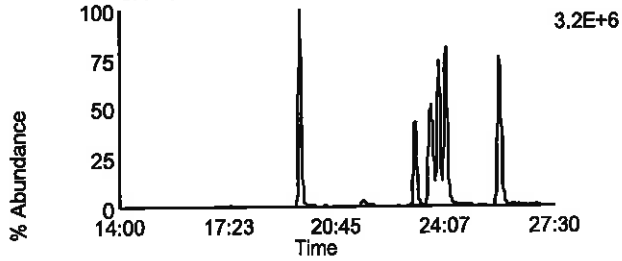
Data File: U130729B_09 G1 C7 - 319.8965
CAL CS3/CPM-7604-274 - SMT



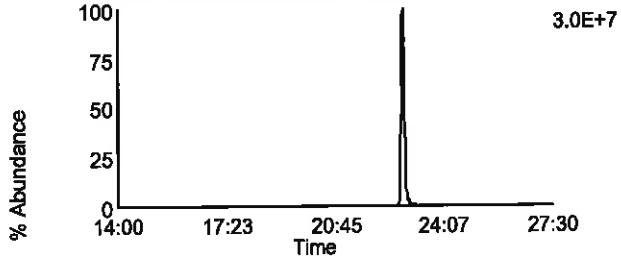
Data File: U130729B_09 G1 C2 - 305.8987
CAL CS3/CPM-7604-274 - SMT



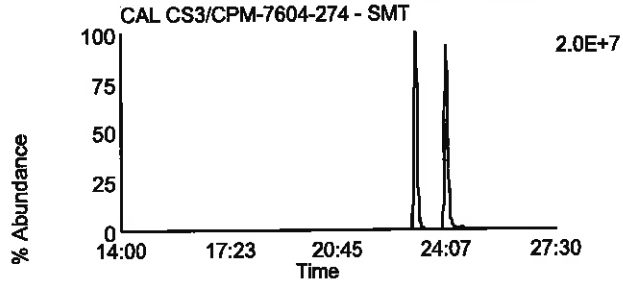
Data File: U130729B_09 G1 C8 - 321.8936
CAL CS3/CPM-7604-274 - SMT



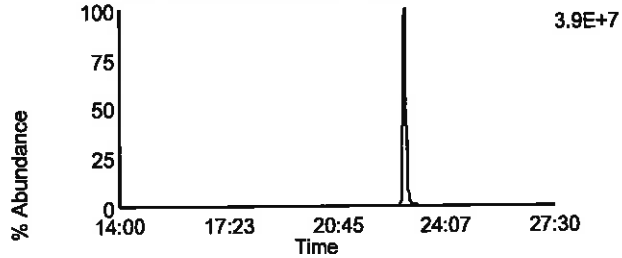
Data File: U130729B_09 G1 C3 - 315.9418
CAL CS3/CPM-7604-274 - SMT



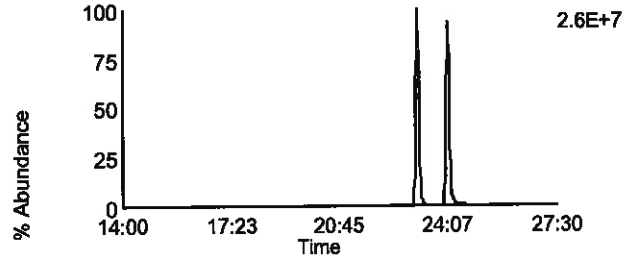
Data File: U130729B_09 G1 C10 - 331.9367
CAL CS3/CPM-7604-274 - SMT



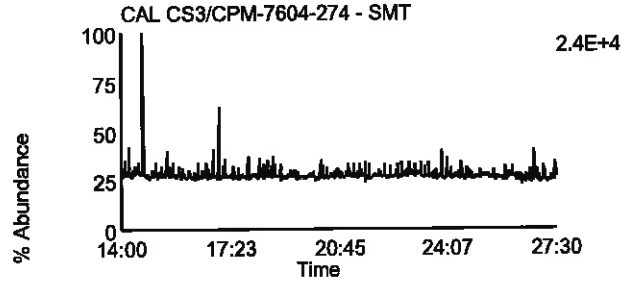
Data File: U130729B_09 G1 C4 - 317.9389
CAL CS3/CPM-7604-274 - SMT



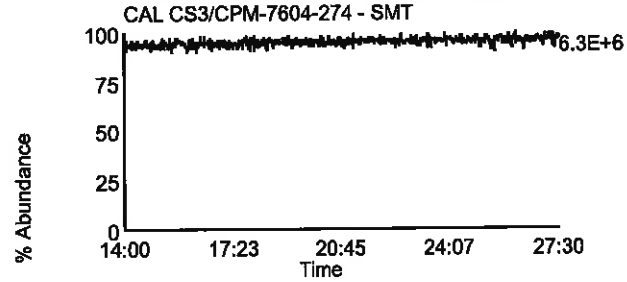
Data File: U130729B_09 G1 C11 - 333.9338
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C14 - 375.8364
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C5 - 318.9792
CAL CS3/CPM-7604-274 - SMT

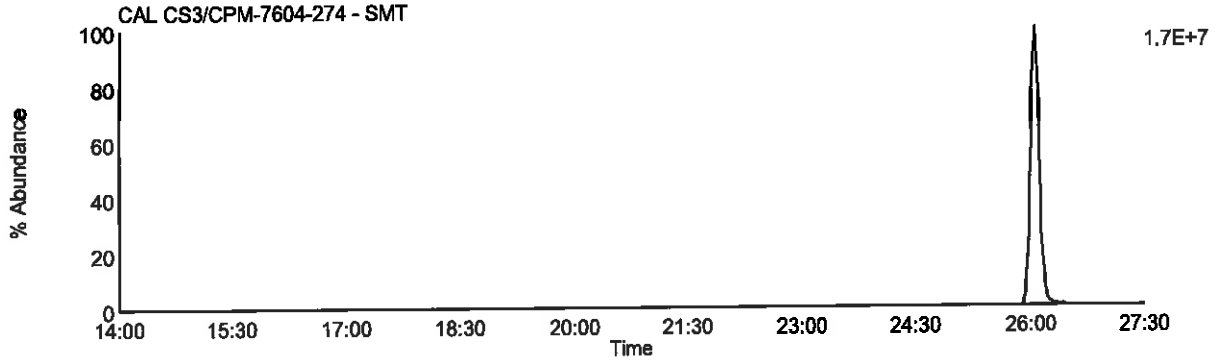


Homologue Group: Penta & Cleanup

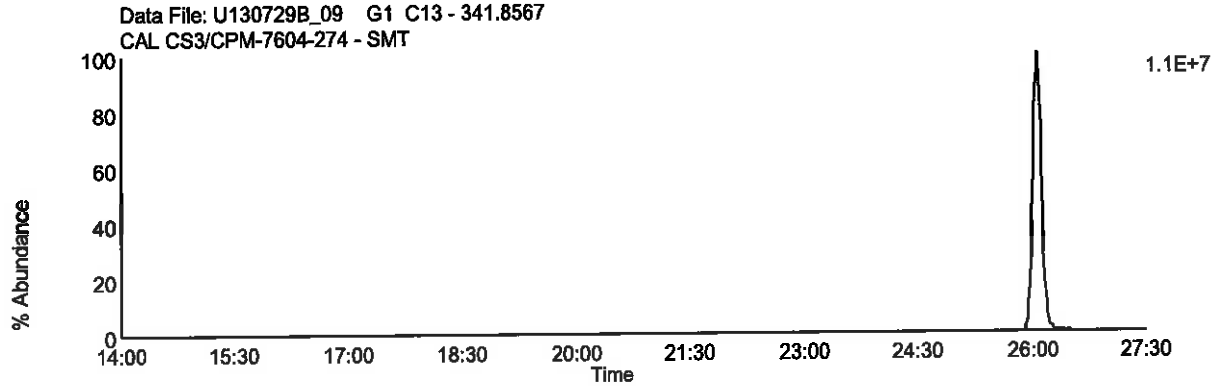
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID:
Instrument: 10MSHR06 (U)

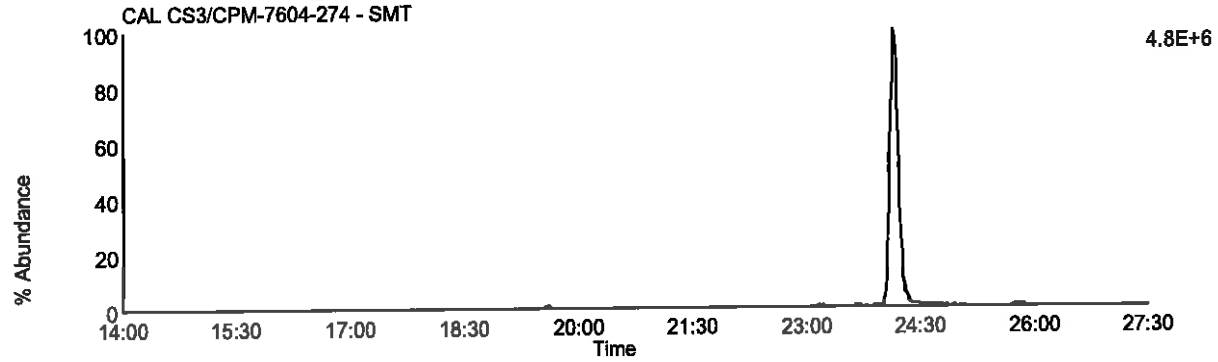
Data File: U130729B_09 G1 C12 - 339.8597
CAL CS3/CPM-7604-274 - SMT



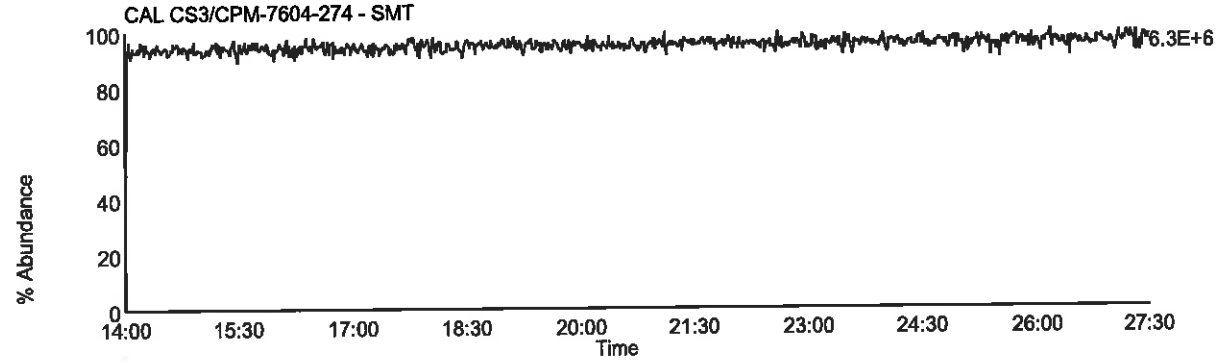
Data File: U130729B_09 G1 C13 - 341.8567
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C9 - 327.8847
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C5 - 318.9792
CAL CS3/CPM-7604-274 - SMT

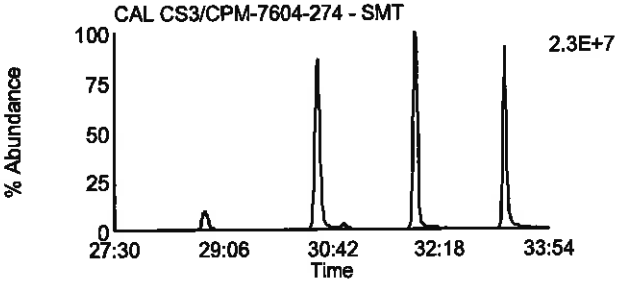


Homologue Group: Pentas

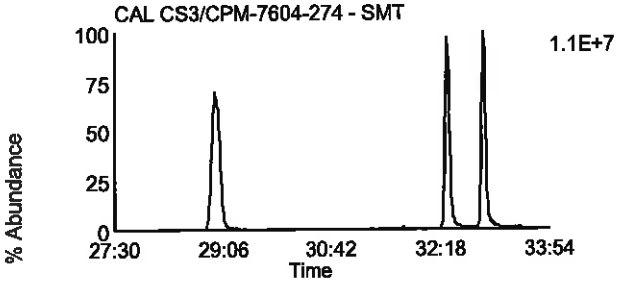
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID:
Instrument: 10MSHR06 (U)

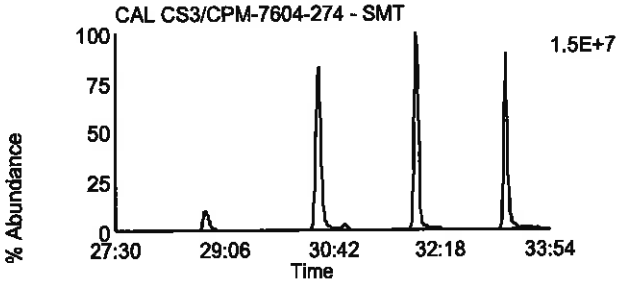
Data File: U130729B_09 G2 C1 - 339.8597
CAL CS3/CPM-7604-274 - SMT



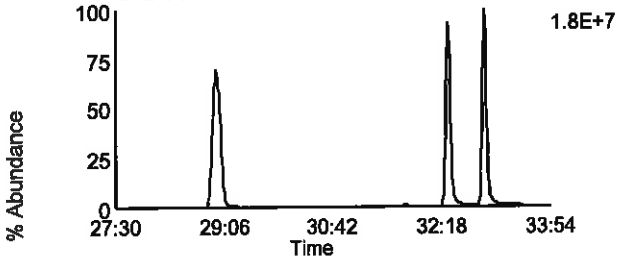
Data File: U130729B_09 G2 C4 - 353.8576
CAL CS3/CPM-7604-274 - SMT



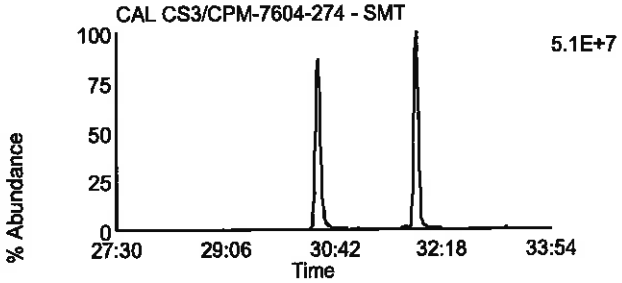
Data File: U130729B_09 G2 C2 - 341.8567
CAL CS3/CPM-7604-274 - SMT



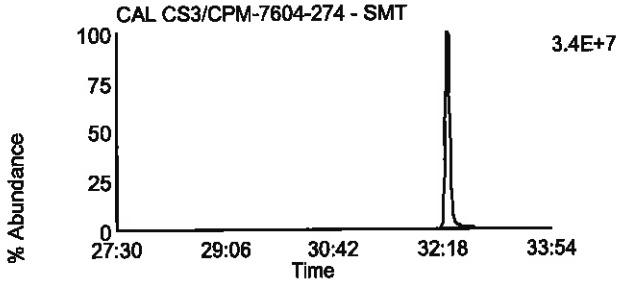
Data File: U130729B_09 G2 C8 - 355.8546
CAL CS3/CPM-7604-274 - SMT



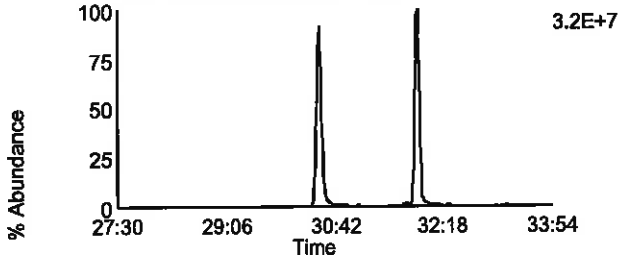
Data File: U130729B_09 G2 C3 - 351.8999
CAL CS3/CPM-7604-274 - SMT



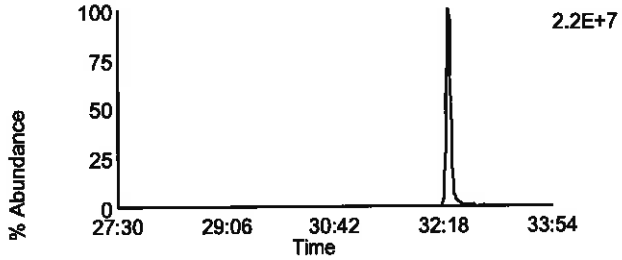
Data File: U130729B_09 G2 C10 - 367.8948
CAL CS3/CPM-7604-274 - SMT



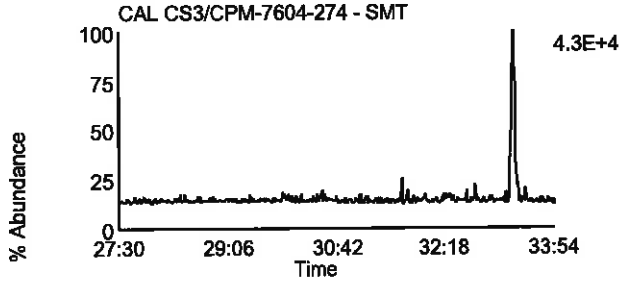
Data File: U130729B_09 G2 C5 - 353.8969
CAL CS3/CPM-7604-274 - SMT



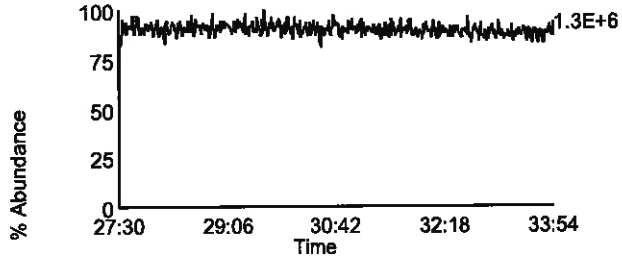
Data File: U130729B_09 G2 C11 - 369.8918
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G2 C12 - 409.7974
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G2 C6 - 354.9792
CAL CS3/CPM-7604-274 - SMT

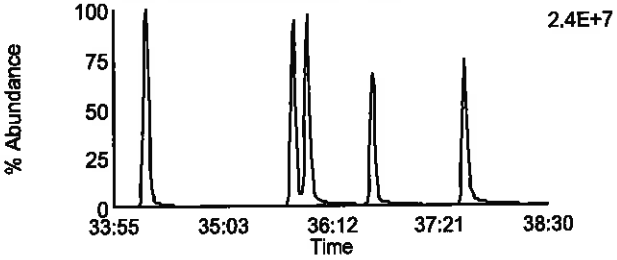


Homologue Group: Hexas

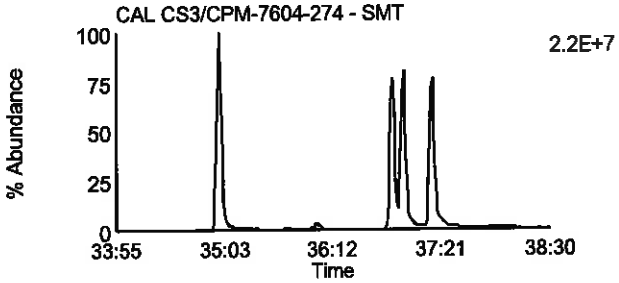
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID:
Instrument: 10MSHR06 (U)

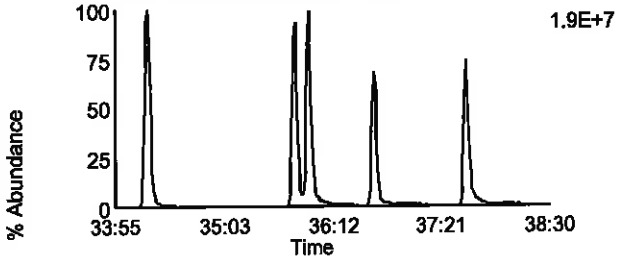
Data File: U130729B_09 G3 C1 - 373.8207
CAL CS3/CPM-7604-274 - SMT



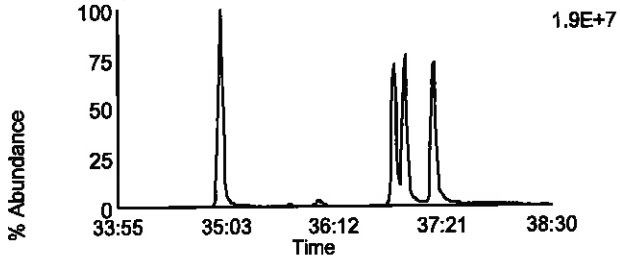
Data File: U130729B_09 G3 C7 - 389.8156
CAL CS3/CPM-7604-274 - SMT



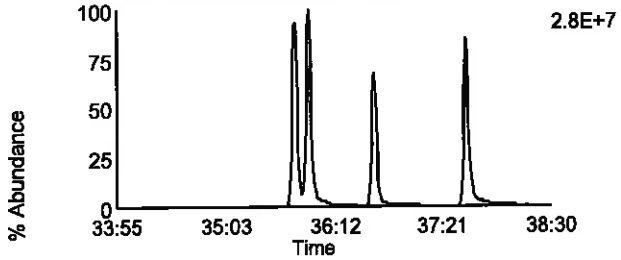
Data File: U130729B_09 G3 C2 - 375.8178
CAL CS3/CPM-7604-274 - SMT



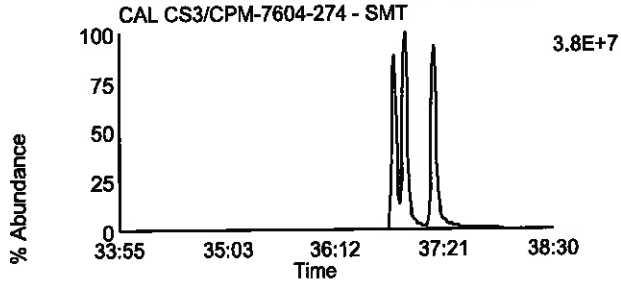
Data File: U130729B_09 G3 C8 - 391.8127
CAL CS3/CPM-7604-274 - SMT



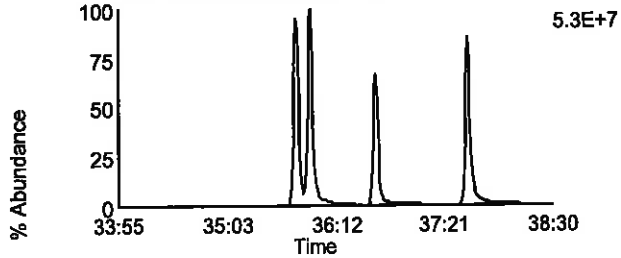
Data File: U130729B_09 G3 C5 - 383.8639
CAL CS3/CPM-7604-274 - SMT



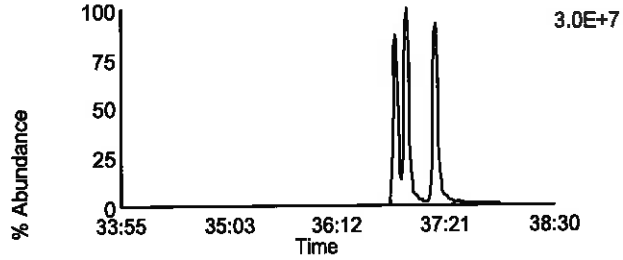
Data File: U130729B_09 G3 C9 - 401.8559
CAL CS3/CPM-7604-274 - SMT



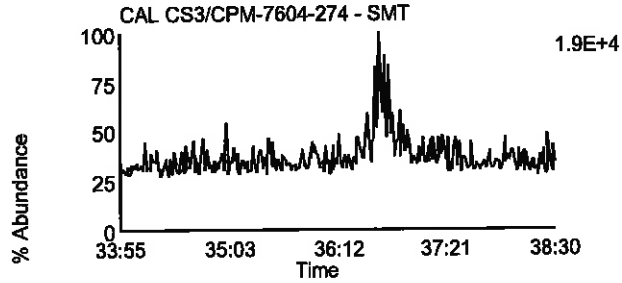
Data File: U130729B_09 G3 C6 - 385.861
CAL CS3/CPM-7604-274 - SMT



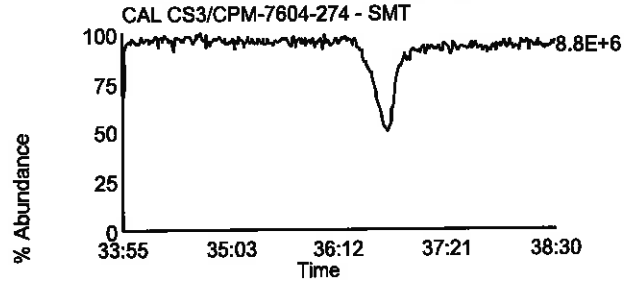
Data File: U130729B_09 G3 C10 - 403.8529
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G3 C11 - 445.7555
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G3 C3 - 380.976
CAL CS3/CPM-7604-274 - SMT

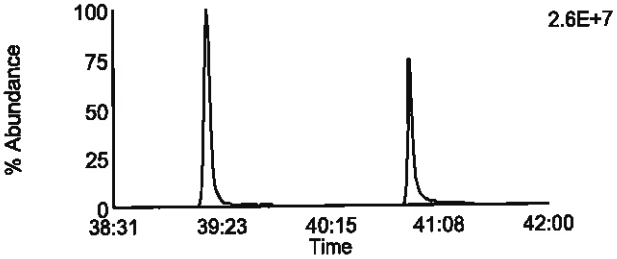


Homologue Group: Heptas

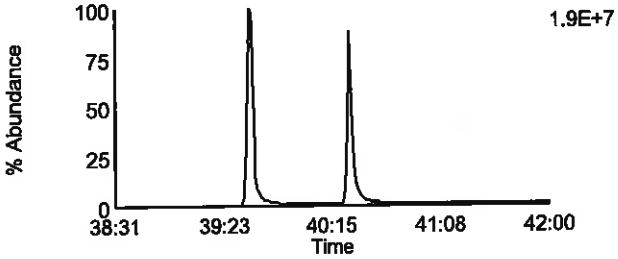
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID:
Instrument: 10MSHR06 (U)

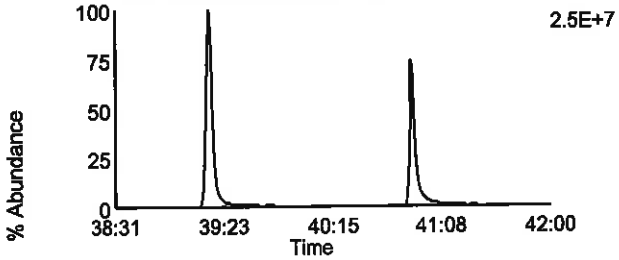
Data File: U130729B_09 G4 C3 - 407.7818
CAL CS3/CPM-7604-274 - SMT



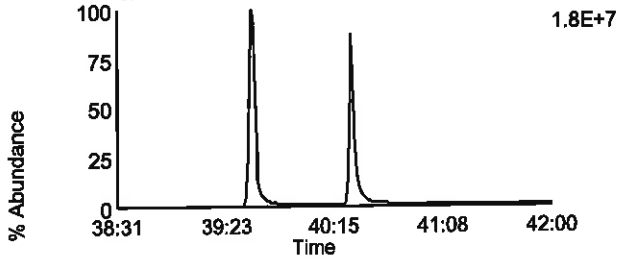
Data File: U130729B_09 G4 C8 - 423.7767
CAL CS3/CPM-7604-274 - SMT



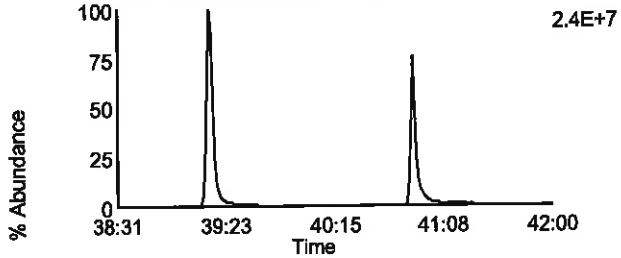
Data File: U130729B_09 G4 C4 - 409.7788
CAL CS3/CPM-7604-274 - SMT



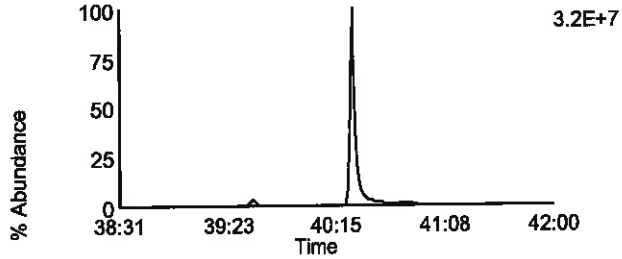
Data File: U130729B_09 G4 C9 - 425.7737
CAL CS3/CPM-7604-274 - SMT



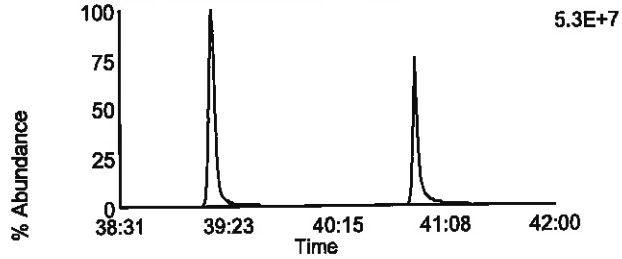
Data File: U130729B_09 G4 C6 - 417.825
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G4 C11 - 435.8169
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G4 C7 - 419.822
CAL CS3/CPM-7604-274 - SMT



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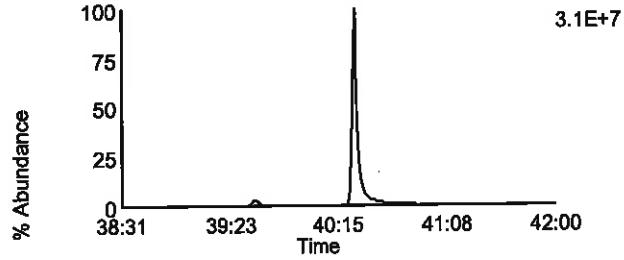
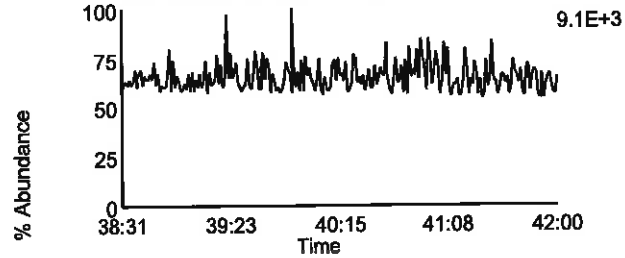
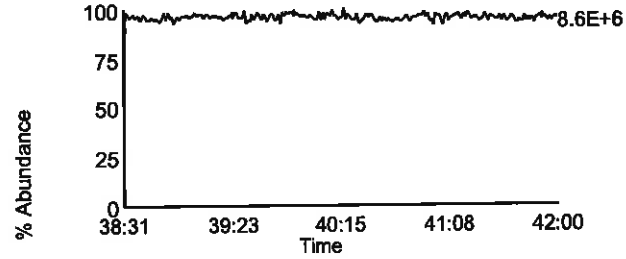
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G4 C13 - 479.7165
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G4 C1 - 380.976
CAL CS3/CPM-7604-274 - SMT

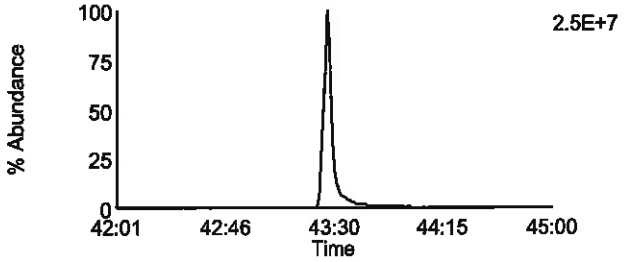


Homologue Group: Octas

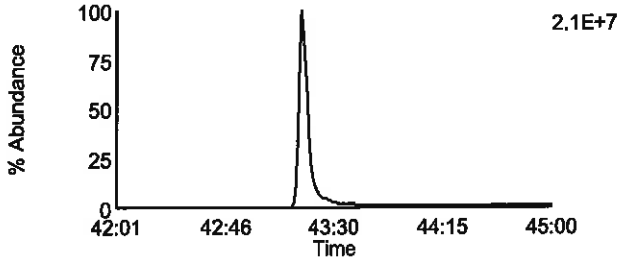
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID:
Instrument: 10MSHR06 (U)

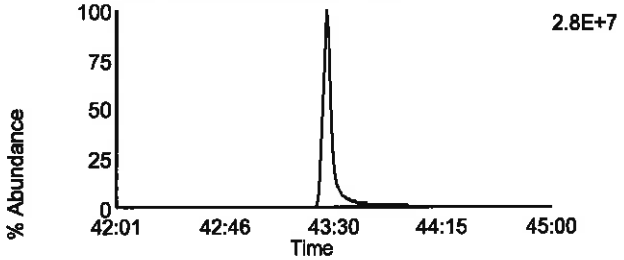
Data File: U130729B_09 G5 C4 - 441.7428
CAL CS3/CPM-7604-274 - SMT



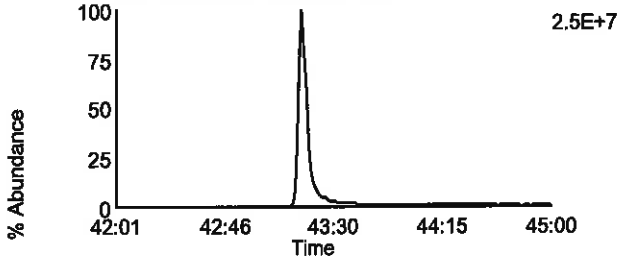
Data File: U130729B_09 G5 C8 - 457.7377
CAL CS3/CPM-7604-274 - SMT



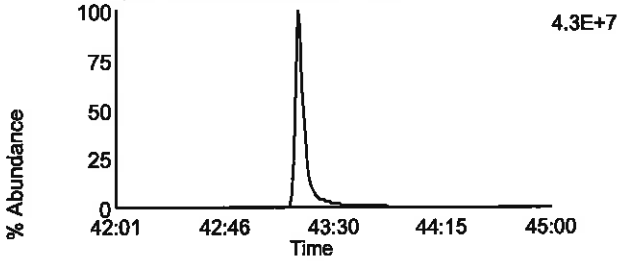
Data File: U130729B_09 G5 C5 - 443.7398
CAL CS3/CPM-7604-274 - SMT



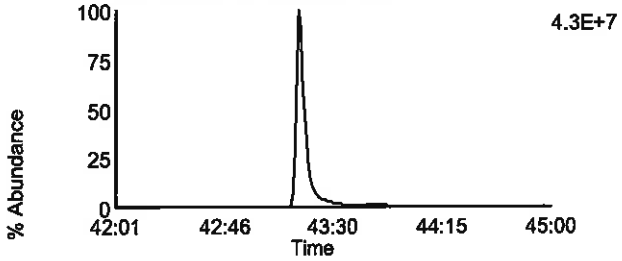
Data File: U130729B_09 G5 C9 - 459.7347
CAL CS3/CPM-7604-274 - SMT



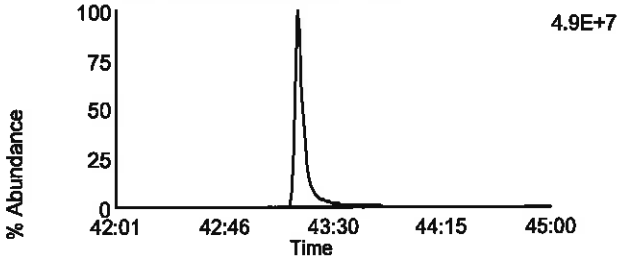
Data File: U130729B_09 G5 C11 - 469.7779
CAL CS3/CPM-7604-274 - SMT



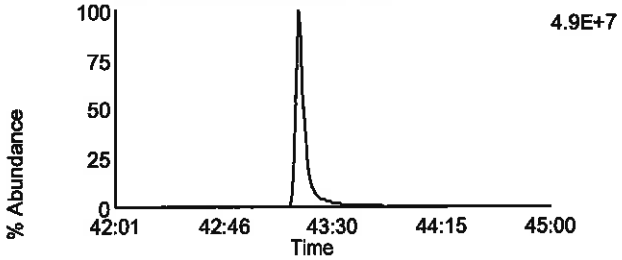
Data File: U130729B_09 G5 C11 - 469.7779
CAL CS3/CPM-7604-274 - SMT



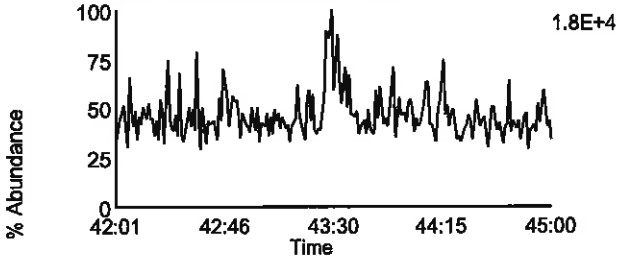
Data File: U130729B_09 G5 C12 - 471.7749
CAL CS3/CPM-7604-274 - SMT



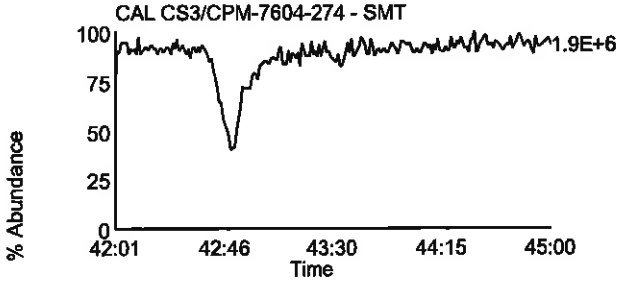
Data File: U130729B_09 G5 C12 - 471.7749
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G5 C13 - 513.6775
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G5 C2 - 430.9728
CAL CS3/CPM-7604-274 - SMT

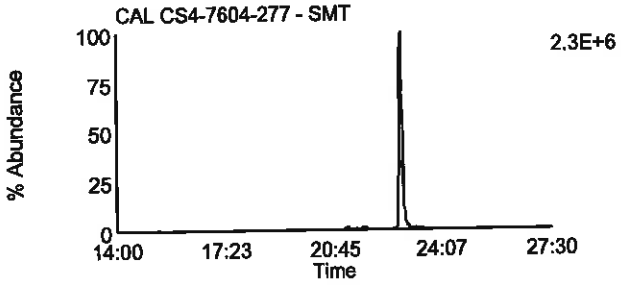


Homologue Group: Tetras

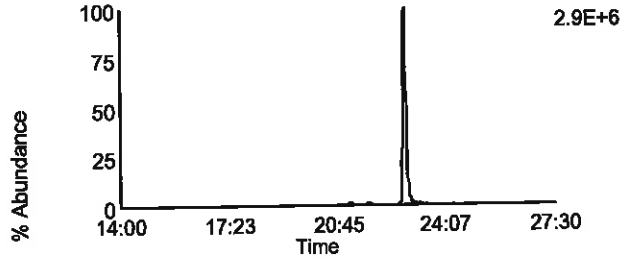
Data File Name: U130729B_13
Date Acquired: 7/30/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR06 (U)

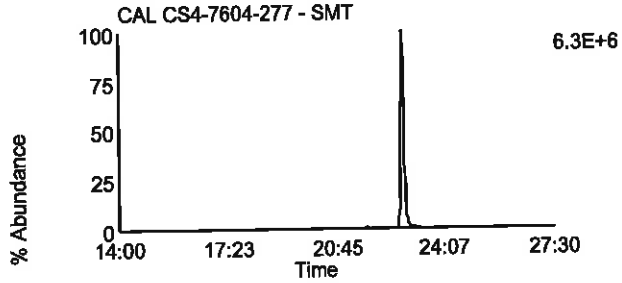
Data File: U130729B_13 G1 C1 - 303.9016
CAL CS4-7604-277 - SMT



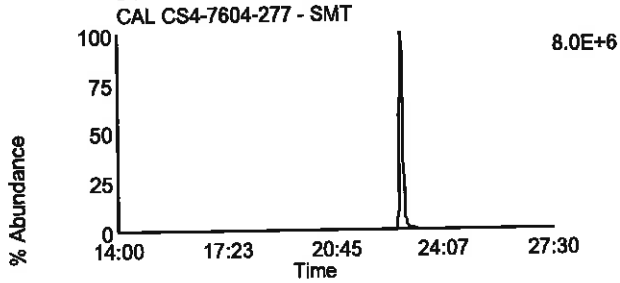
Data File: U130729B_13 G1 C2 - 305.8987
CAL CS4-7604-277 - SMT



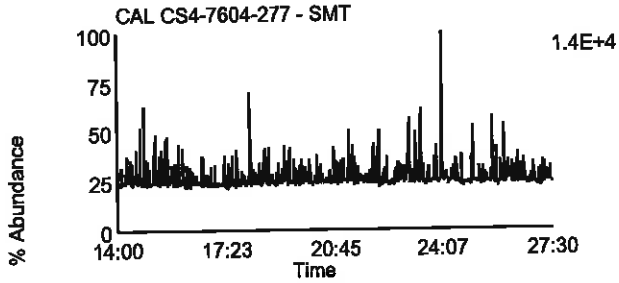
Data File: U130729B_13 G1 C3 - 315.9418
CAL CS4-7604-277 - SMT



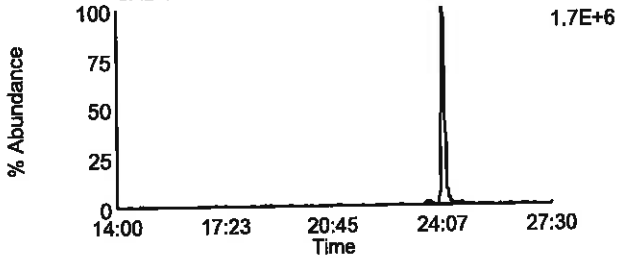
Data File: U130729B_13 G1 C4 - 317.9389
CAL CS4-7604-277 - SMT



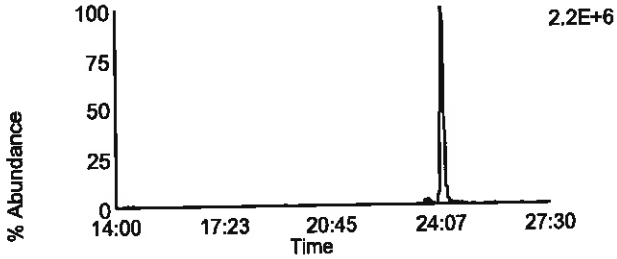
Data File: U130729B_13 G1 C14 - 375.8364
CAL CS4-7604-277 - SMT



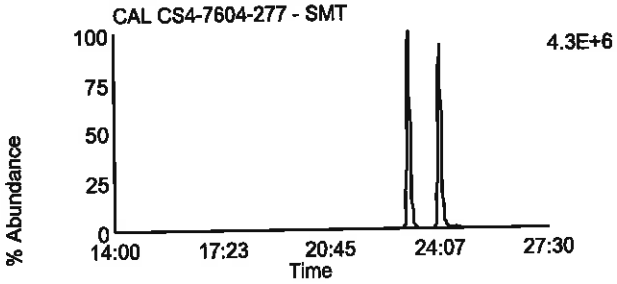
Data File: U130729B_13 G1 C7 - 319.8965
CAL CS4-7604-277 - SMT



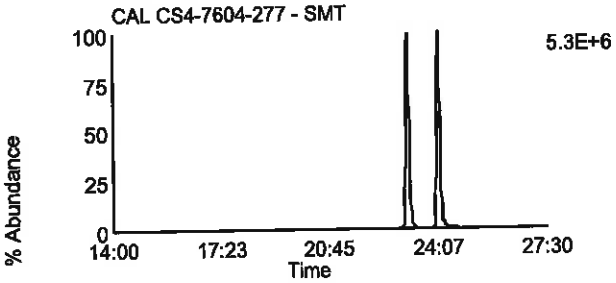
Data File: U130729B_13 G1 C8 - 321.8936
CAL CS4-7604-277 - SMT



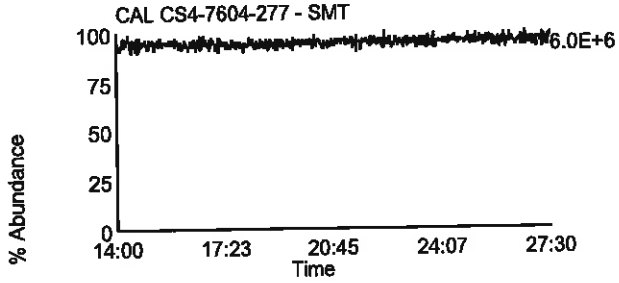
Data File: U130729B_13 G1 C10 - 331.9367
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G1 C11 - 333.9338
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G1 C5 - 318.9792
CAL CS4-7604-277 - SMT

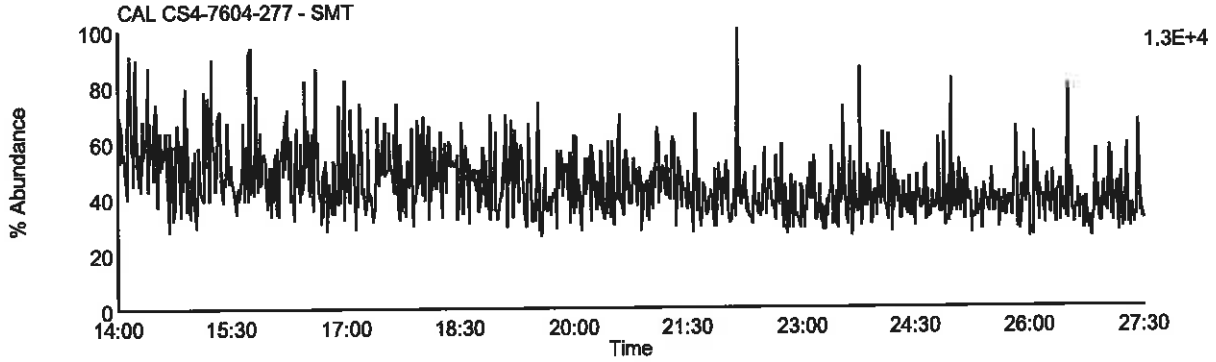


Homologue Group: Penta & Cleanup

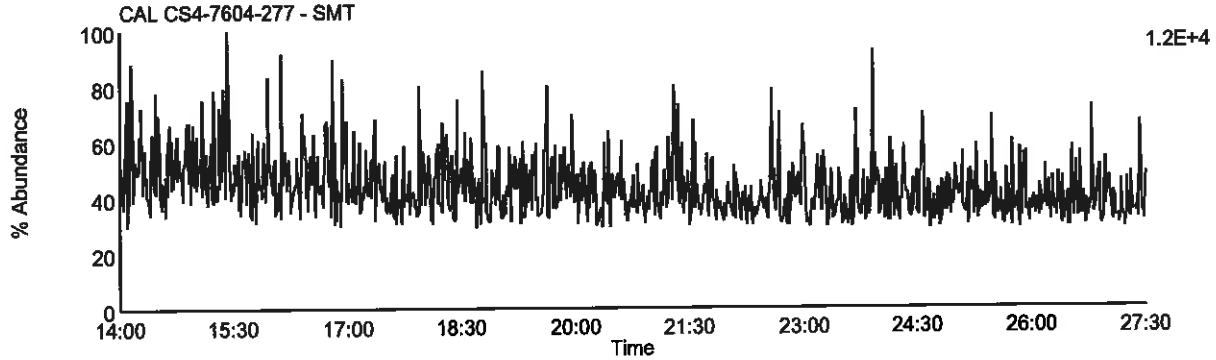
Data File Name: U130729B_13
Date Acquired: 7/30/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U130729B_13 G1 C12 - 339.8597
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G1 C13 - 341.8567
CAL CS4-7604-277 - SMT



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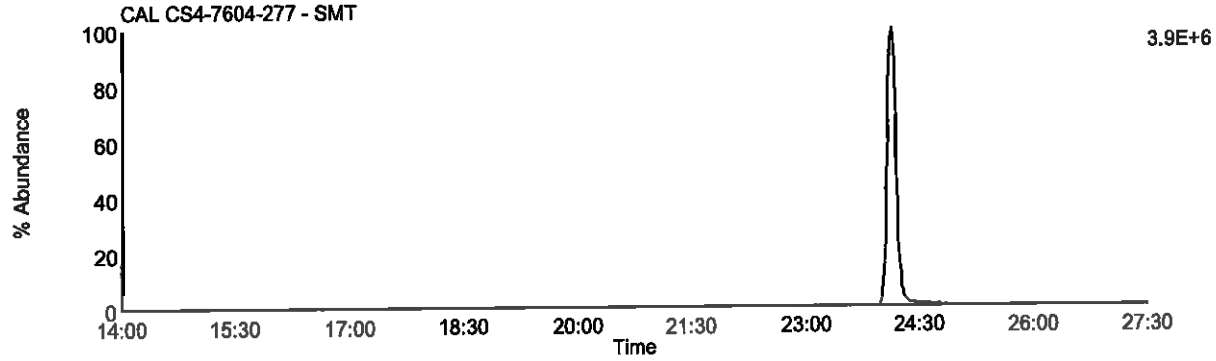
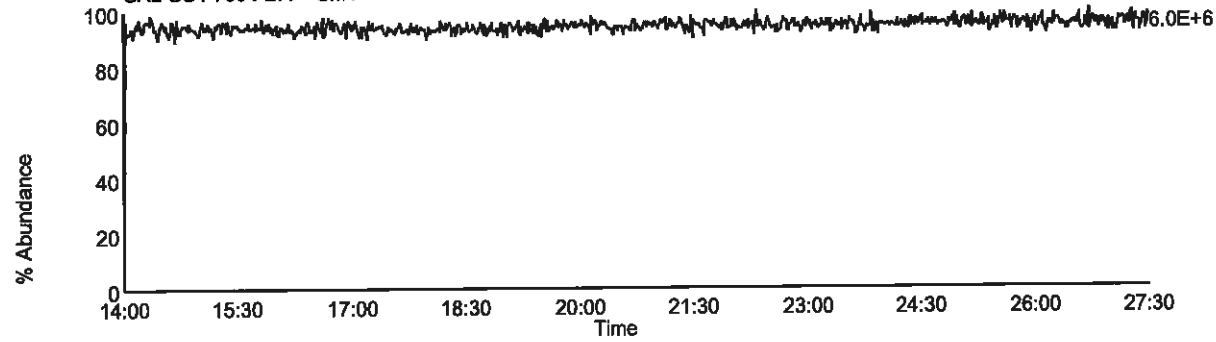
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G1 C5 - 318.9792
CAL CS4-7604-277 - SMT

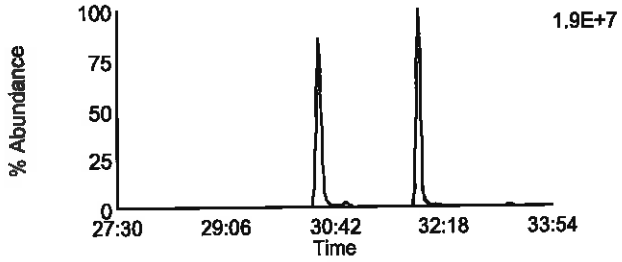


Homologue Group: Pentas

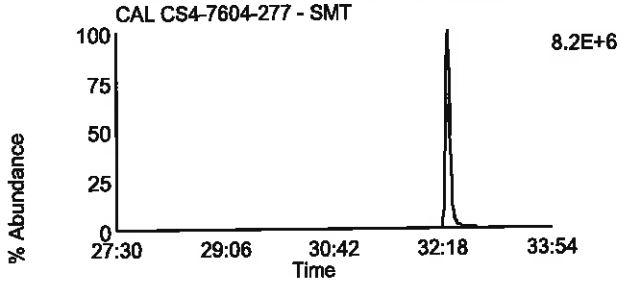
Data File Name: U130729B_13
Date Acquired: 7/30/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR06 (U)

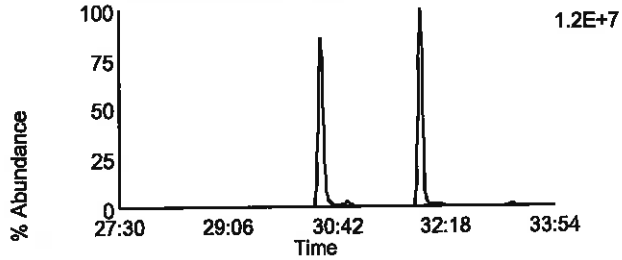
Data File: U130729B_13 G2 C1 - 339.8597
CAL CS4-7604-277 - SMT



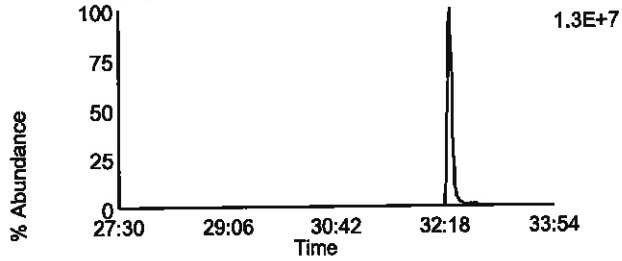
Data File: U130729B_13 G2 C4 - 353.8576
CAL CS4-7604-277 - SMT



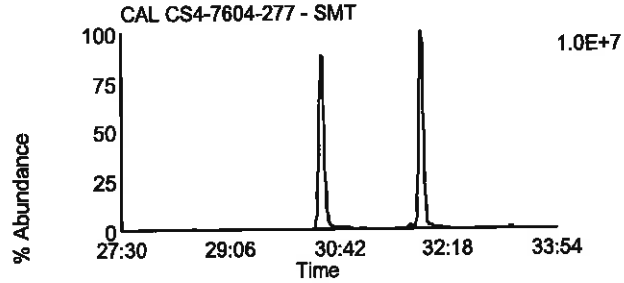
Data File: U130729B_13 G2 C2 - 341.8567
CAL CS4-7604-277 - SMT



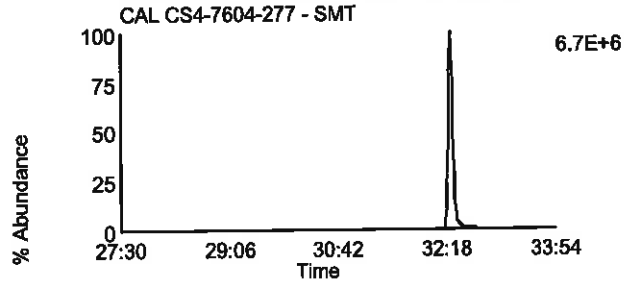
Data File: U130729B_13 G2 C8 - 355.8546
CAL CS4-7604-277 - SMT



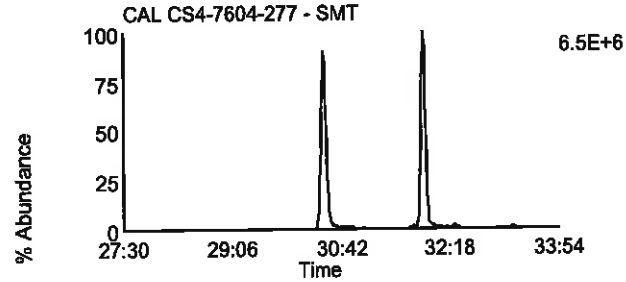
Data File: U130729B_13 G2 C3 - 351.8999
CAL CS4-7604-277 - SMT



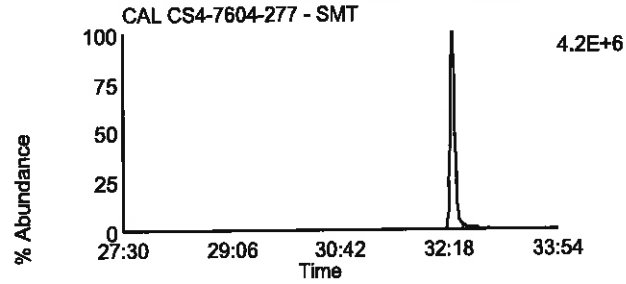
Data File: U130729B_13 G2 C10 - 367.8948
CAL CS4-7604-277 - SMT



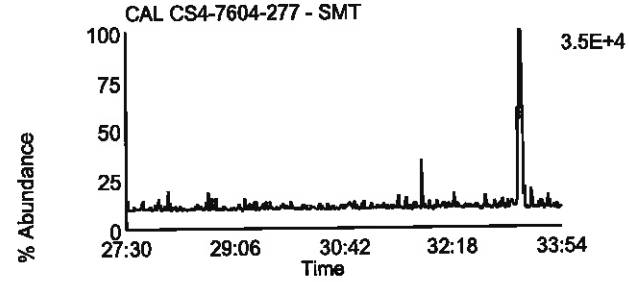
Data File: U130729B_13 G2 C5 - 353.8969
CAL CS4-7604-277 - SMT



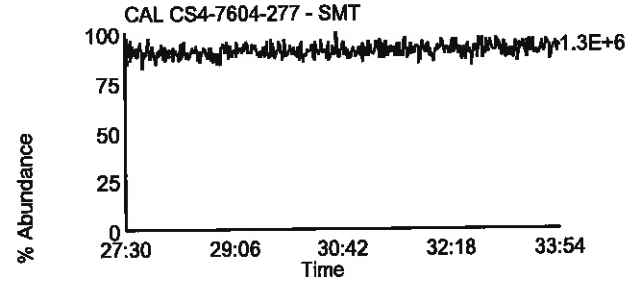
Data File: U130729B_13 G2 C11 - 369.8918
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G2 C12 - 409.7974
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G2 C6 - 354.9792
CAL CS4-7604-277 - SMT

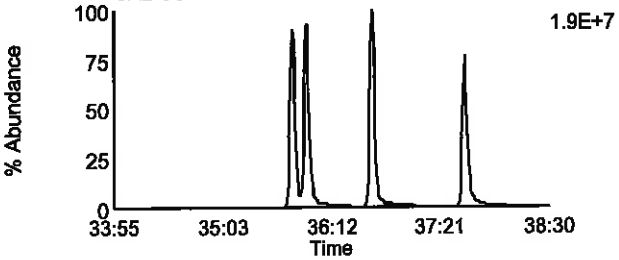


Homologue Group: Hexas

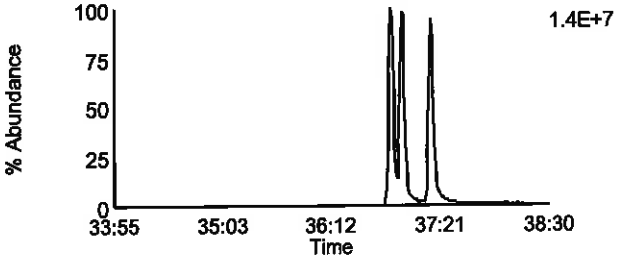
Data File Name: U130729B_13
Date Acquired: 7/30/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR06 (U)

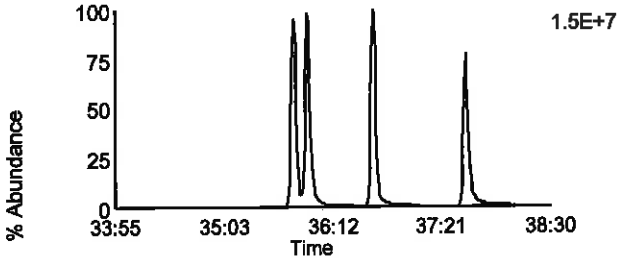
Data File: U130729B_13 G3 C1 - 373.8207
CAL CS4-7604-277 - SMT



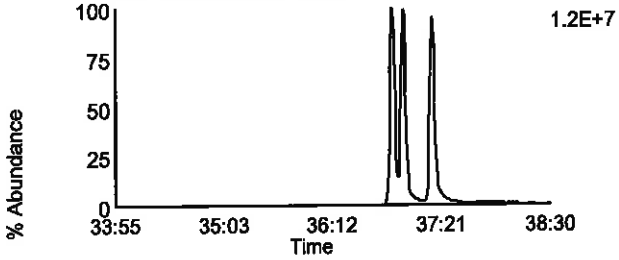
Data File: U130729B_13 G3 C7 - 389.8156
CAL CS4-7604-277 - SMT



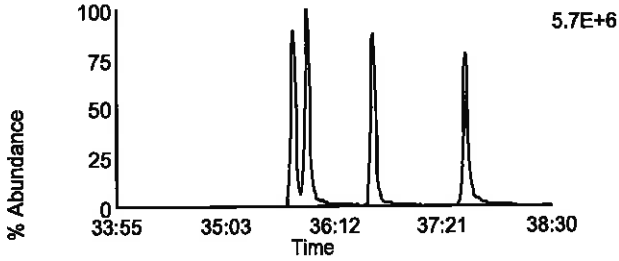
Data File: U130729B_13 G3 C2 - 375.8178
CAL CS4-7604-277 - SMT



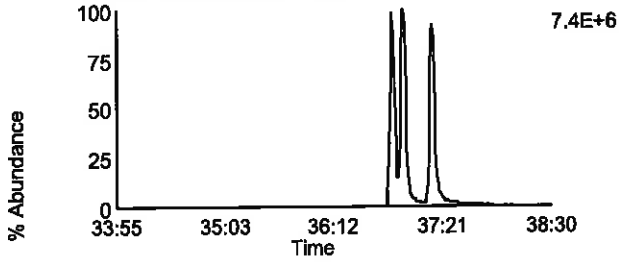
Data File: U130729B_13 G3 C8 - 391.8127
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G3 C5 - 383.8639
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G3 C9 - 401.8559
CAL CS4-7604-277 - SMT



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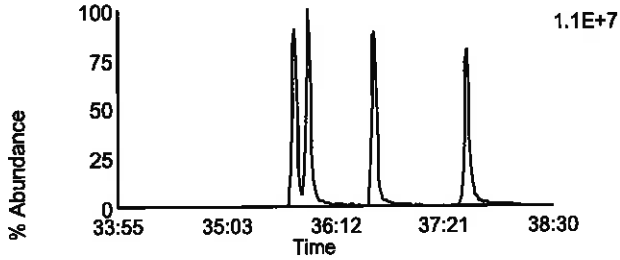
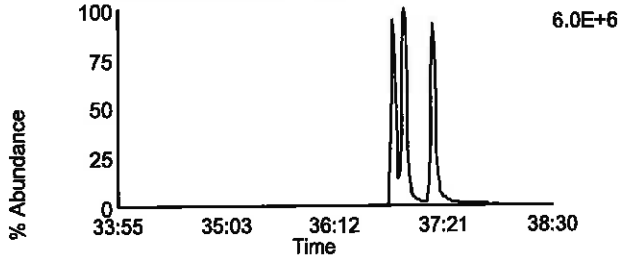
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G3 C10 - 403.8529
CAL CS4-7604-277 - SMT



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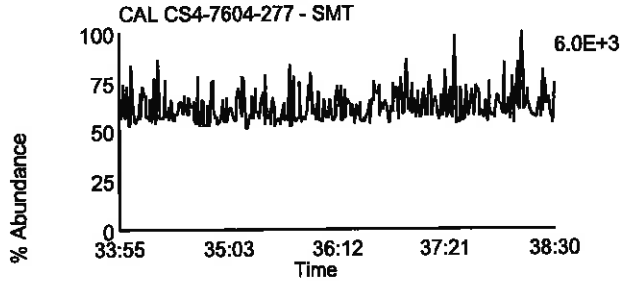
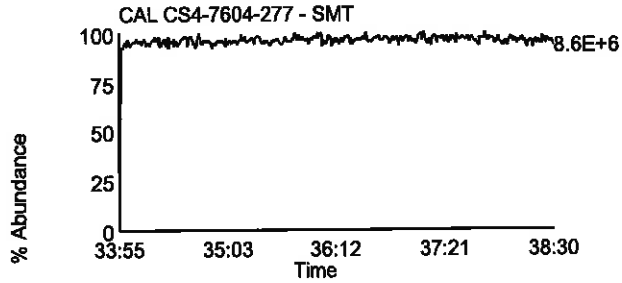
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G3 C3 - 380.976
CAL CS4-7604-277 - SMT

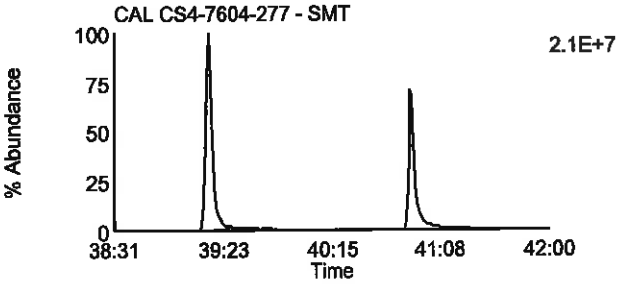


Homologue Group: Heptas

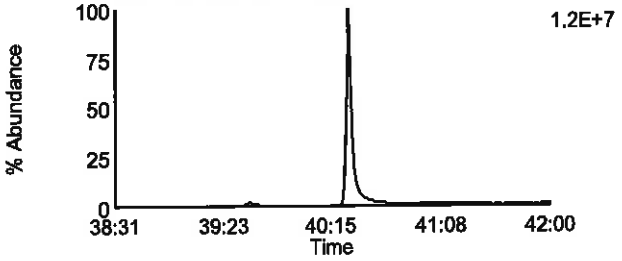
Data File Name: U130729B_13
Date Acquired: 7/30/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR06 (U)

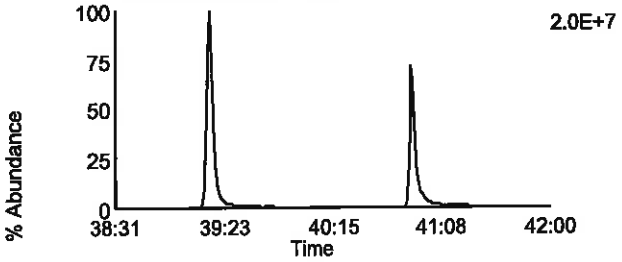
Data File: U130729B_13 G4 C3 - 407.7818
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G4 C8 - 423.7767
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G4 C4 - 409.7788
CAL CS4-7604-277 - SMT



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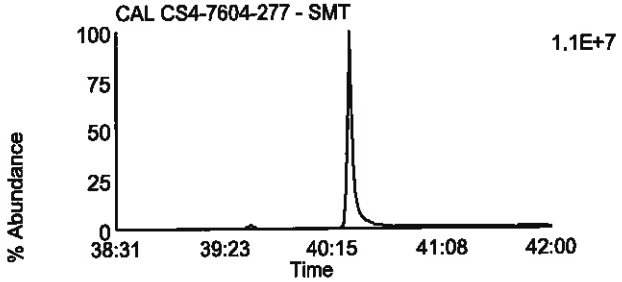
CAL CS4-7604-277 - SMT



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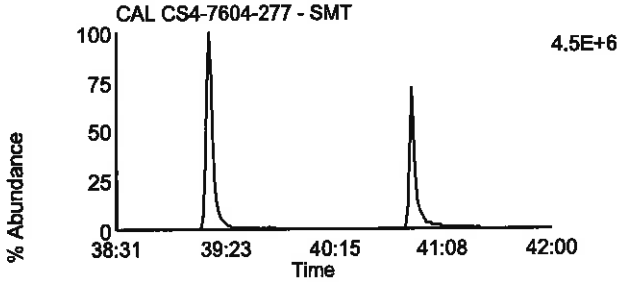
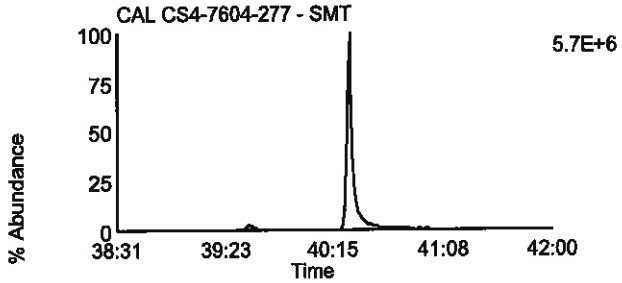
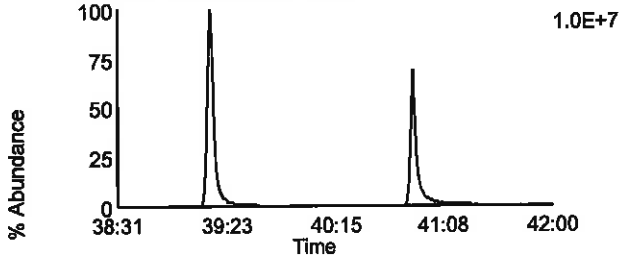
CAL CS4-7604-277 - SMT



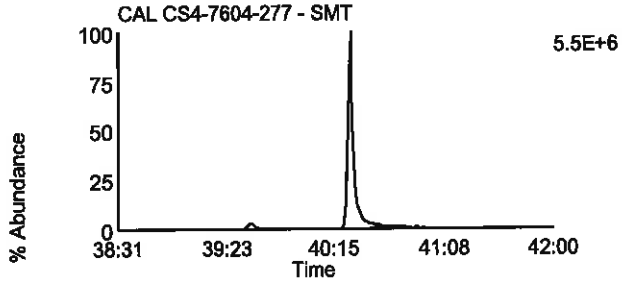
Data File: U130729B_13 G4 C11 - 435.8169
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G4 C7 - 419.822
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G4 C12 - 437.814
CAL CS4-7604-277 - SMT



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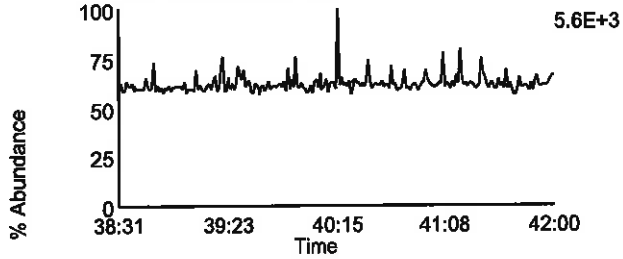
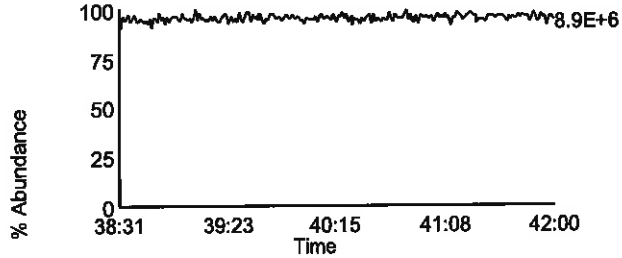
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G4 C1 - 380.976
CAL CS4-7604-277 - SMT

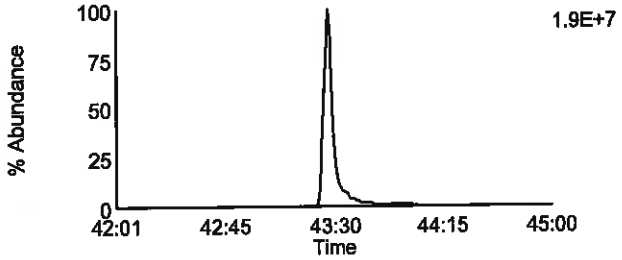


Homologue Group: Octas

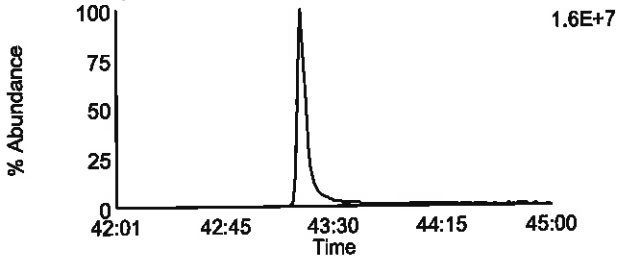
Data File Name: U130729B_13
Date Acquired: 7/30/2013
Sample Description: CAL CS4-7604-277 - SMT

Lab Sample ID: CS4-7604-277
Client Sample ID:
Instrument: 10MSHR06 (U)

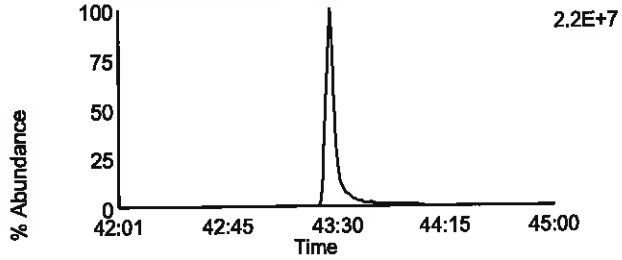
Data File: U130729B_13 G5 C4 - 441.7428
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G5 C8 - 457.7377
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G5 C5 - 443.7398
CAL CS4-7604-277 - SMT



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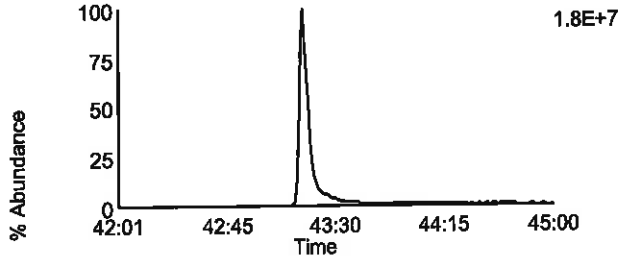
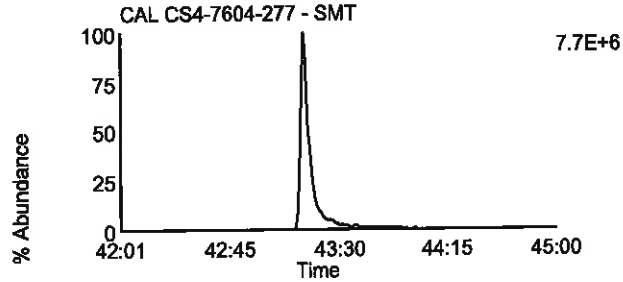
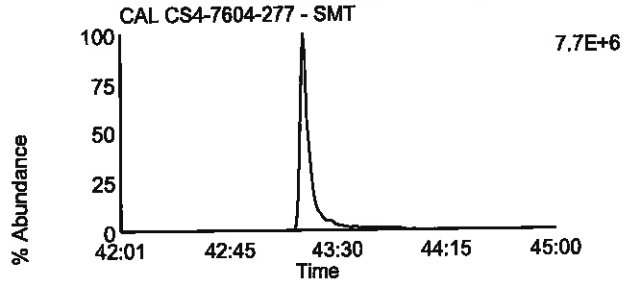
CAL CS4-7604-277 - SMT



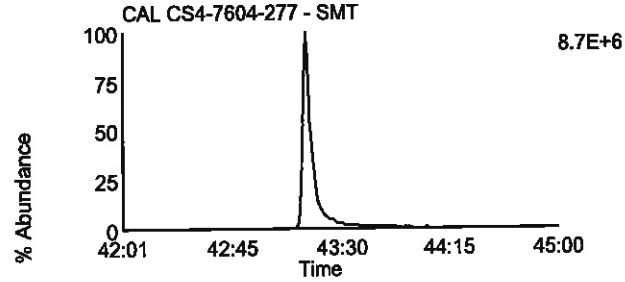
Data File: U130729B_13 G5 C11 - 469.7779
CAL CS4-7604-277 - SMT



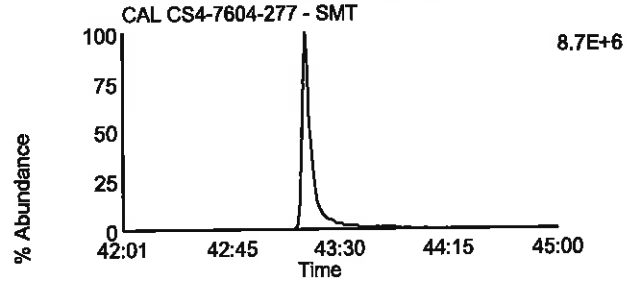
Data File: U130729B_13 G5 C11 - 469.7779
CAL CS4-7604-277 - SMT



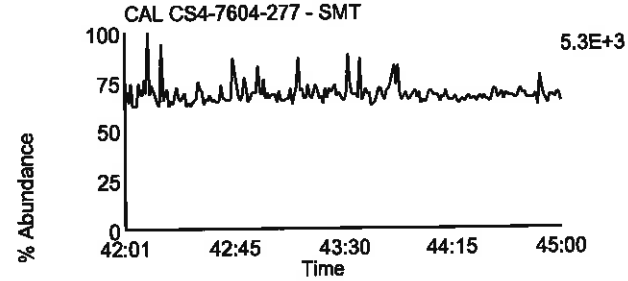
Data File: U130729B_13 G5 C12 - 471.7749
CAL CS4-7604-277 - SMT



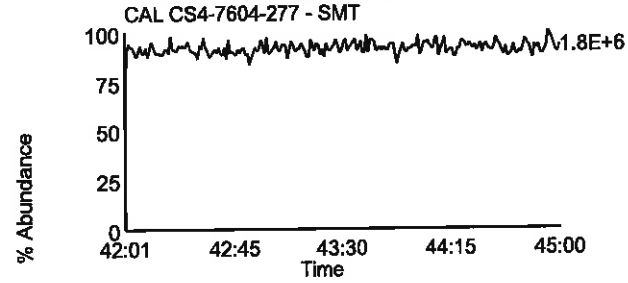
Data File: U130729B_13 G5 C12 - 471.7749
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G5 C13 - 513.6775
CAL CS4-7604-277 - SMT



Data File: U130729B_13 G5 C2 - 430.9728
CAL CS4-7604-277 - SMT

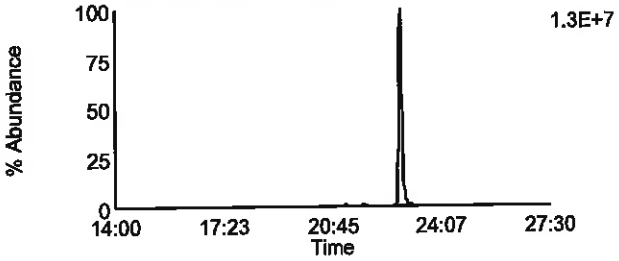


Homologue Group: Tetras

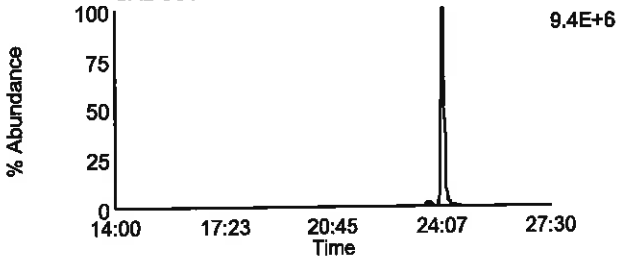
Data File Name: U130729B_12
Date Acquired: 7/30/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR06 (U)

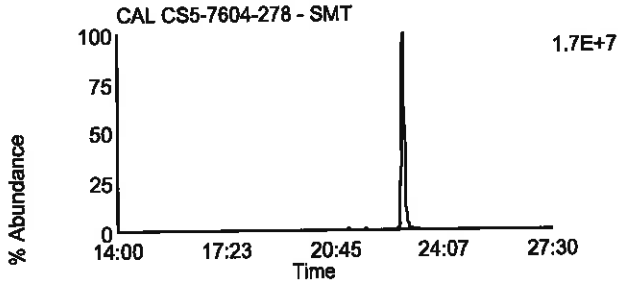
Data File: U130729B_12 G1 C1 - 303.9016
CAL CS5-7604-278 - SMT



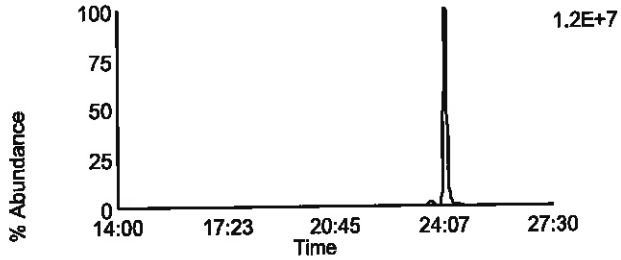
Data File: U130729B_12 G1 C7 - 319.8965
CAL CS5-7604-278 - SMT



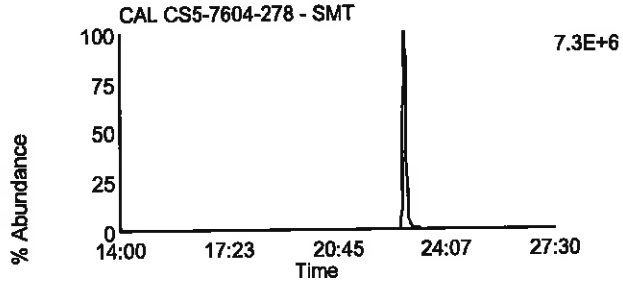
Data File: U130729B_12 G1 C2 - 305.8987
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G1 C8 - 321.8936
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G1 C3 - 315.9418
CAL CS5-7604-278 - SMT



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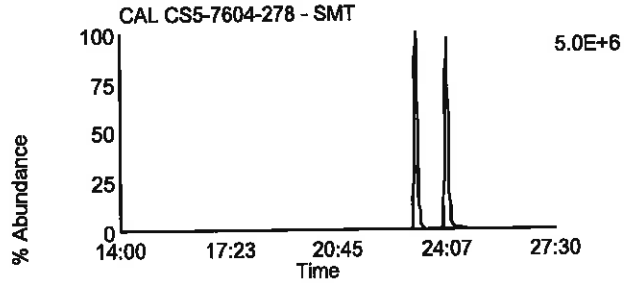
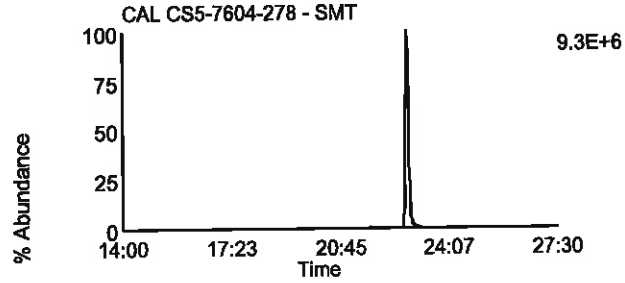
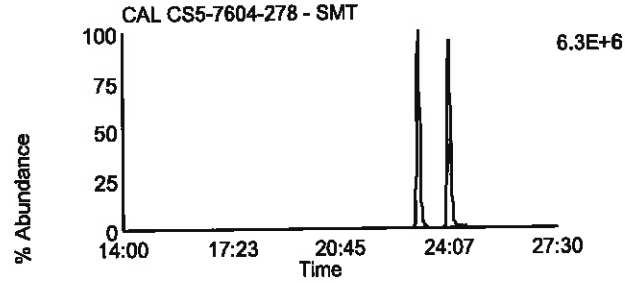
CAL CS5-7604-278 - SMT



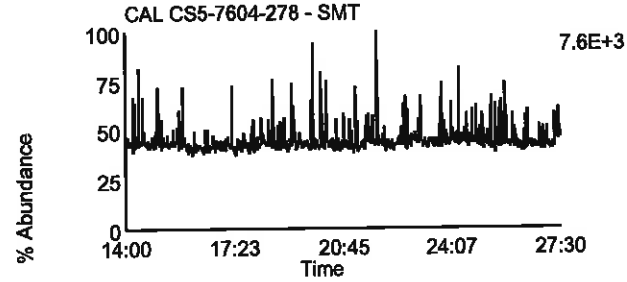
Data File: U130729B_12 G1 C4 - 317.9389
CAL CS5-7604-278 - SMT



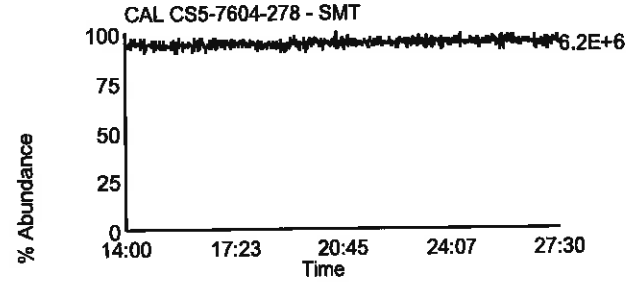
Data File: U130729B_12 G1 C11 - 333.9338
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G1 C14 - 375.8364
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G1 C5 - 318.9792
CAL CS5-7604-278 - SMT

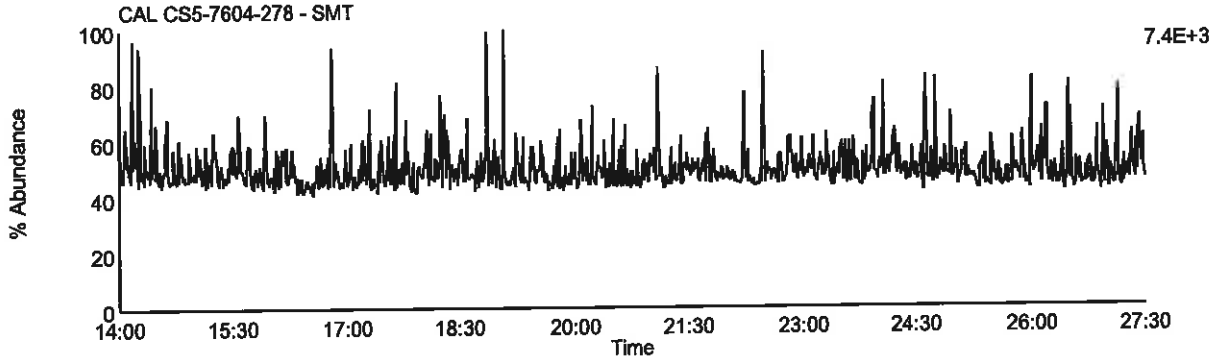


Homologue Group: Penta & Cleanup

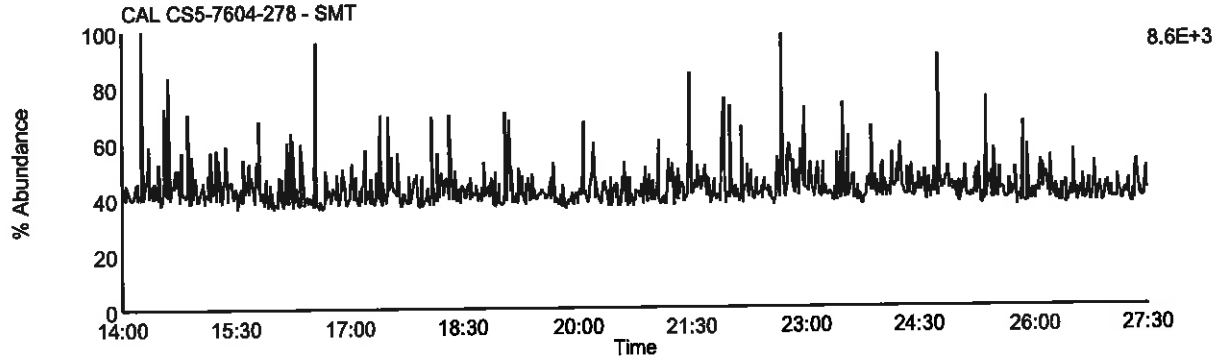
Data File Name: U130729B_12
Date Acquired: 7/30/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U130729B_12 G1 C12 - 339.8597
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G1 C13 - 341.8567
CAL CS5-7604-278 - SMT



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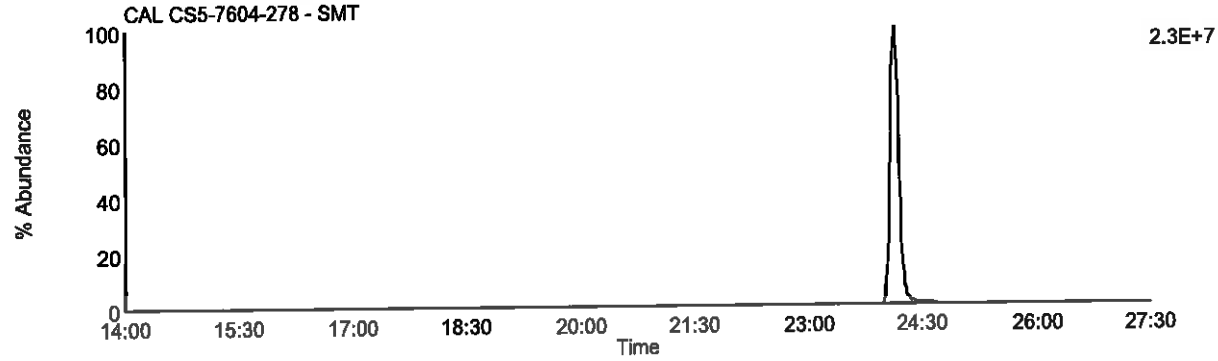
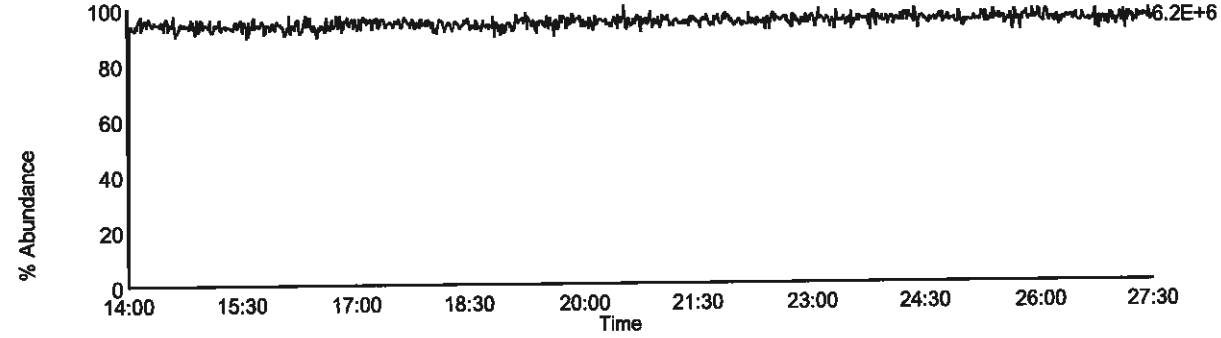
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G1 C5 - 318.9792
CAL CS5-7604-278 - SMT

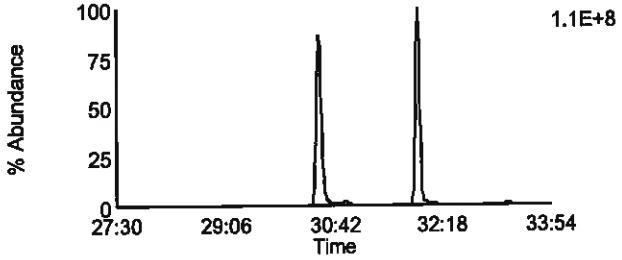


Homologue Group: Pentas

Data File Name: U130729B_12
Date Acquired: 7/30/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U130729B_12 G2 C1 - 339.8597
CAL CS5-7604-278 - SMT



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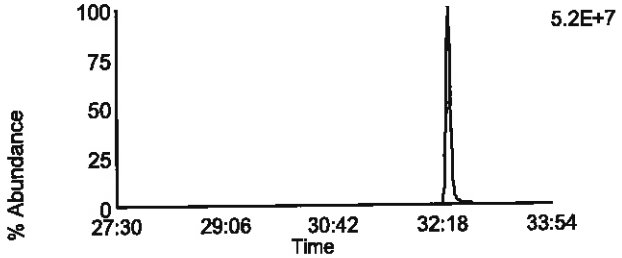
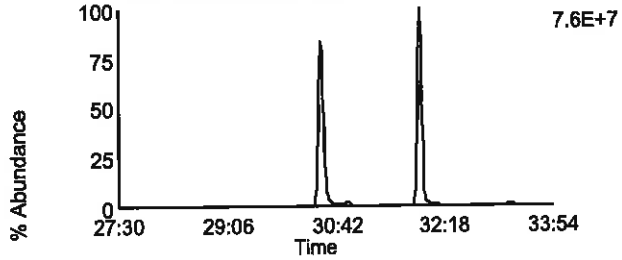
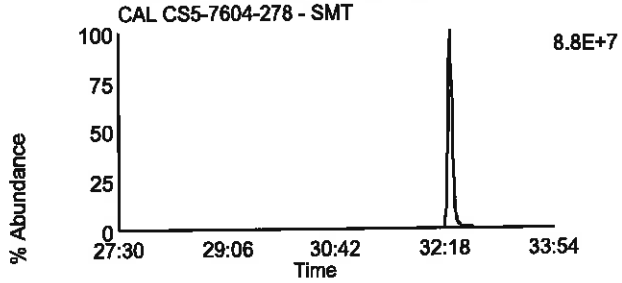
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G2 C2 - 341.8567
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G2 C8 - 355.8546
CAL CS5-7604-278 - SMT



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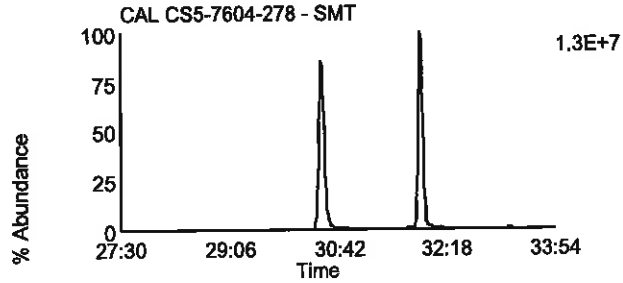
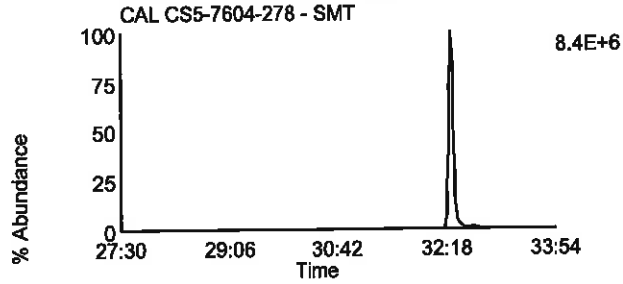
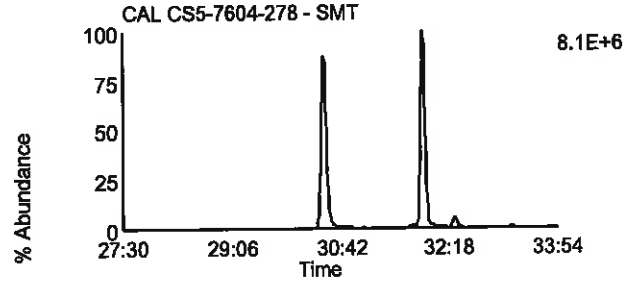
CAL CS5-7604-278 - SMT



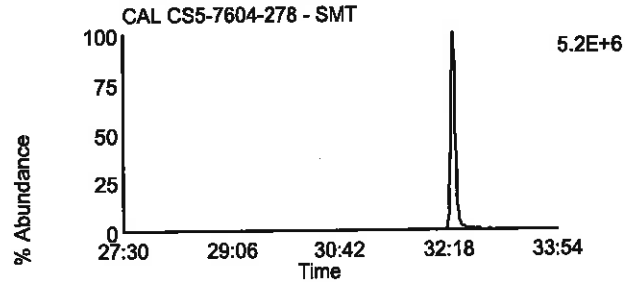
Data File: U130729B_12 G2 C10 - 367.8948
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G2 C5 - 353.8969
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G2 C11 - 369.8918
CAL CS5-7604-278 - SMT



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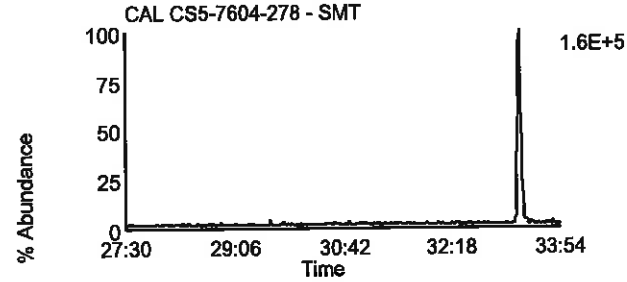
CAL CS5-7604-278 - SMT



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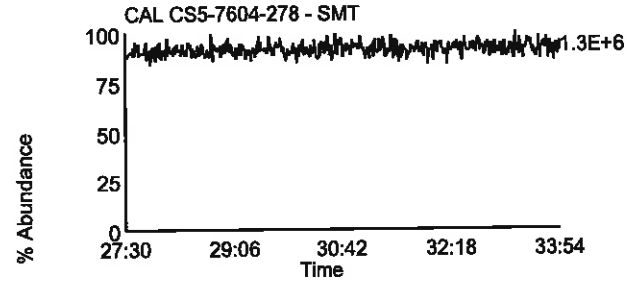
CAL CS5-7604-278 - SMT

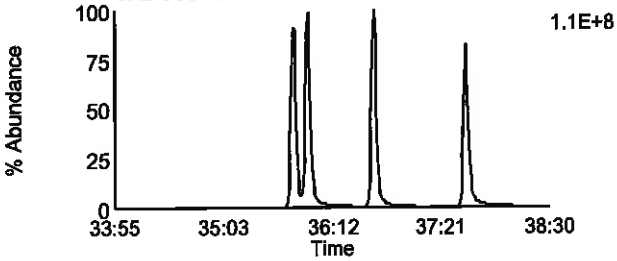


Homologue Group: Hexas

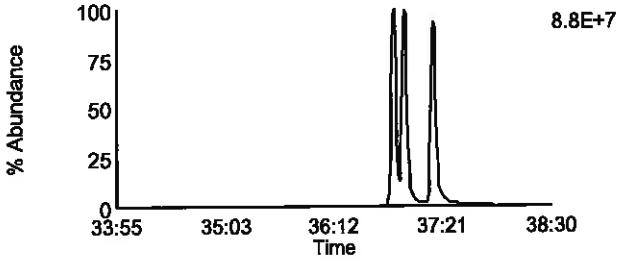
Data File Name: U130729B_12
Date Acquired: 7/30/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR06 (U)

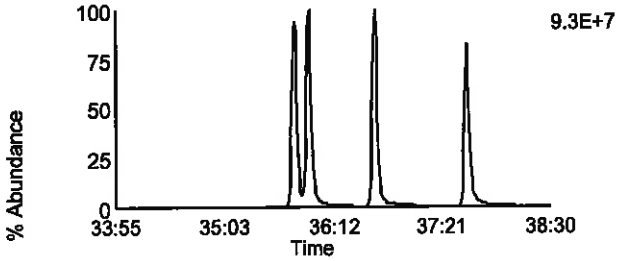
Data File: U130729B_12 G3 C1 - 373.8207
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G3 C7 - 389.8156
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G3 C2 - 375.8178
CAL CS5-7604-278 - SMT



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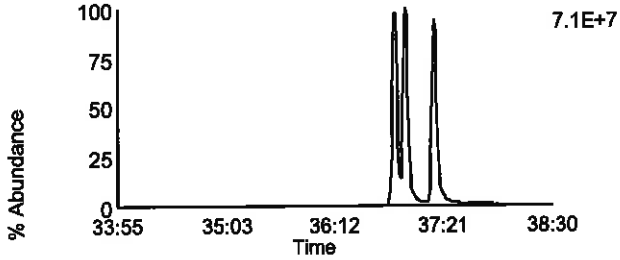
CAL CS5-7604-278 - SMT



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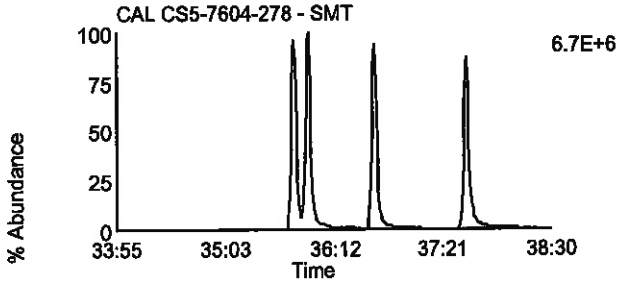
CAL CS5-7604-278 - SMT



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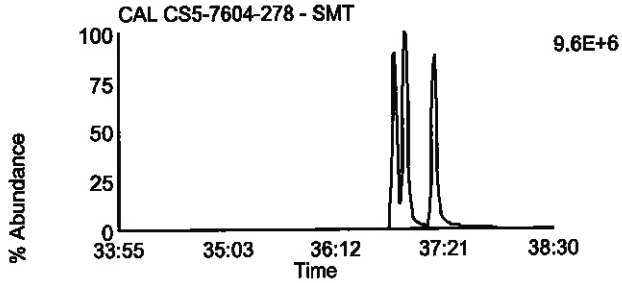
CAL CS5-7604-278 - SMT



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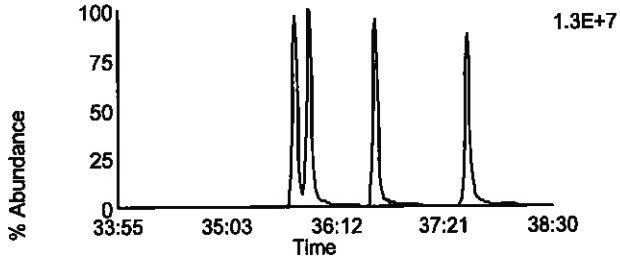
CAL CS5-7604-278 - SMT



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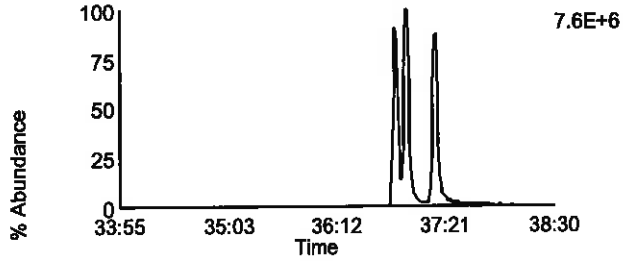
CAL CS5-7604-278 - SMT



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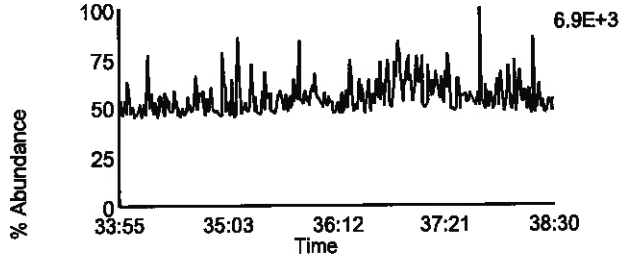
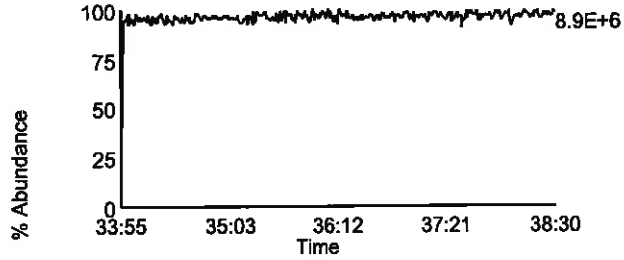
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G3 C3 - 380.976
CAL CS5-7604-278 - SMT

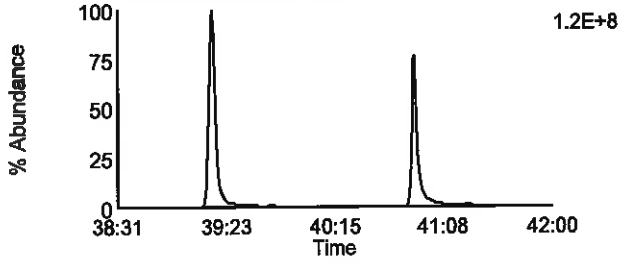


Homologue Group: Heptas

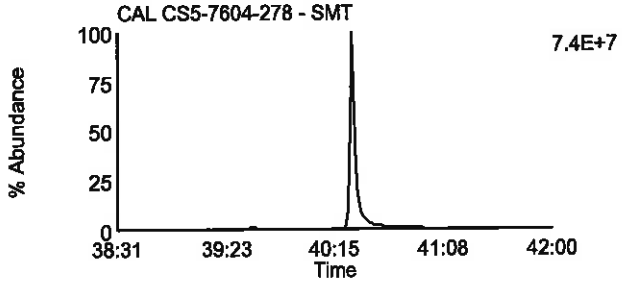
Data File Name: U130729B_12
Date Acquired: 7/30/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR06 (U)

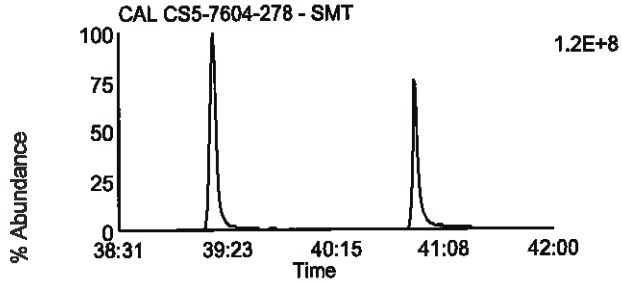
Data File: U130729B_12 G4 C3 - 407.7818
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G4 C8 - 423.7767
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G4 C4 - 409.7788
CAL CS5-7604-278 - SMT



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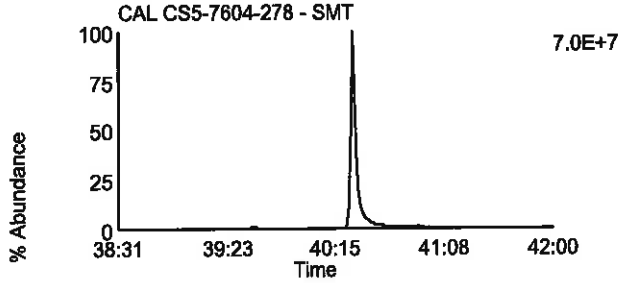
CAL CS5-7604-278 - SMT



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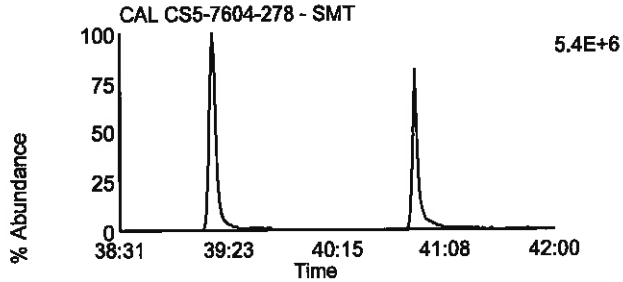
CAL CS5-7604-278 - SMT



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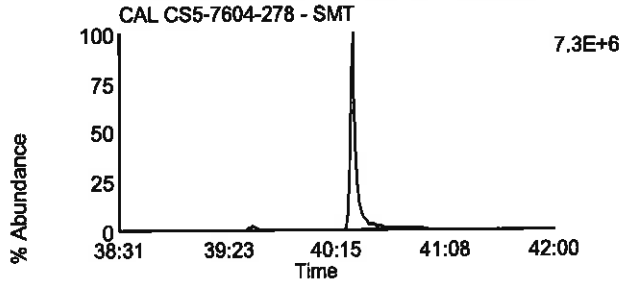
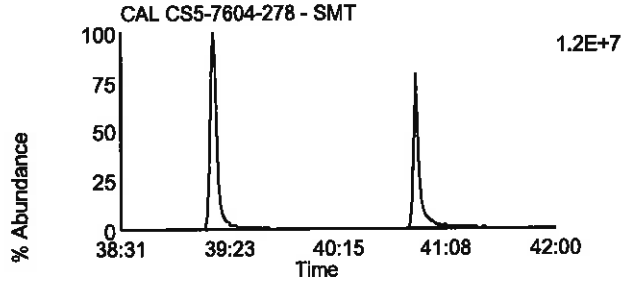
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G4 C7 - 419.822
CAL CS5-7604-278 - SMT



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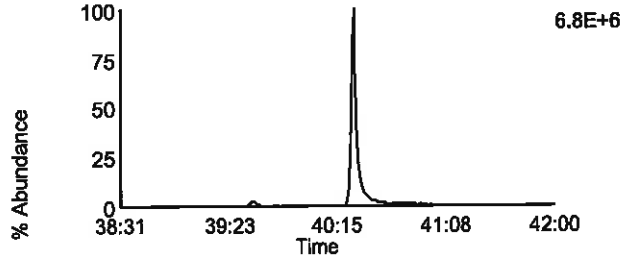
CAL CS5-7604-278 - SMT



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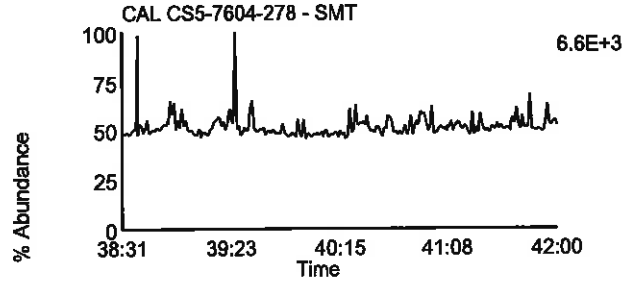
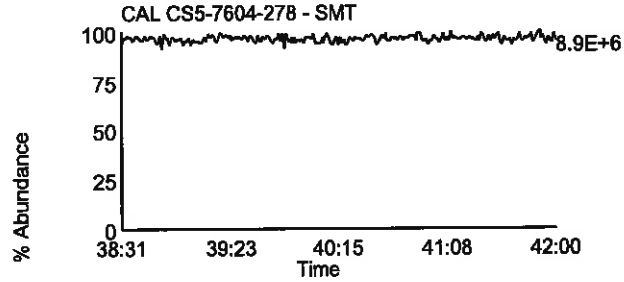
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G4 C1 - 380.976
CAL CS5-7604-278 - SMT

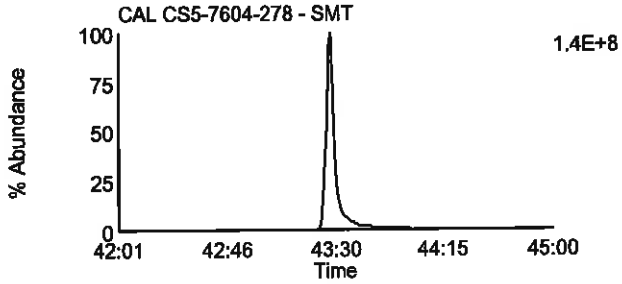


Homologue Group: Octas

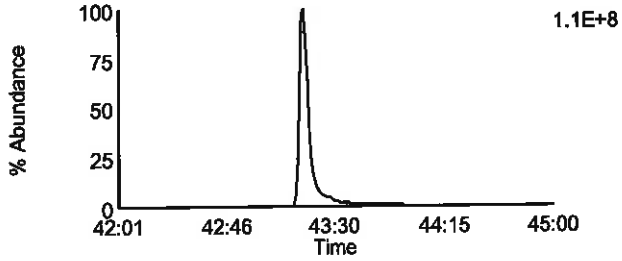
Data File Name: U130729B_12
Date Acquired: 7/30/2013
Sample Description: CAL CS5-7604-278 - SMT

Lab Sample ID: CS5-7604-278
Client Sample ID:
Instrument: 10MSHR06 (U)

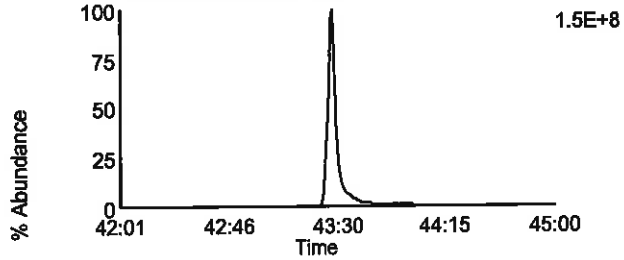
Data File: U130729B_12 G5 C4 - 441.7428
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G5 C8 - 457.7377
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G5 C5 - 443.7398
CAL CS5-7604-278 - SMT



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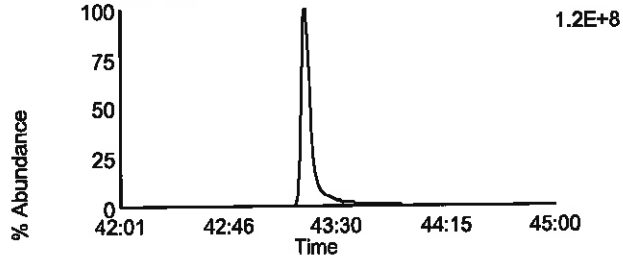
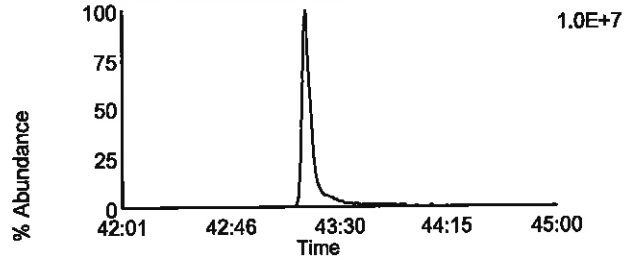
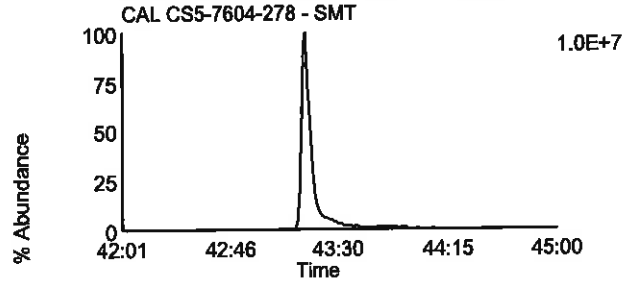
CAL CS5-7604-278 - SMT



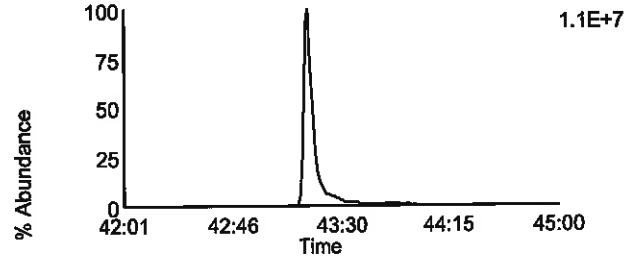
Data File: U130729B_12 G5 C11 - 469.7779
CAL CS5-7604-278 - SMT



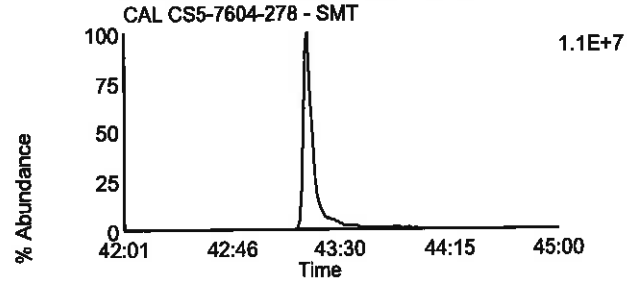
Data File: U130729B_12 G5 C11 - 469.7779
CAL CS5-7604-278 - SMT



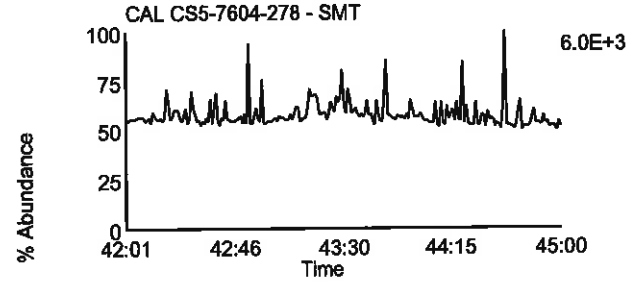
Data File: U130729B_12 G5 C12 - 471.7749
CAL CS5-7604-278 - SMT



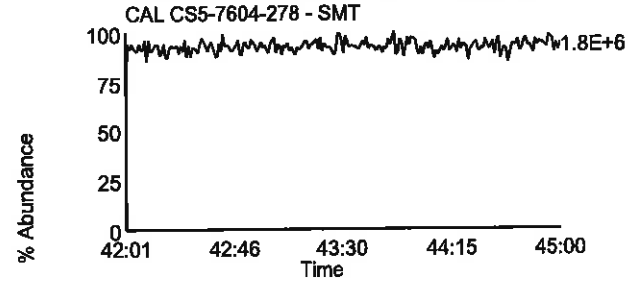
Data File: U130729B_12 G5 C12 - 471.7749
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G5 C13 - 513.6775
CAL CS5-7604-278 - SMT



Data File: U130729B_12 G5 C2 - 430.9728
CAL CS5-7604-278 - SMT

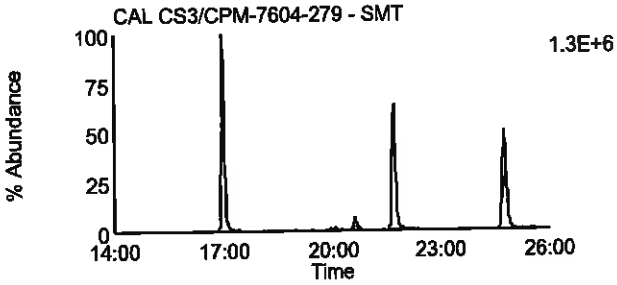


Homologue Group: Tetras

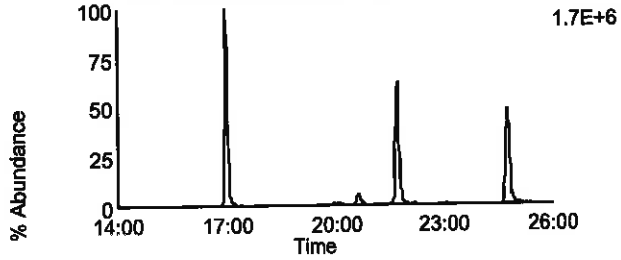
Data File Name: U130917A_22
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

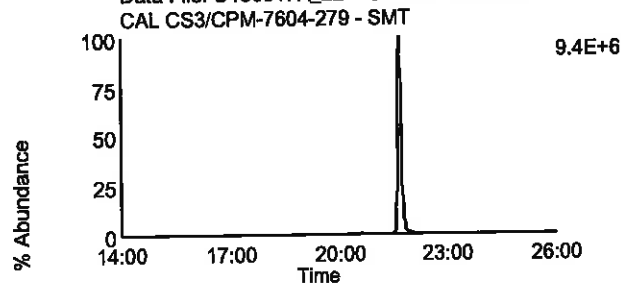
Data File: U130917A_22 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - SMT



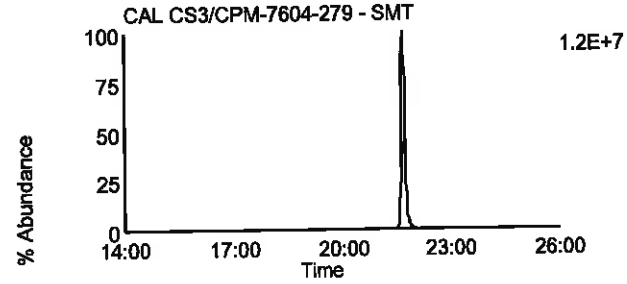
Data File: U130917A_22 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - SMT



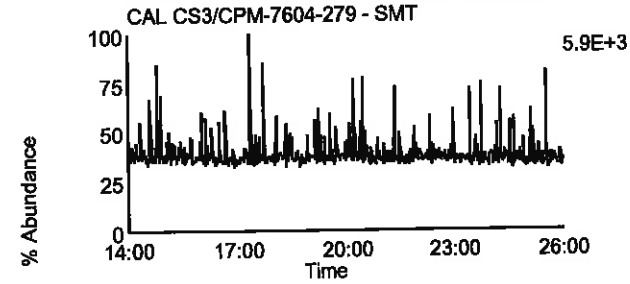
Data File: U130917A_22 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - SMT



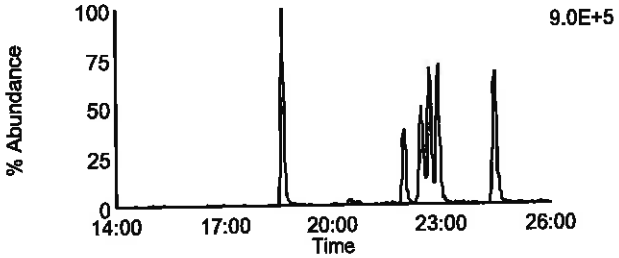
Data File: U130917A_22 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - SMT



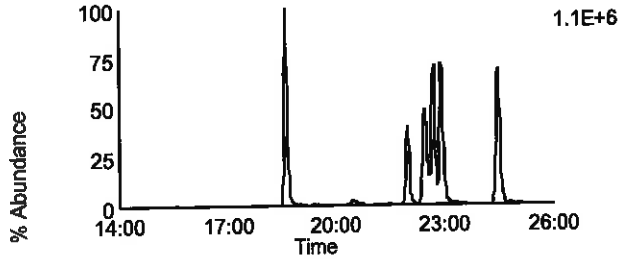
Data File: U130917A_22 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - SMT



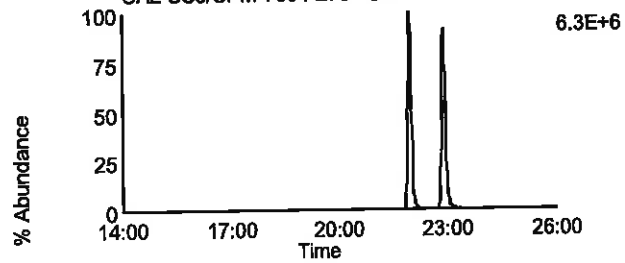
Data File: U130917A_22 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - SMT



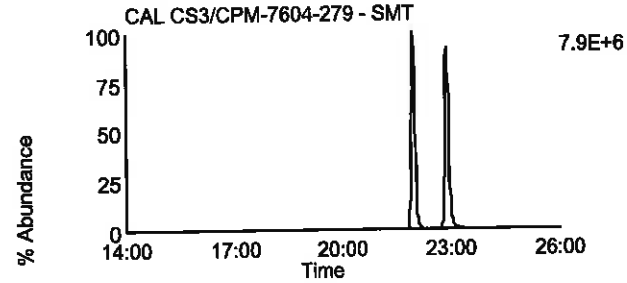
Data File: U130917A_22 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - SMT



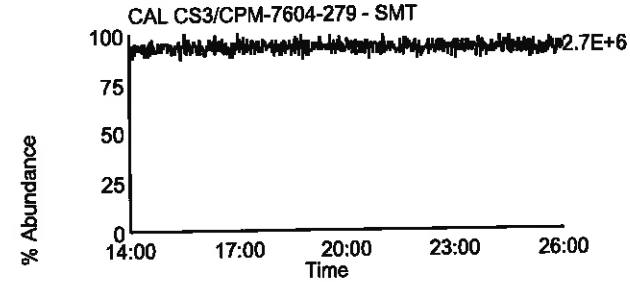
Data File: U130917A_22 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT

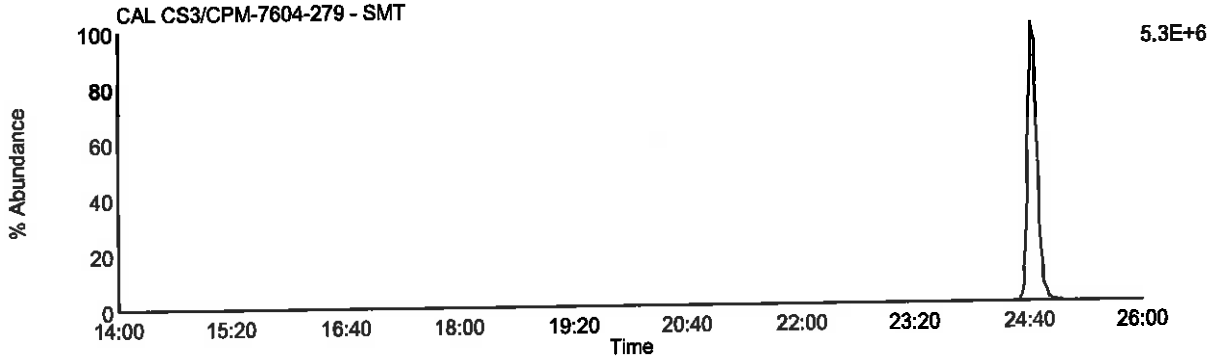


Homologue Group: Penta & Cleanup

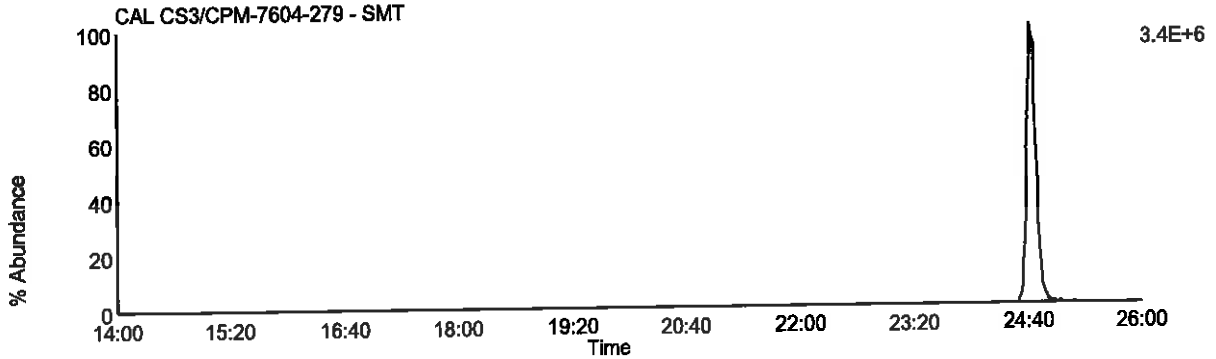
Data File Name: U130917A_22
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

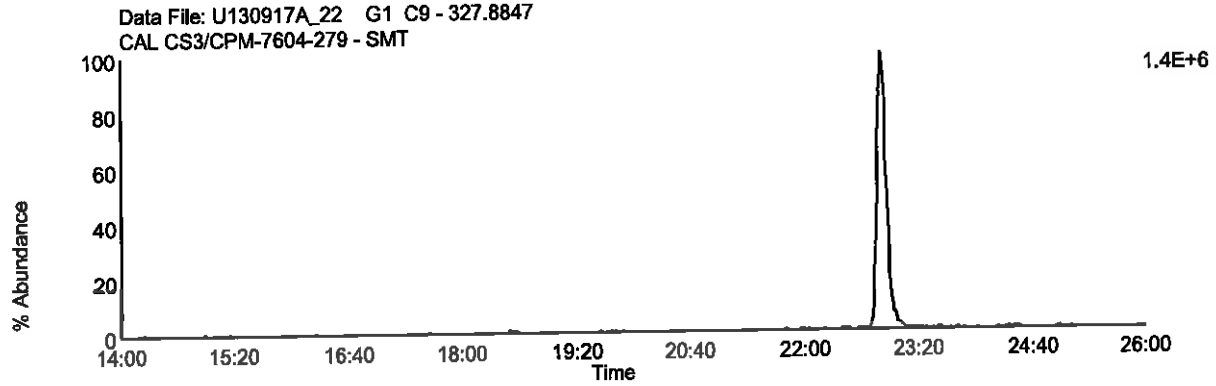
Data File: U130917A_22 G1 C12 - 339.8597
CAL CS3/CPM-7604-279 - SMT



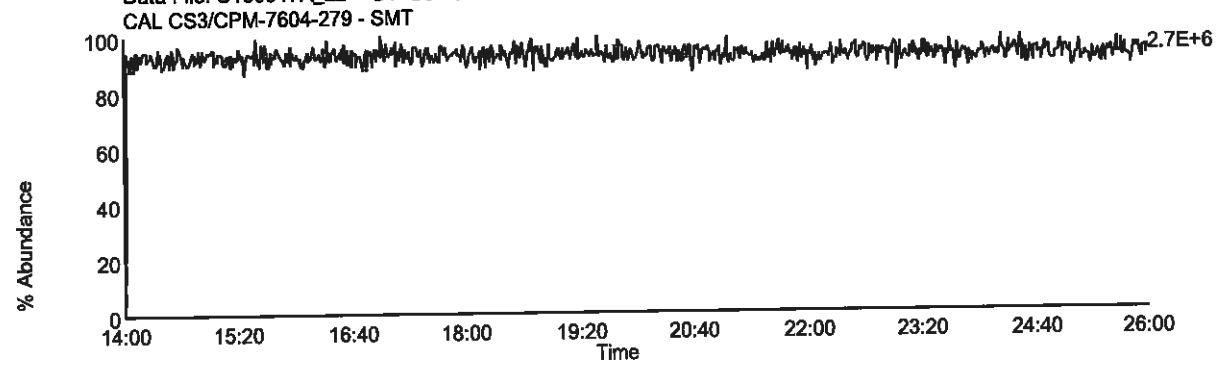
Data File: U130917A_22 G1 C13 - 341.8567
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G1 C9 - 327.8847
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT

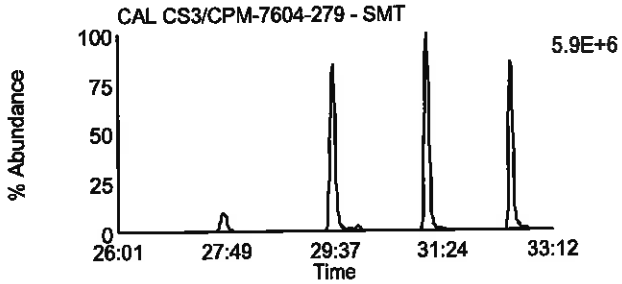


Homologue Group: Pentas

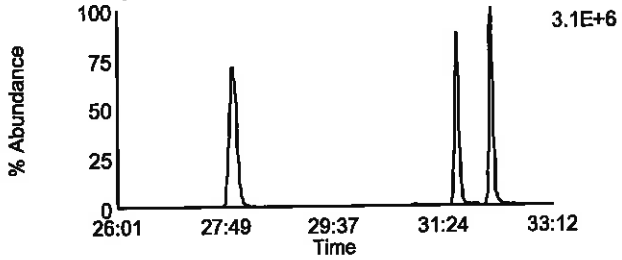
Data File Name: U130917A_22
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

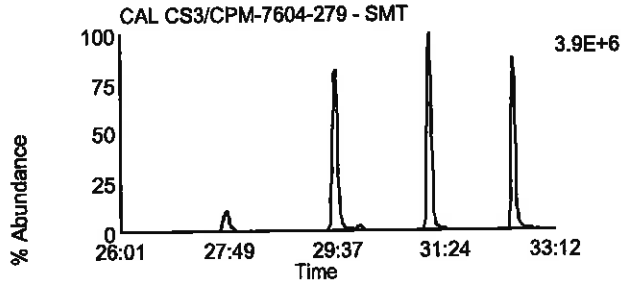
Data File: U130917A_22 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - SMT



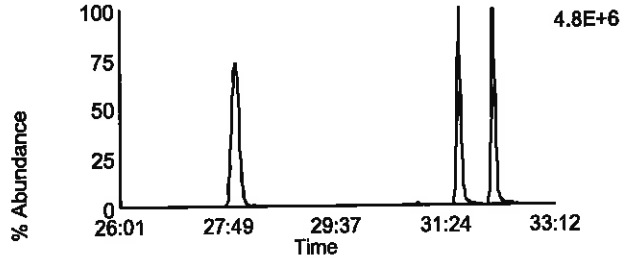
Data File: U130917A_22 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - SMT



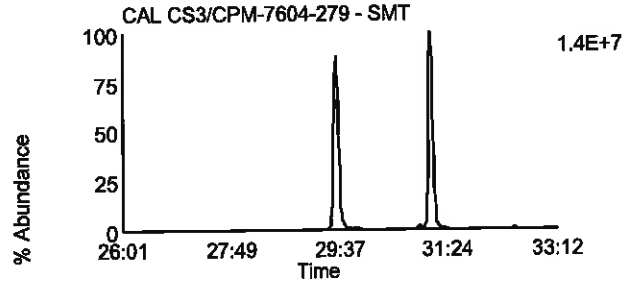
Data File: U130917A_22 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - SMT



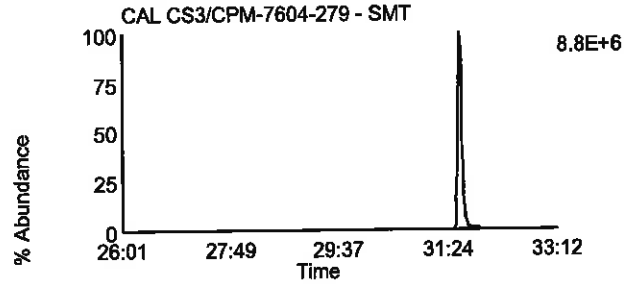
Data File: U130917A_22 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - SMT



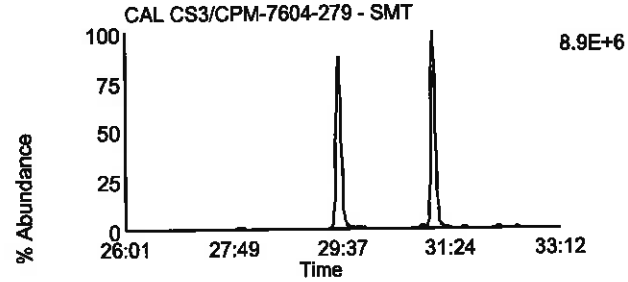
Data File: U130917A_22 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - SMT



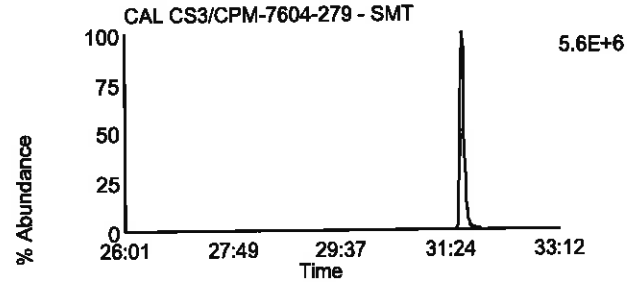
Data File: U130917A_22 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - SMT



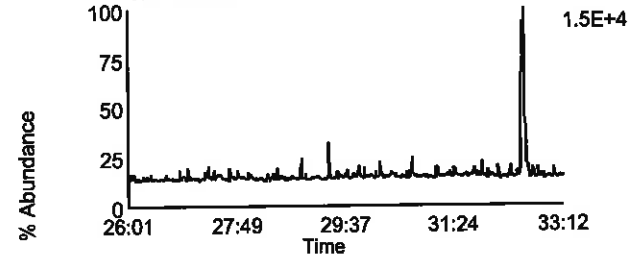
Data File: U130917A_22 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - SMT



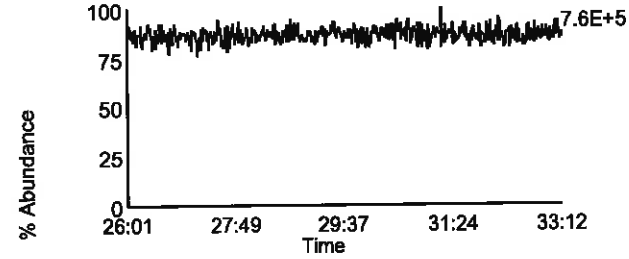
Data File: U130917A_22 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - SMT

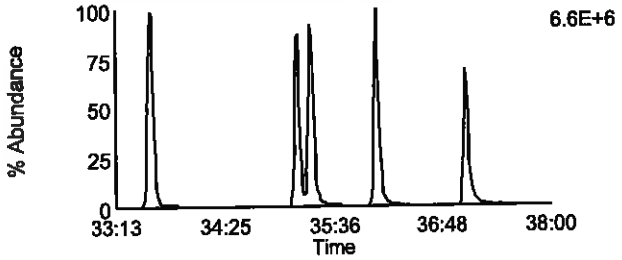


Homologue Group: Hexas

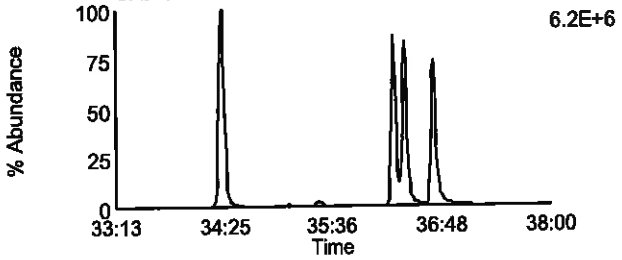
Data File Name: U130917A_22
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

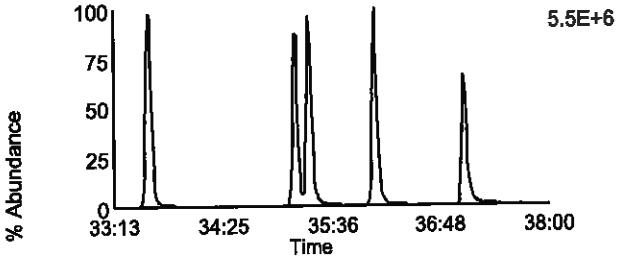
Data File: U130917A_22 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - SMT



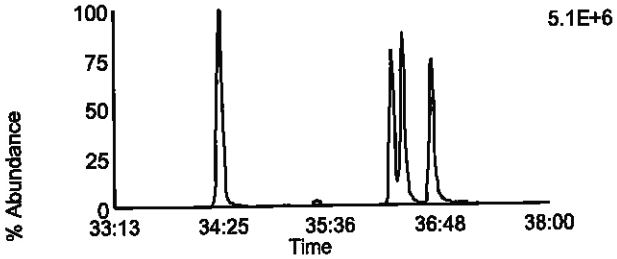
Data File: U130917A_22 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - SMT



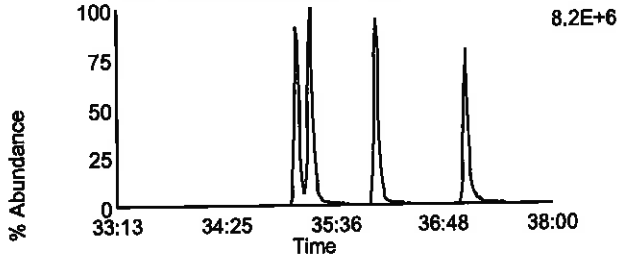
Data File: U130917A_22 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - SMT



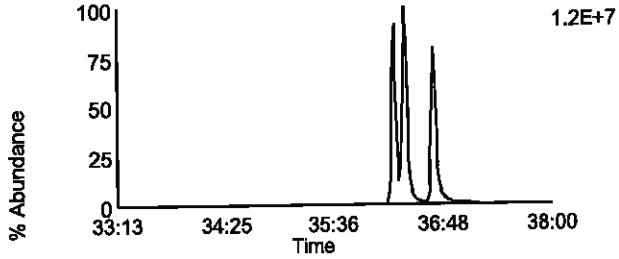
Data File: U130917A_22 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - SMT



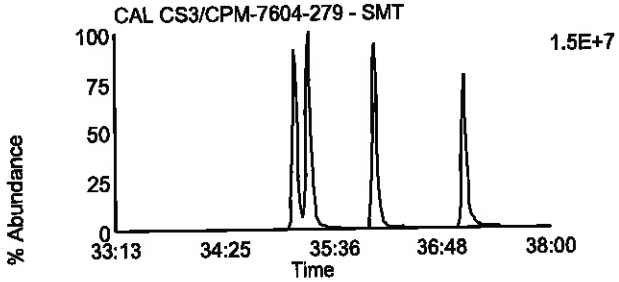
Data File: U130917A_22 G3 C5 - 383.8639
CAL CS3/CPM-7604-279 - SMT



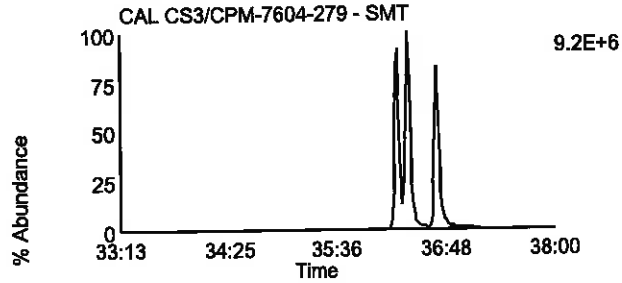
Data File: U130917A_22 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - SMT



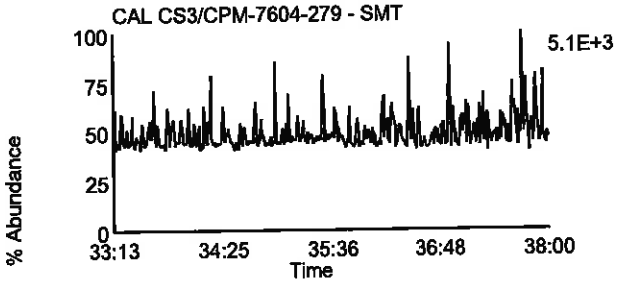
Data File: U130917A_22 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - SMT



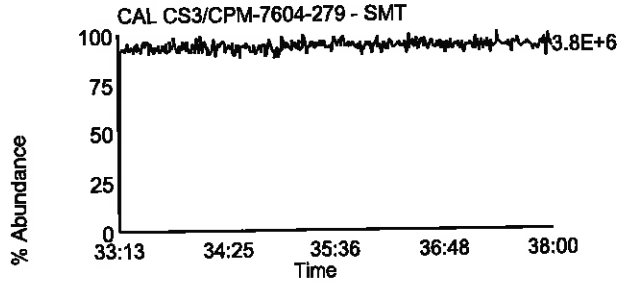
Data File: U130917A_22 G3 C10 - 403.8529
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - SMT

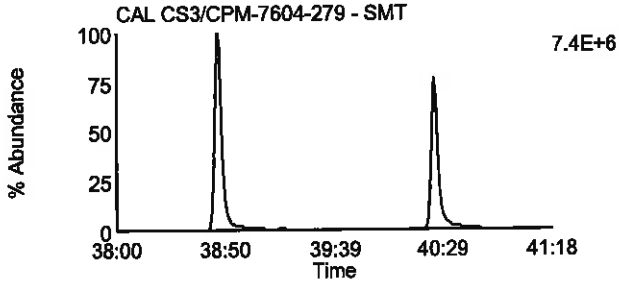


Homologue Group: Heptas

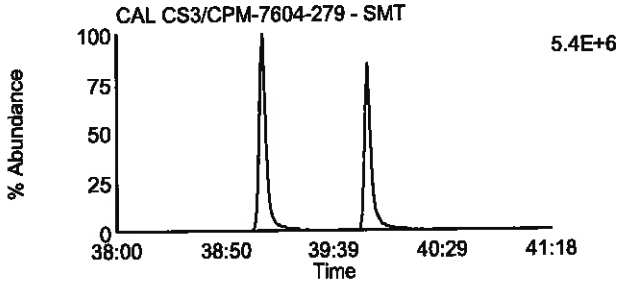
Data File Name: U130917A_22
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

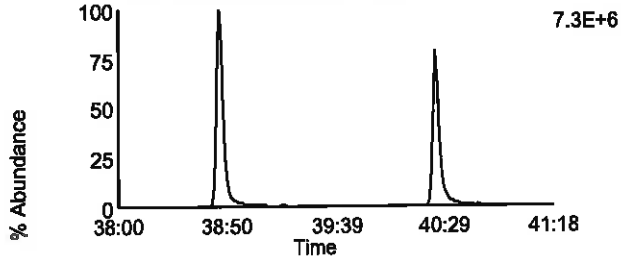
Data File: U130917A_22 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - SMT



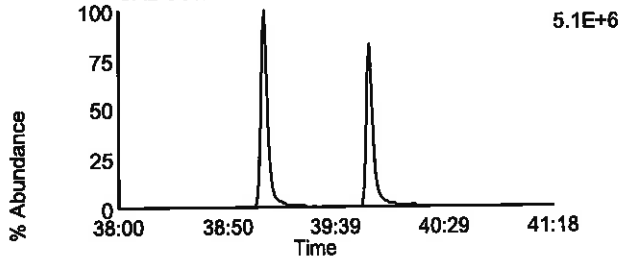
Data File: U130917A_22 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - SMT



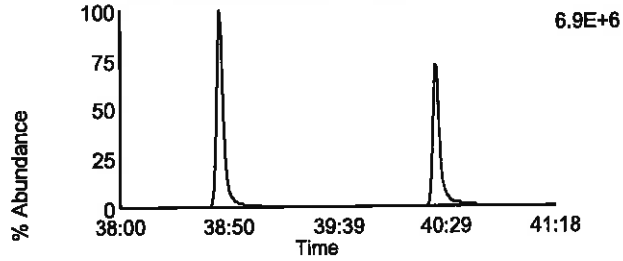
Data File: U130917A_22 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - SMT



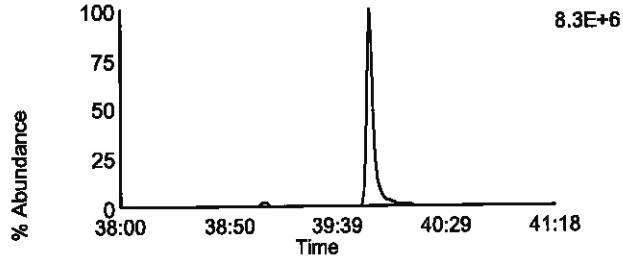
Data File: U130917A_22 G4 C9 - 425.7737
CAL CS3/CPM-7604-279 - SMT



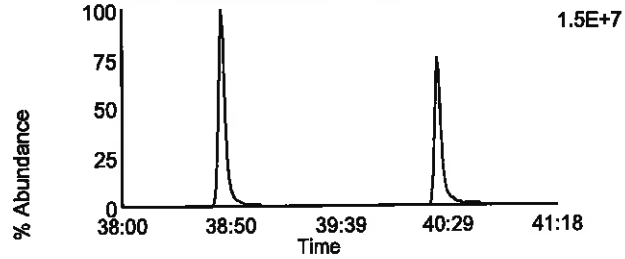
Data File: U130917A_22 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - SMT



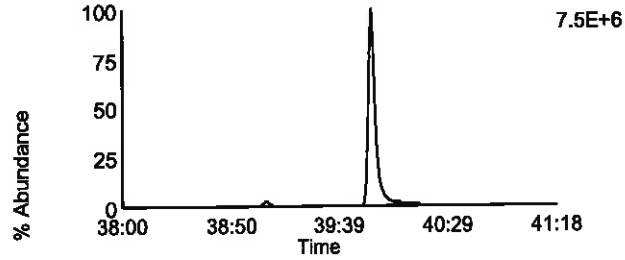
Data File: U130917A_22 G4 C11 - 435.8169
CAL CS3/CPM-7604-279 - SMT



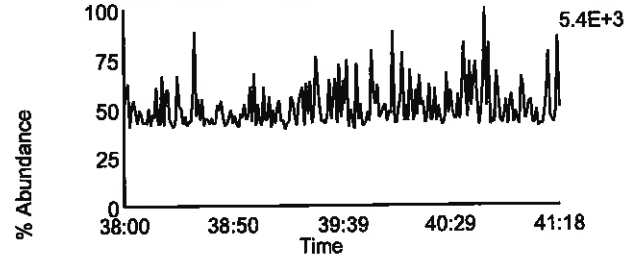
Data File: U130917A_22 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - SMT



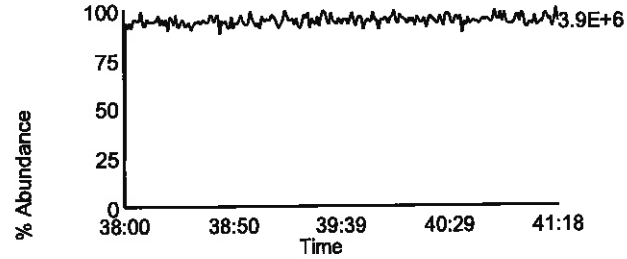
Data File: U130917A_22 G4 C12 - 437.814
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G4 C13 - 479.7165
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - SMT

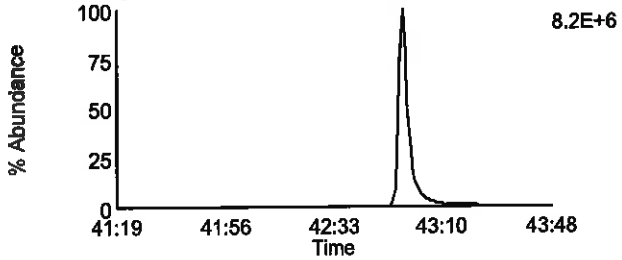


Homologue Group: Octas

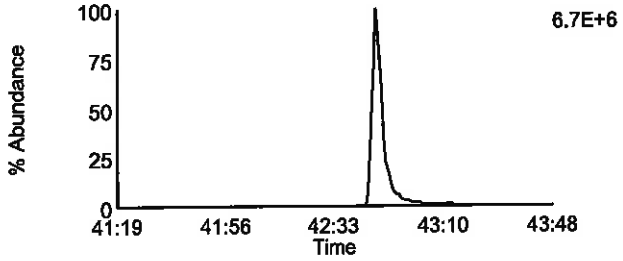
Data File Name: U130917A_22
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

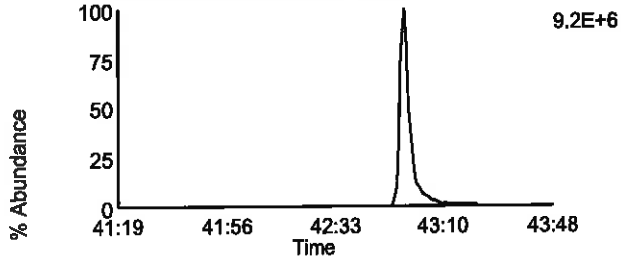
Data File: U130917A_22 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - SMT



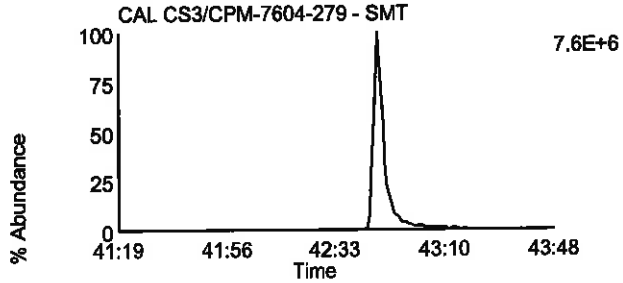
Data File: U130917A_22 G5 C8 - 457.7377
CAL CS3/CPM-7604-279 - SMT



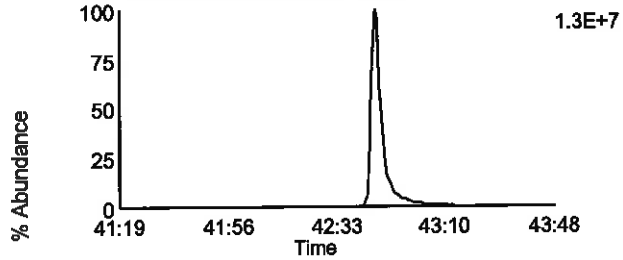
Data File: U130917A_22 G5 C5 - 443.7398
CAL CS3/CPM-7604-279 - SMT



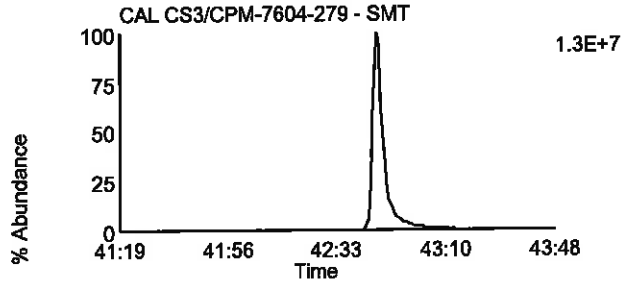
Data File: U130917A_22 G5 C9 - 459.7347
CAL CS3/CPM-7604-279 - SMT



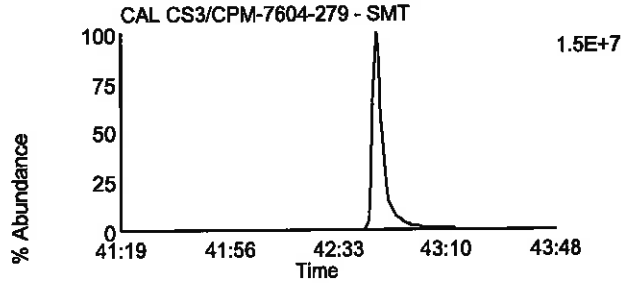
Data File: U130917A_22 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT



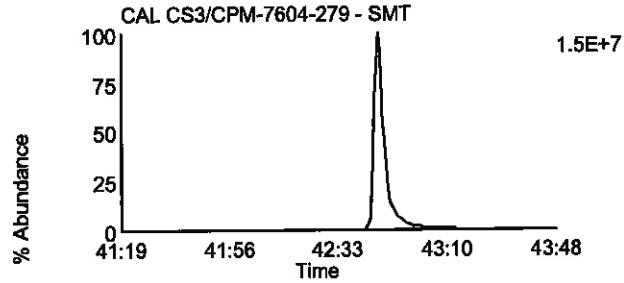
Data File: U130917A_22 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT



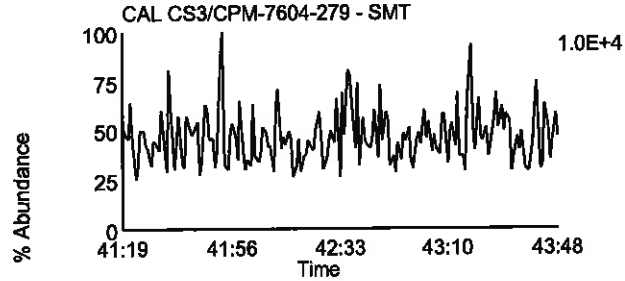
Data File: U130917A_22 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT



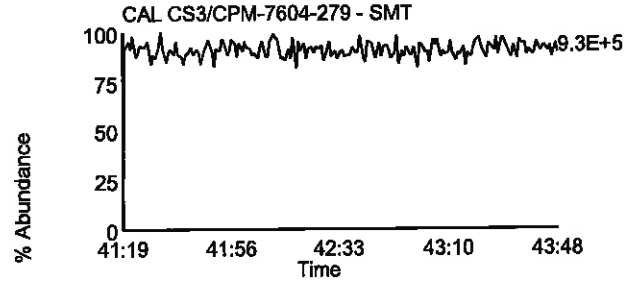
Data File: U130917A_22 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G5 C2 - 430.9728
CAL CS3/CPM-7604-279 - SMT

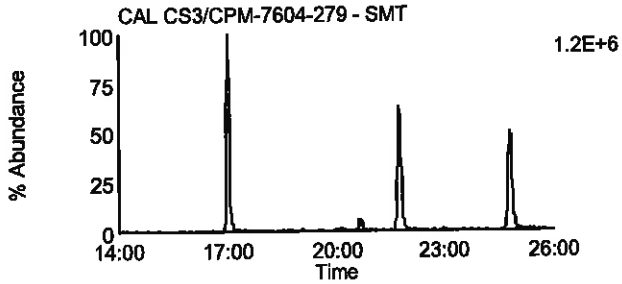


Homologue Group: Tetras

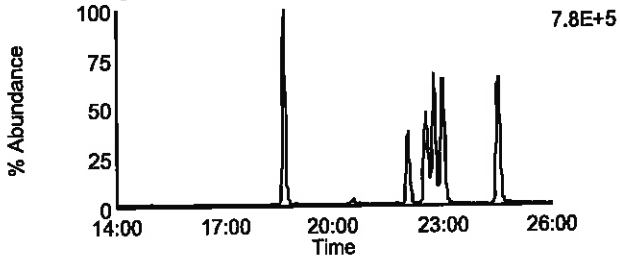
Data File Name: U130917B_15
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

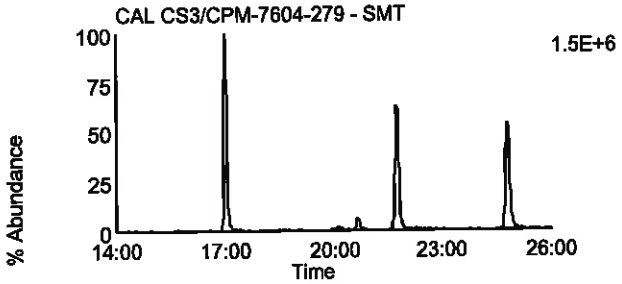
Data File: U130917B_15 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - SMT



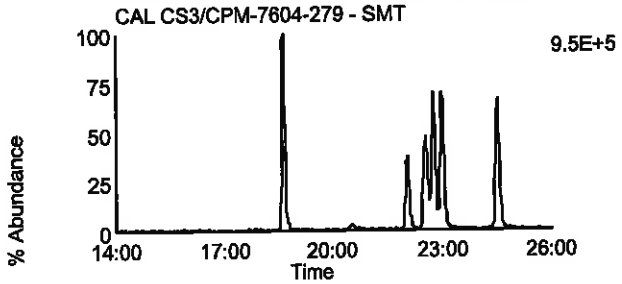
Data File: U130917B_15 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - SMT



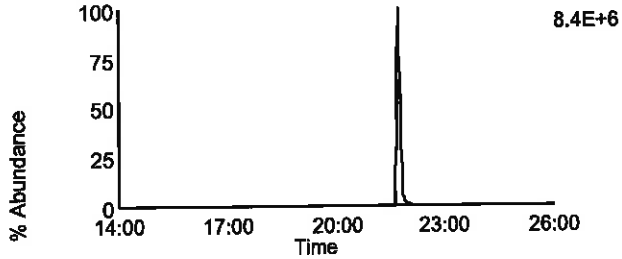
Data File: U130917B_15 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - SMT



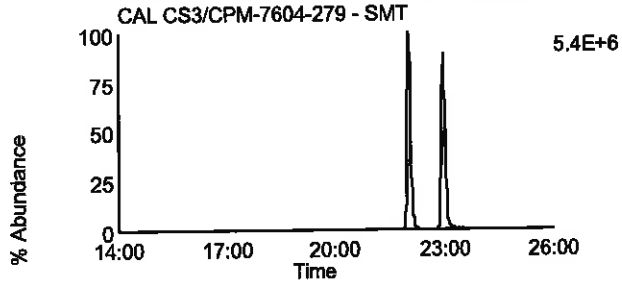
Data File: U130917B_15 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - SMT



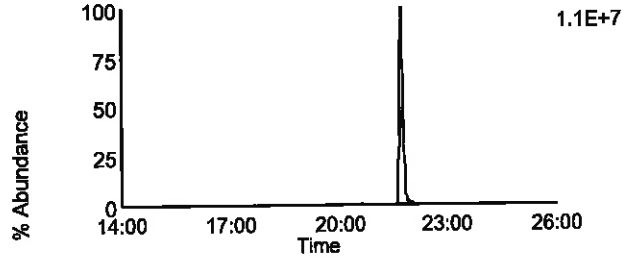
Data File: U130917B_15 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - SMT



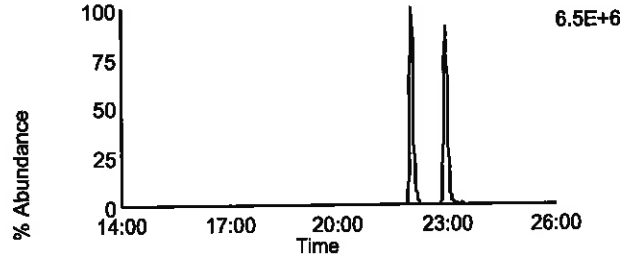
Data File: U130917B_15 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - SMT



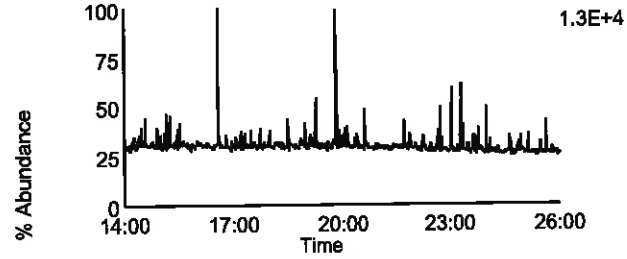
Data File: U130917B_15 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - SMT



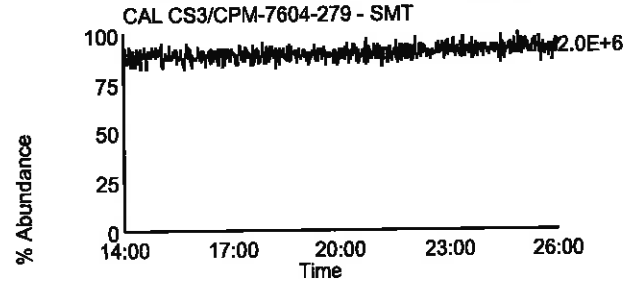
Data File: U130917B_15 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - SMT



Data File: U130917B_15 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - SMT



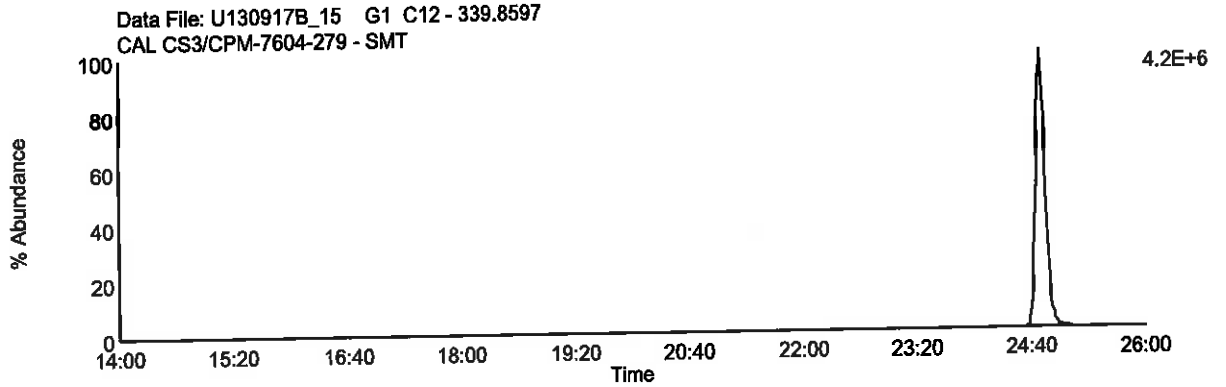
Data File: U130917B_15 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT

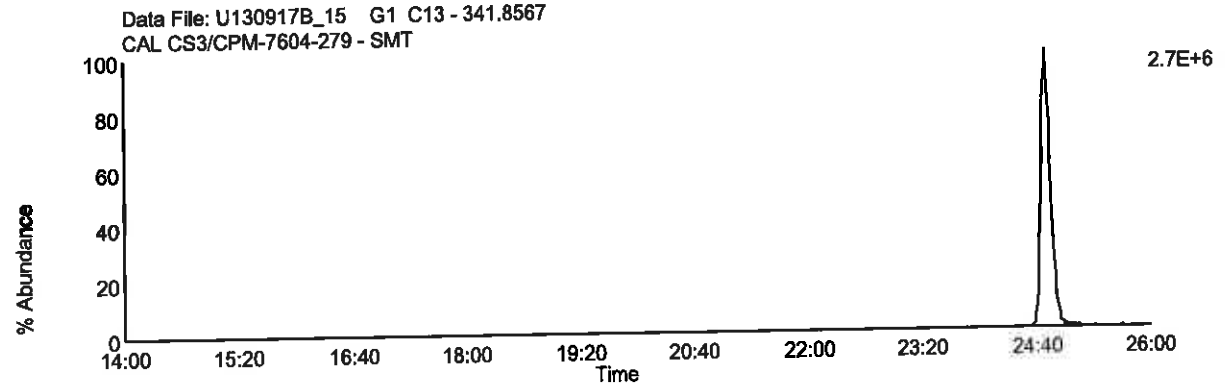


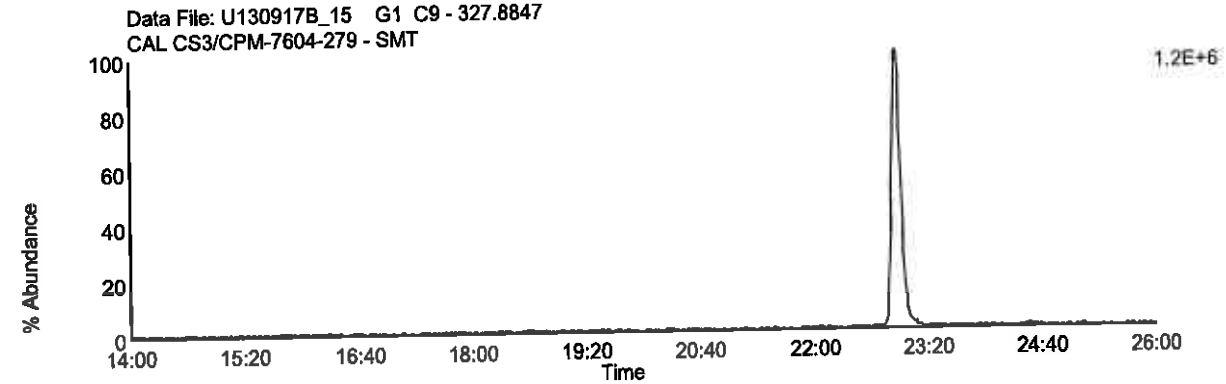
Homologue Group: Penta & Cleanup

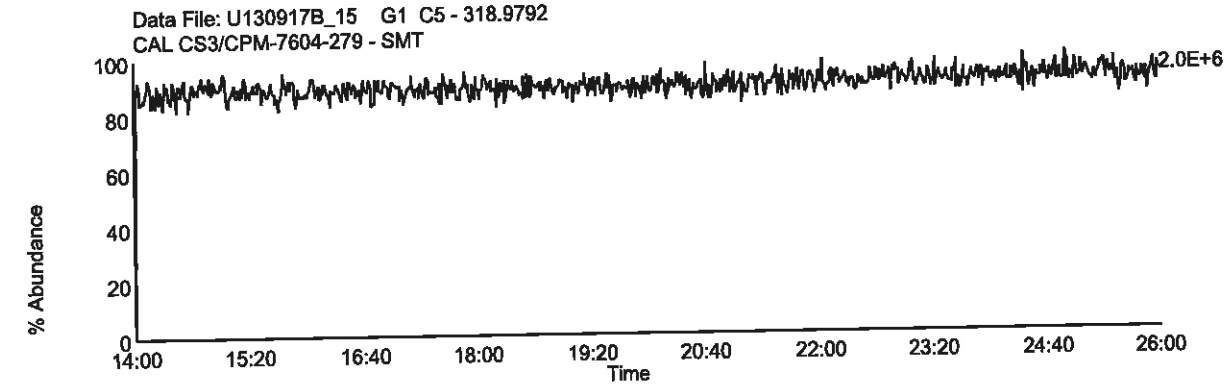
Data File Name: U130917B_15
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)







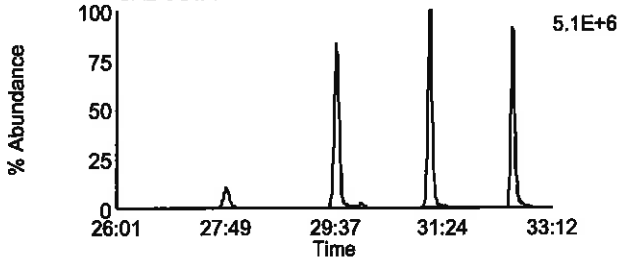


Homologue Group: Pentas

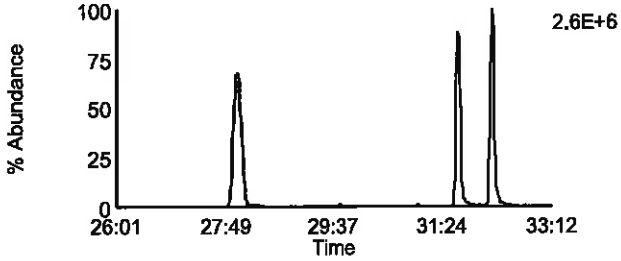
Data File Name: U130917B_15
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

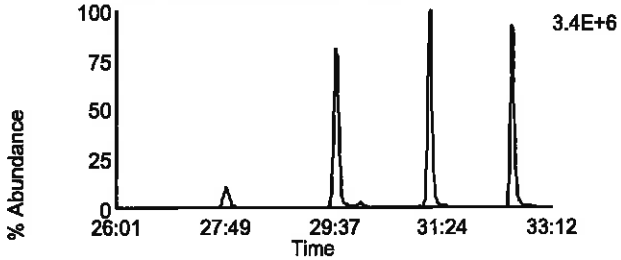
Data File: U130917B_15 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - SMT



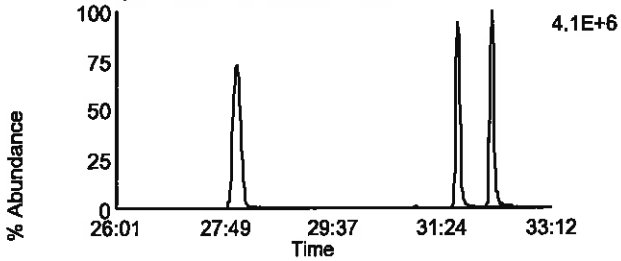
Data File: U130917B_15 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - SMT



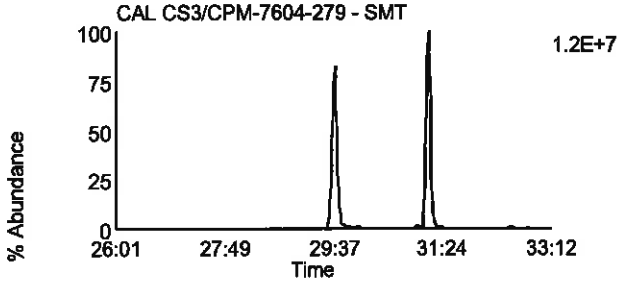
Data File: U130917B_15 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - SMT



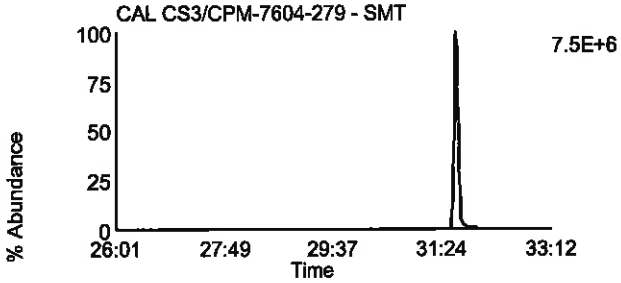
Data File: U130917B_15 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - SMT



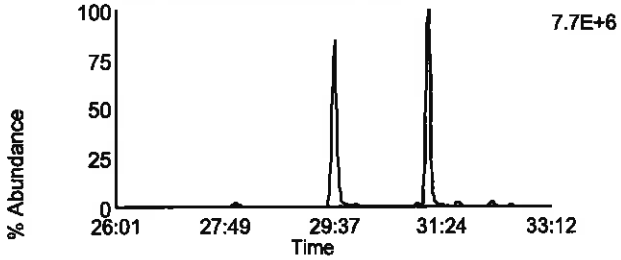
Data File: U130917B_15 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - SMT



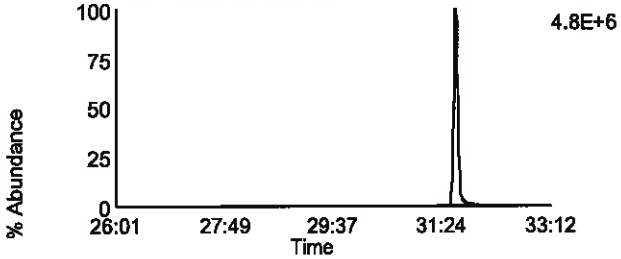
Data File: U130917B_15 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - SMT



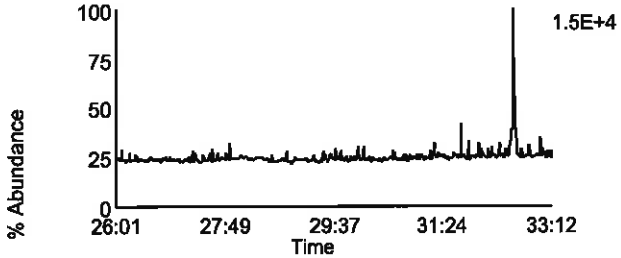
Data File: U130917B_15 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - SMT



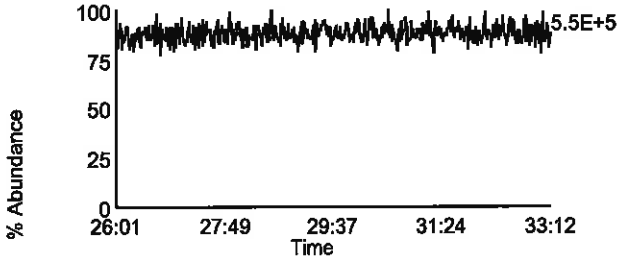
Data File: U130917B_15 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - SMT



Data File: U130917B_15 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - SMT



Data File: U130917B_15 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - SMT

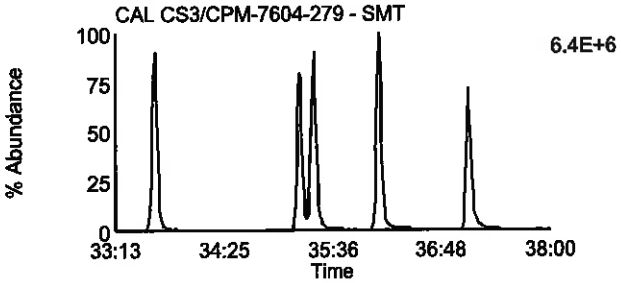


Homologue Group: Hexas

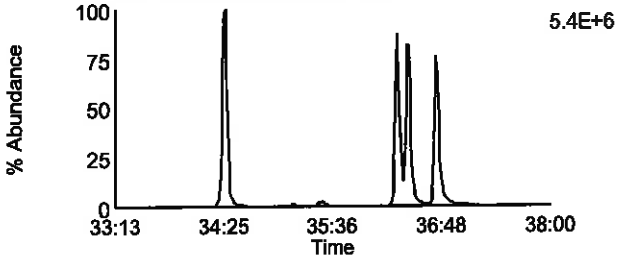
Data File Name: U130917B_15
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

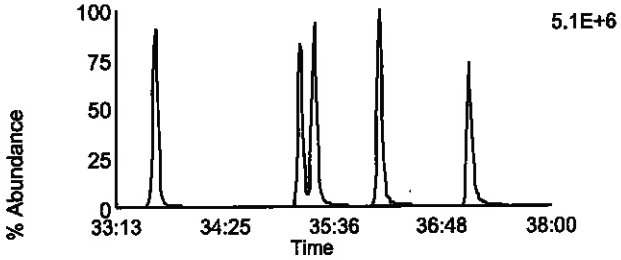
Data File: U130917B_15 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - SMT



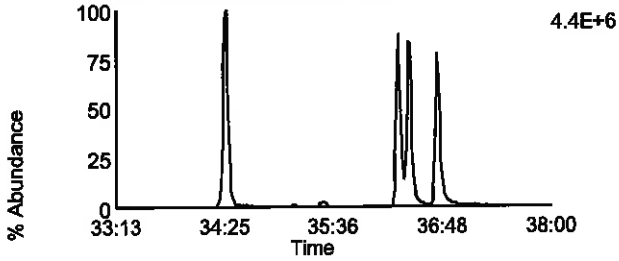
Data File: U130917B_15 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - SMT



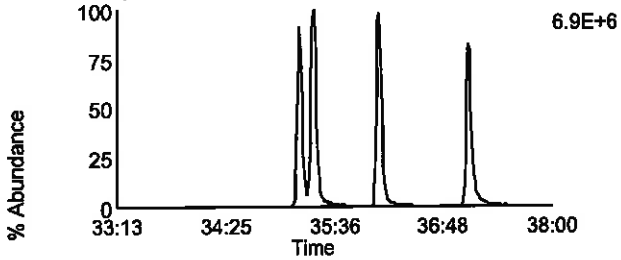
Data File: U130917B_15 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - SMT



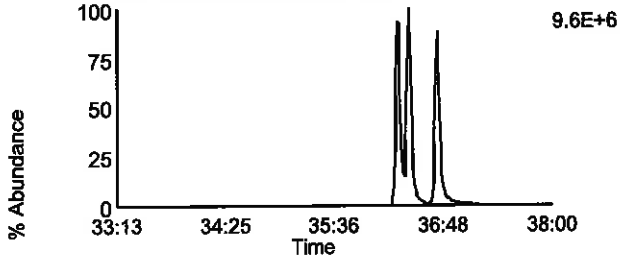
Data File: U130917B_15 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - SMT



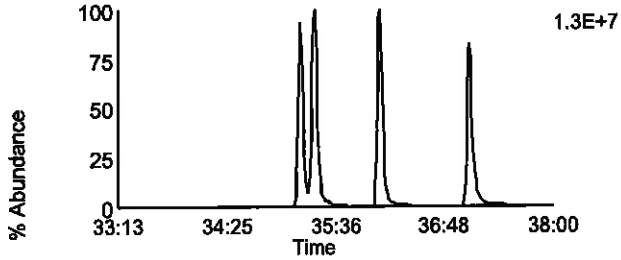
Data File: U130917B_15 G3 C5 - 383.8639
CAL CS3/CPM-7604-279 - SMT



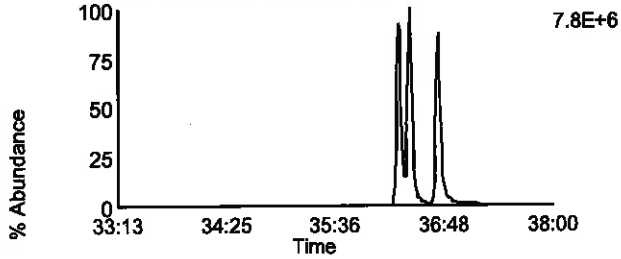
Data File: U130917B_15 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - SMT



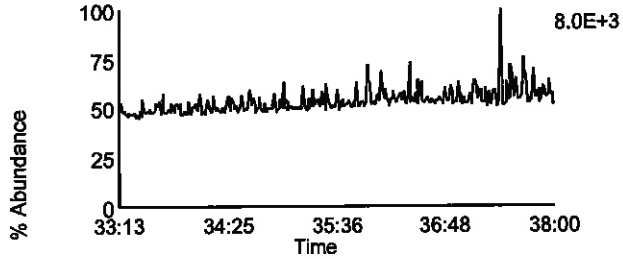
Data File: U130917B_15 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - SMT



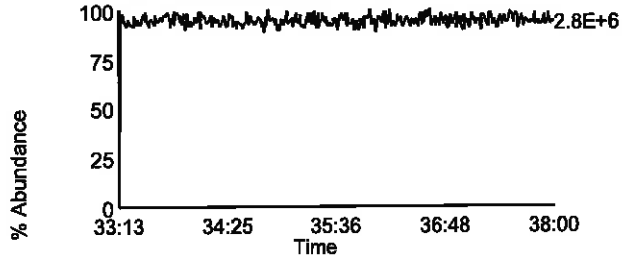
Data File: U130917B_15 G3 C10 - 403.8529
CAL CS3/CPM-7604-279 - SMT



Data File: U130917B_15 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - SMT



Data File: U130917B_15 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - SMT

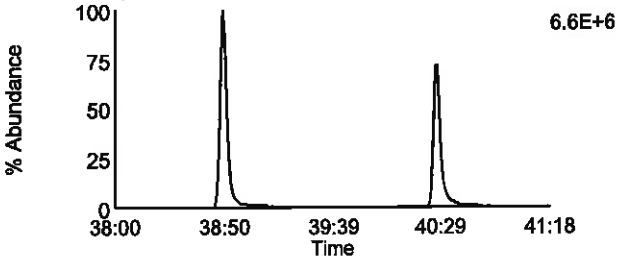


Homologue Group: Heptas

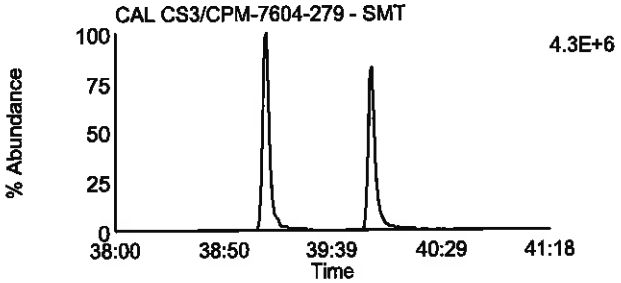
Data File Name: U130917B_15
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

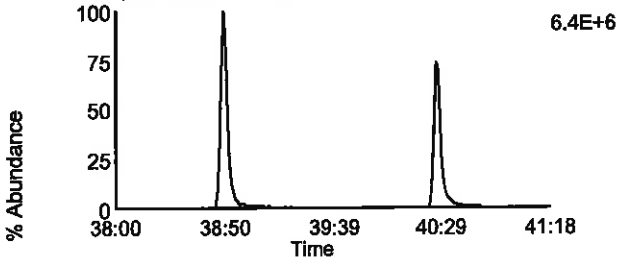
Data File: U130917B_15 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - SMT



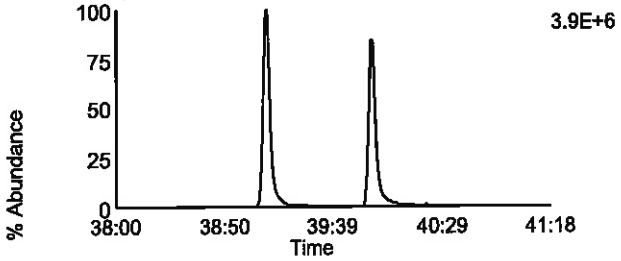
Data File: U130917B_15 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - SMT



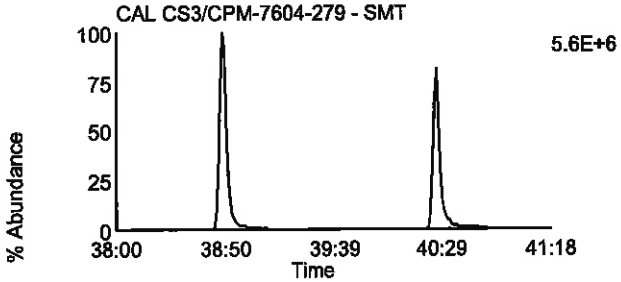
Data File: U130917B_15 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - SMT



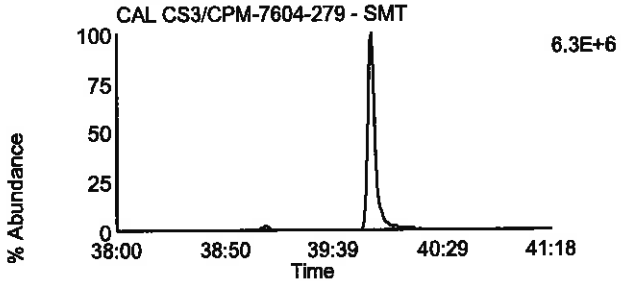
Data File: U130917B_15 G4 C9 - 425.7737
CAL CS3/CPM-7604-279 - SMT



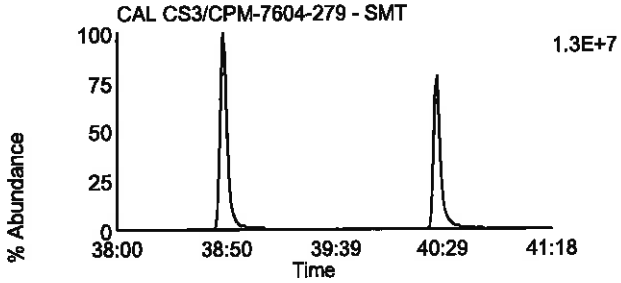
Data File: U130917B_15 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - SMT



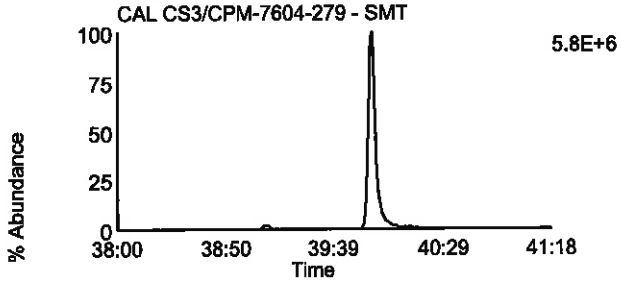
Data File: U130917B_15 G4 C11 - 435.8169
CAL CS3/CPM-7604-279 - SMT



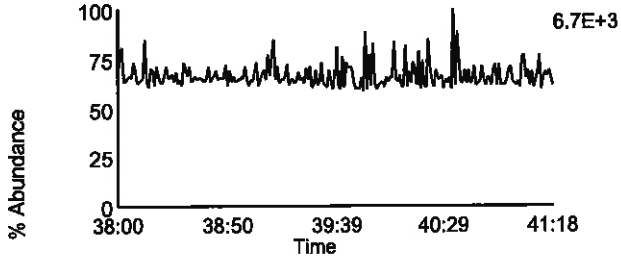
Data File: U130917B_15 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - SMT



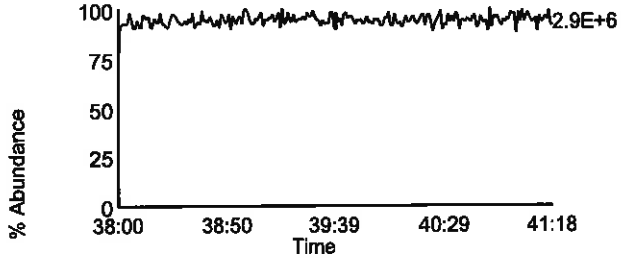
Data File: U130917B_15 G4 C12 - 437.814
CAL CS3/CPM-7604-279 - SMT



Data File: U130917B_15 G4 C13 - 479.7165
CAL CS3/CPM-7604-279 - SMT



Data File: U130917B_15 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - SMT

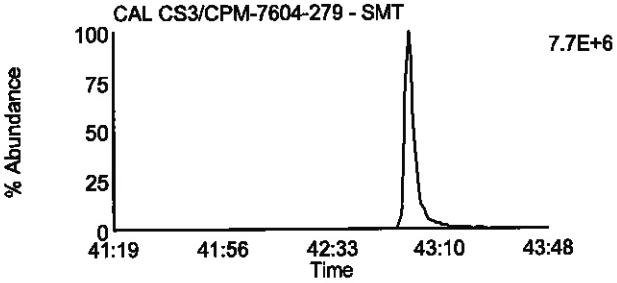


Homologue Group: Octas

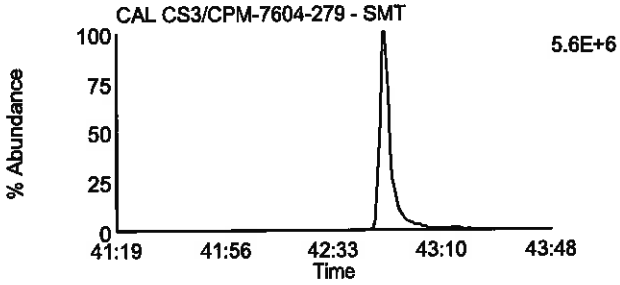
Data File Name: U130917B_15
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR06 (U)

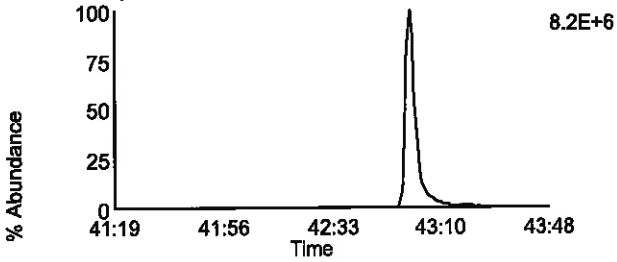
Data File: U130917B_15 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - SMT



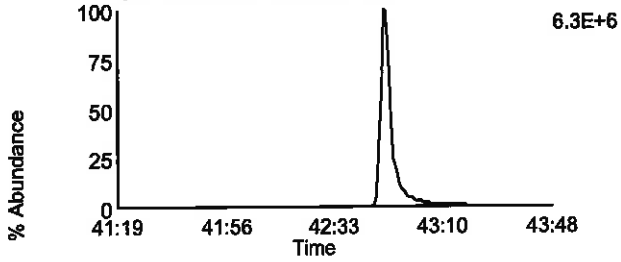
Data File: U130917B_15 G5 C8 - 457.7377
CAL CS3/CPM-7604-279 - SMT



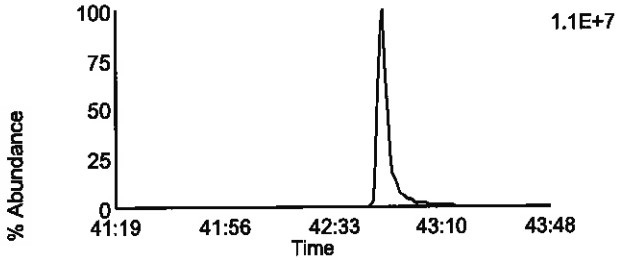
Data File: U130917B_15 G5 C5 - 443.7398
CAL CS3/CPM-7604-279 - SMT



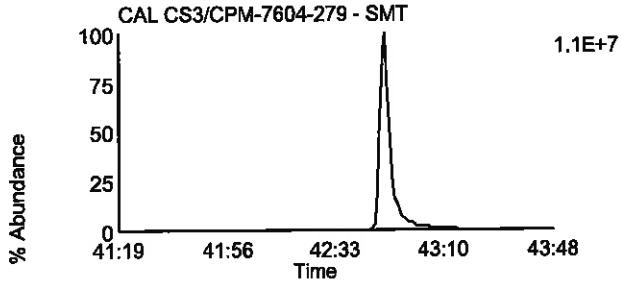
Data File: U130917B_15 G5 C9 - 459.7347
CAL CS3/CPM-7604-279 - SMT



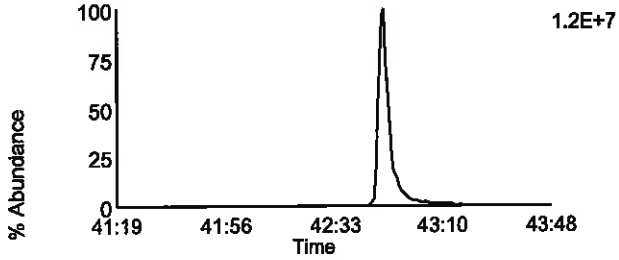
Data File: U130917B_15 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT



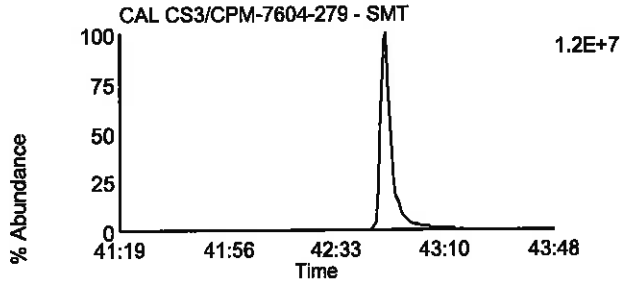
Data File: U130917B_15 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT



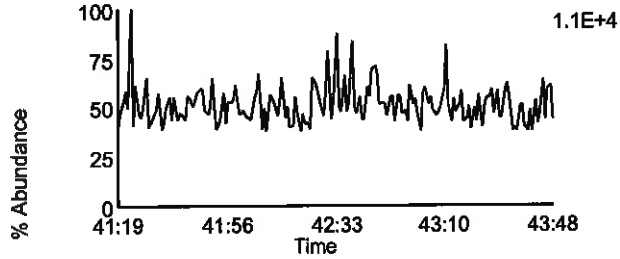
Data File: U130917B_15 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT



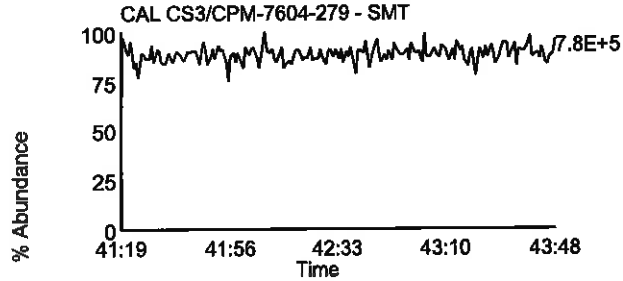
Data File: U130917B_15 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT



Data File: U130917B_15 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - SMT



Data File: U130917B_15 G5 C2 - 430.9728
CAL CS3/CPM-7604-279 - SMT

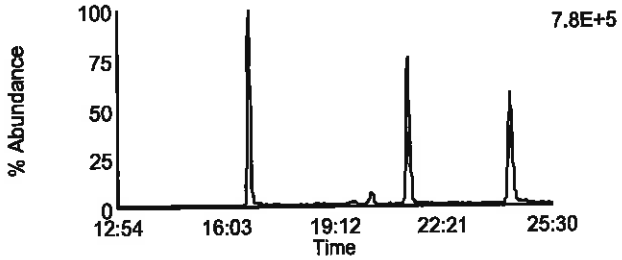


Homologue Group: Tetras

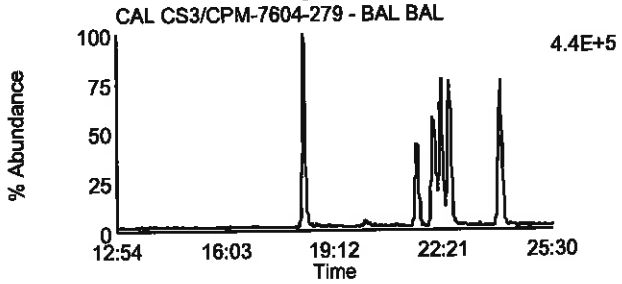
Data File Name: F130921A_16
Date Acquired: 9/21/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

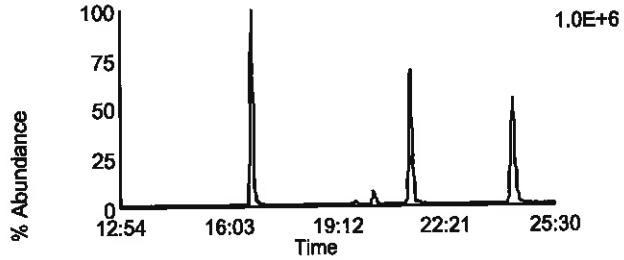
Data File: F130921A_16 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - BAL BAL



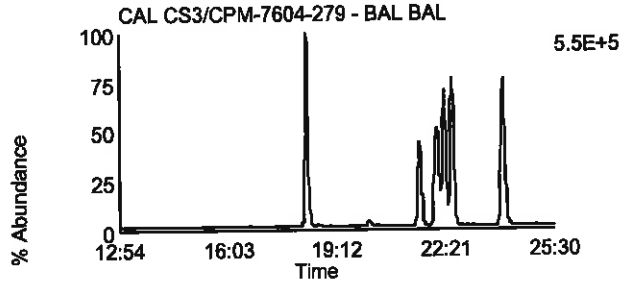
Data File: F130921A_16 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - BAL BAL



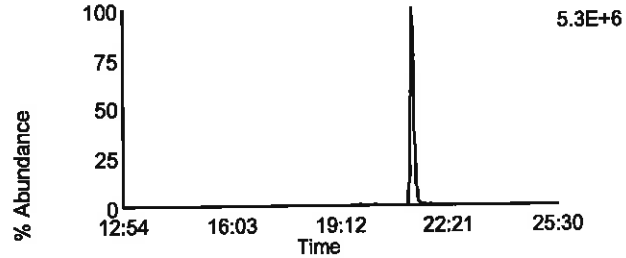
Data File: F130921A_16 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - BAL BAL



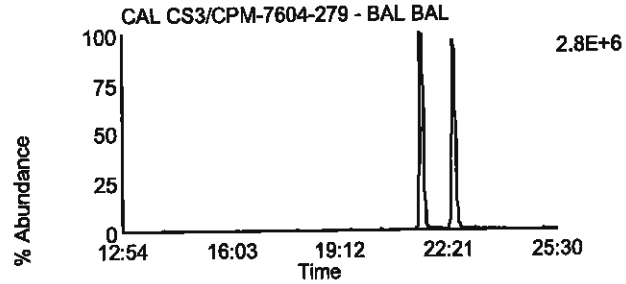
Data File: F130921A_16 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - BAL BAL



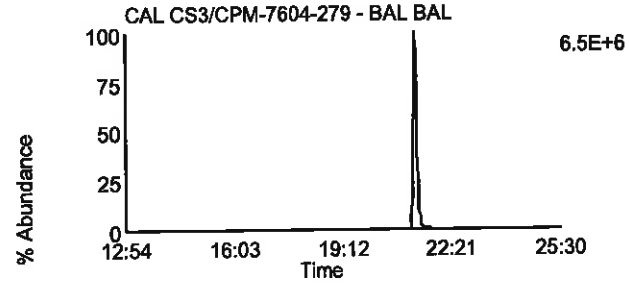
Data File: F130921A_16 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - BAL BAL



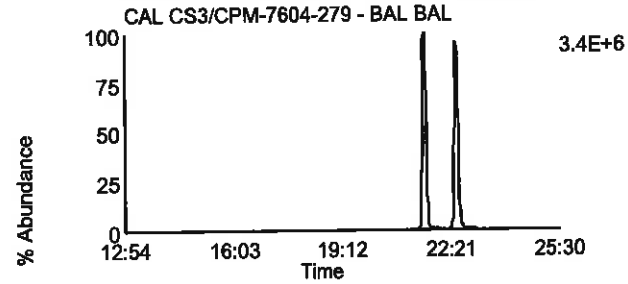
Data File: F130921A_16 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - BAL BAL



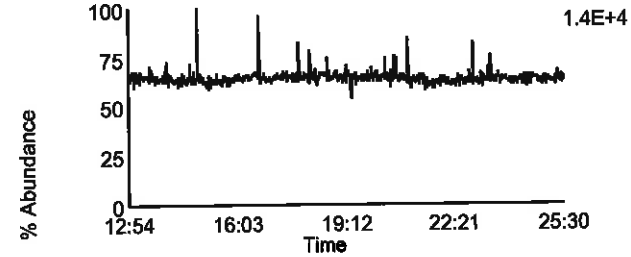
Data File: F130921A_16 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - BAL BAL



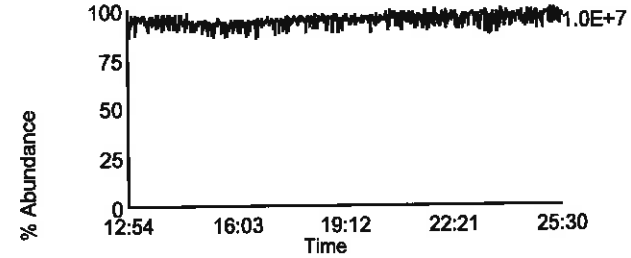
Data File: F130921A_16 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - BAL BAL

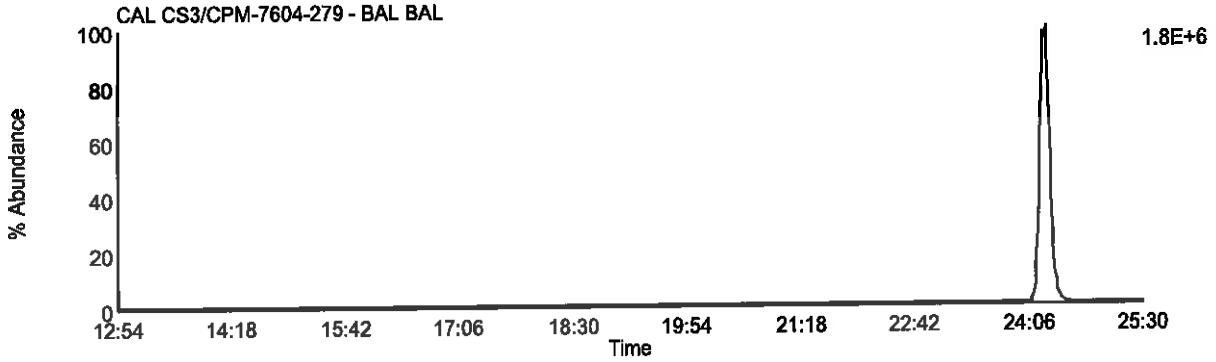


Homologue Group: Penta & Cleanup

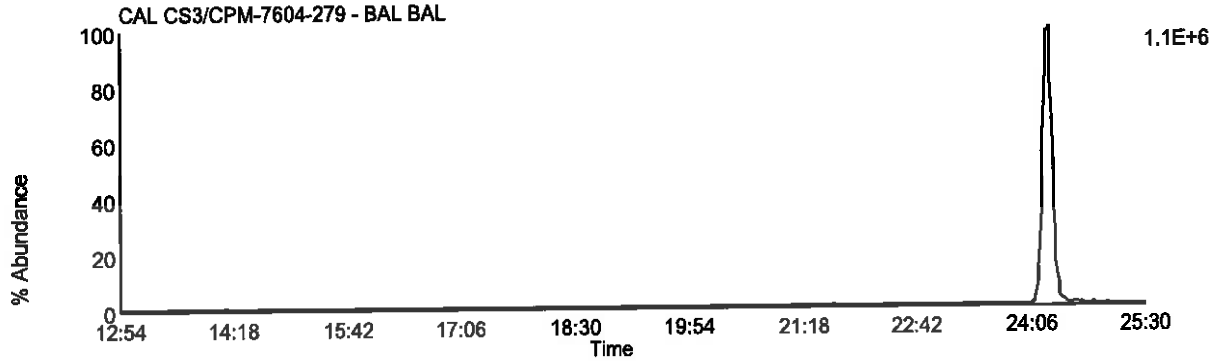
Data File Name: F130921A_16
Date Acquired: 9/21/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

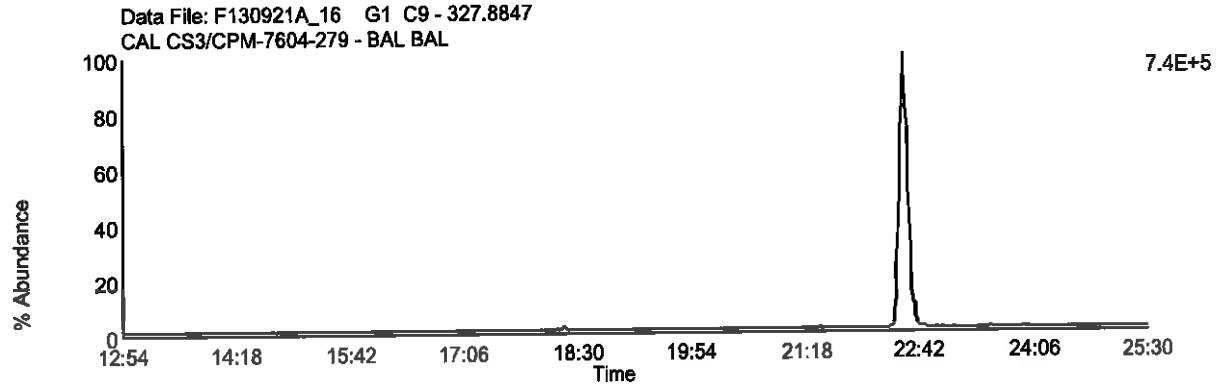
Data File: F130921A_16 G1 C12 - 339.8597
CAL CS3/CPM-7604-279 - BAL BAL



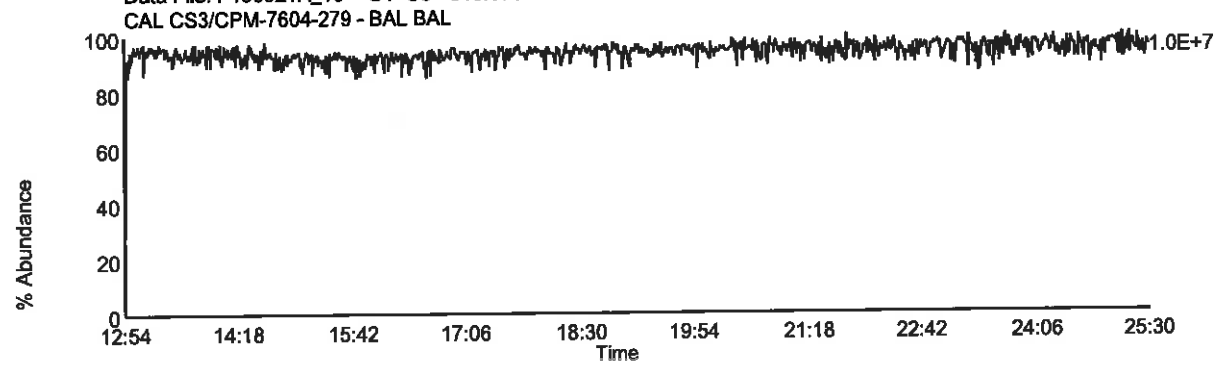
Data File: F130921A_16 G1 C13 - 341.8567
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G1 C9 - 327.8847
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - BAL BAL

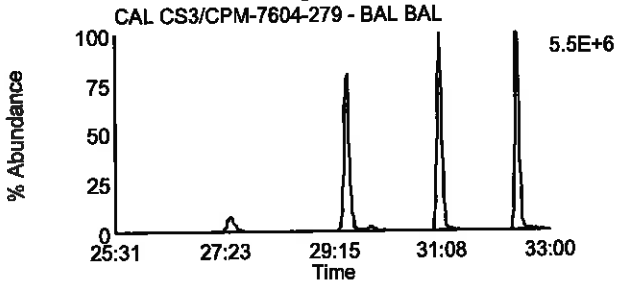


Homologue Group: Pentas

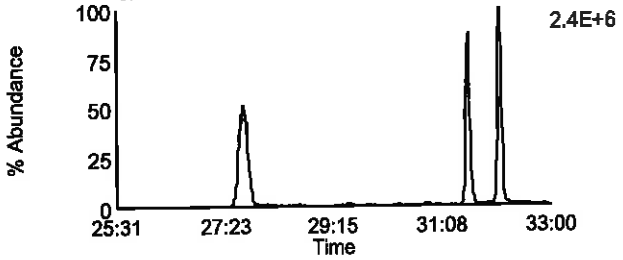
Data File Name: F130921A_16
Date Acquired: 9/21/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

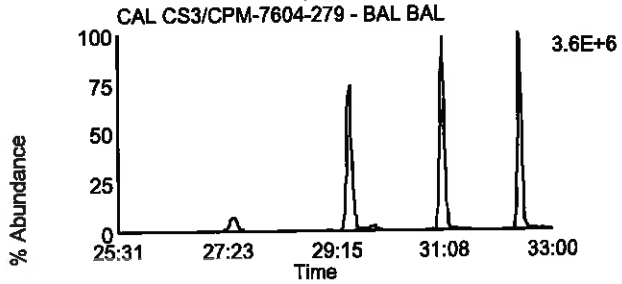
Data File: F130921A_16 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - BAL BAL



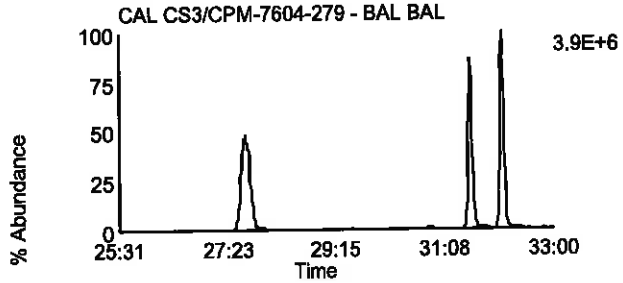
Data File: F130921A_16 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - BAL BAL



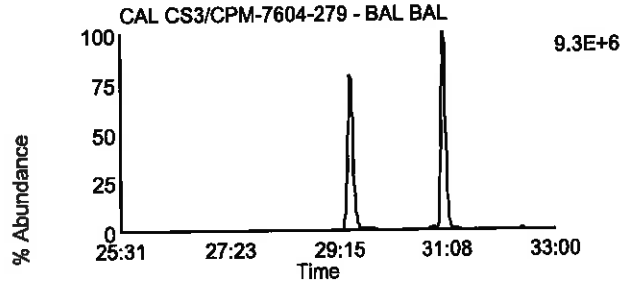
Data File: F130921A_16 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - BAL BAL



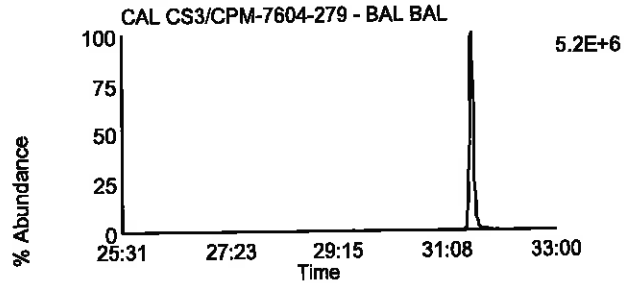
Data File: F130921A_16 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - BAL BAL



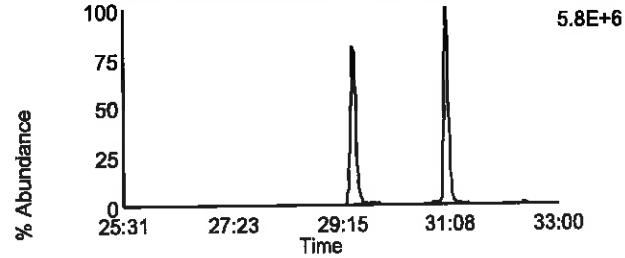
Data File: F130921A_16 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - BAL BAL



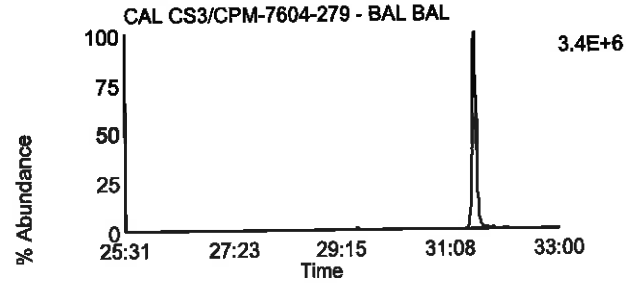
Data File: F130921A_16 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - BAL BAL



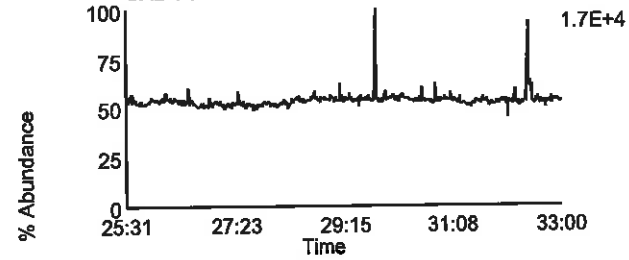
Data File: F130921A_16 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - BAL BAL



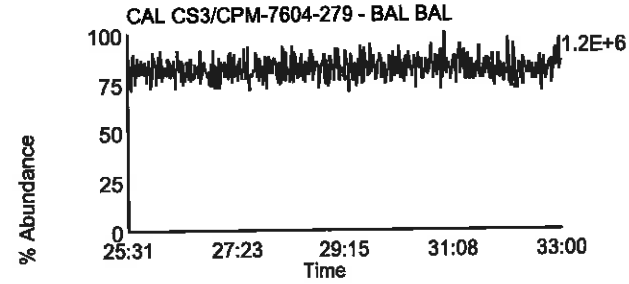
Data File: F130921A_16 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - BAL BAL

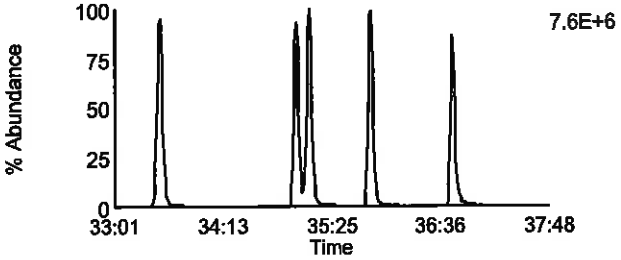


Homologue Group: Hexas

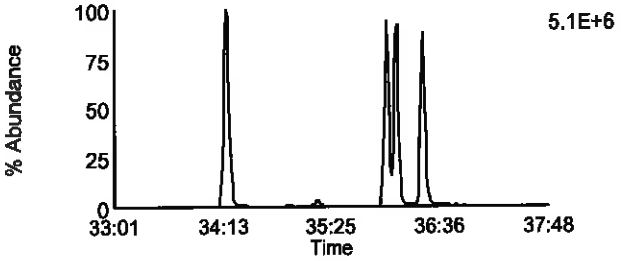
Data File Name: F130921A_16
Date Acquired: 9/21/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

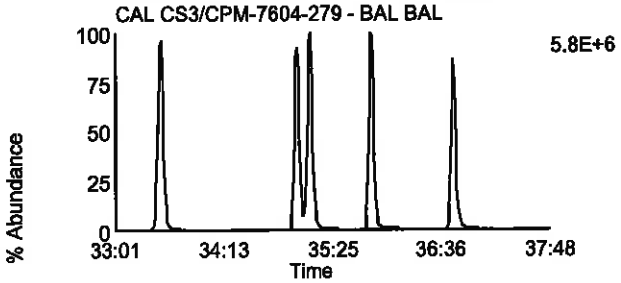
Data File: F130921A_16 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - BAL BAL



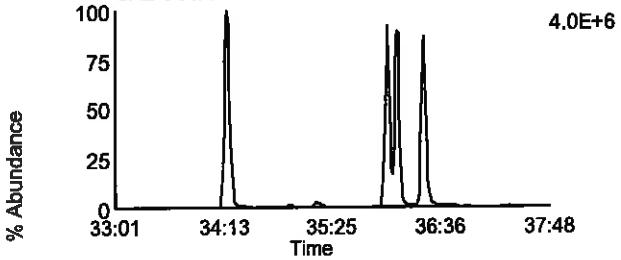
Data File: F130921A_16 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - BAL BAL



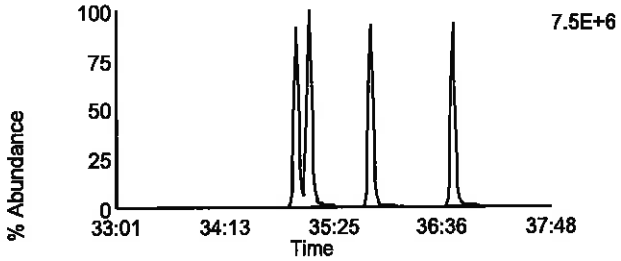
Data File: F130921A_16 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - BAL BAL



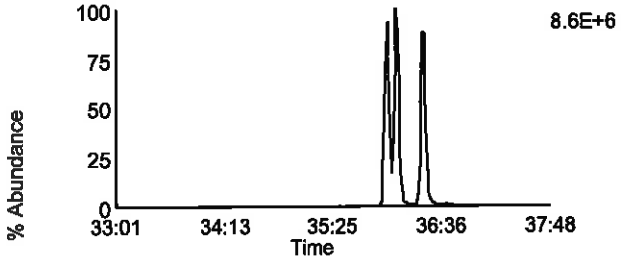
Data File: F130921A_16 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - BAL BAL



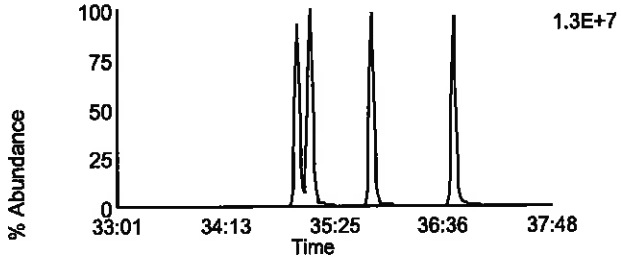
Data File: F130921A_16 G3 C5 - 383.8639
CAL CS3/CPM-7604-279 - BAL BAL



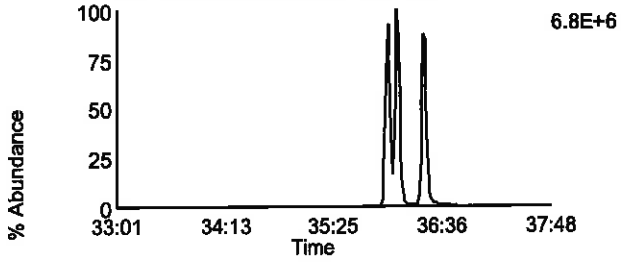
Data File: F130921A_16 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - BAL BAL



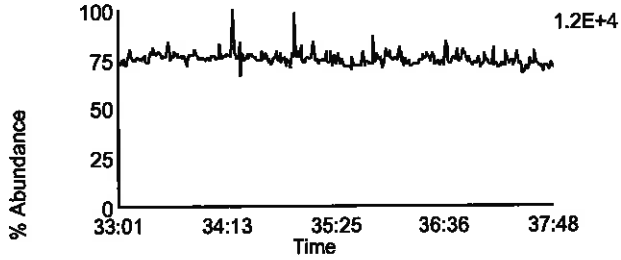
Data File: F130921A_16 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - BAL BAL



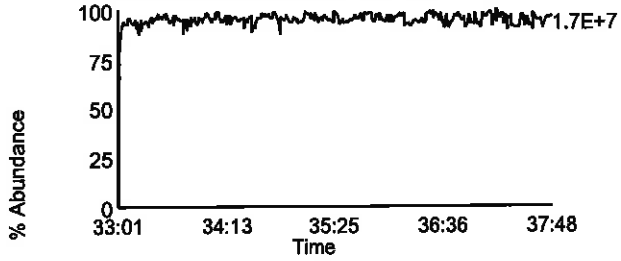
Data File: F130921A_16 G3 C10 - 403.8529
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - BAL BAL

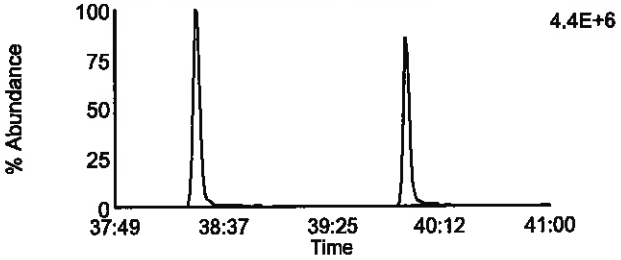


Homologue Group: Heptas

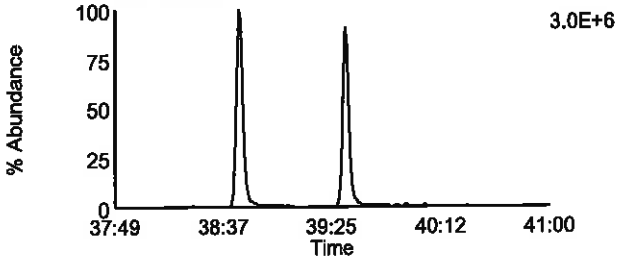
Data File Name: F130921A_16
Date Acquired: 9/21/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

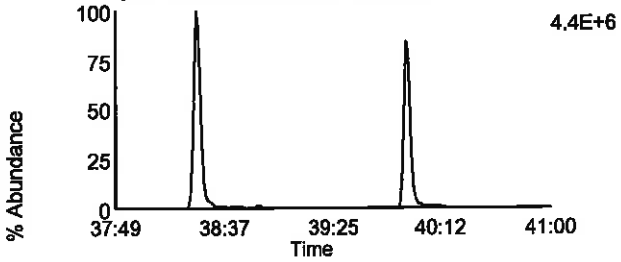
Data File: F130921A_16 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - BAL BAL



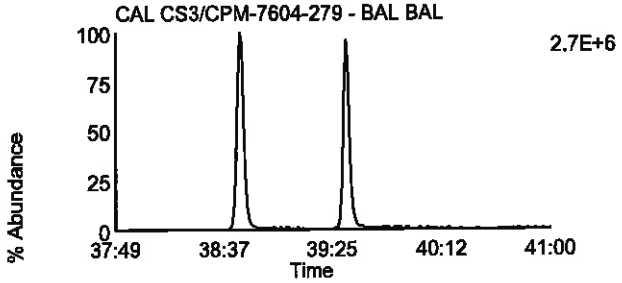
Data File: F130921A_16 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - BAL BAL



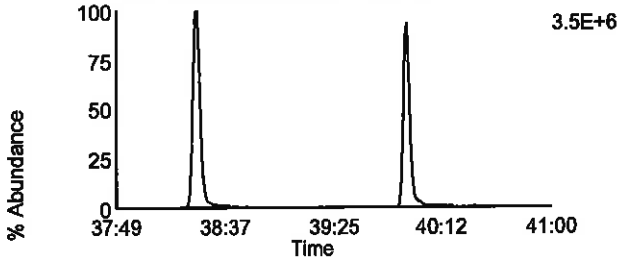
Data File: F130921A_16 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - BAL BAL



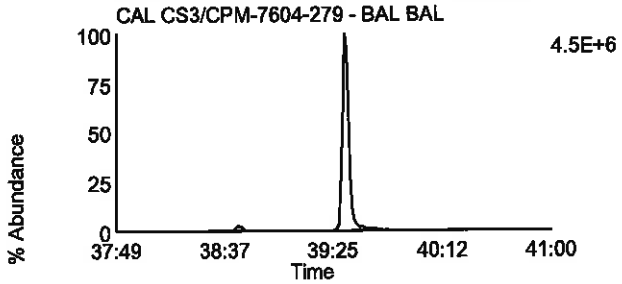
Data File: F130921A_16 G4 C9 - 425.7737
CAL CS3/CPM-7604-279 - BAL BAL



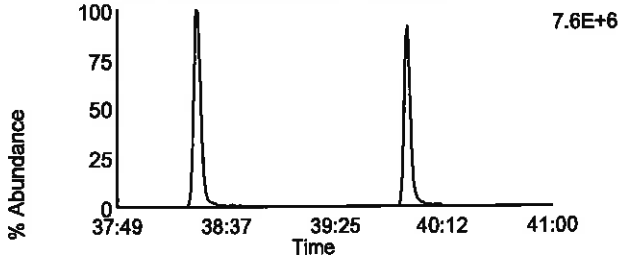
Data File: F130921A_16 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - BAL BAL



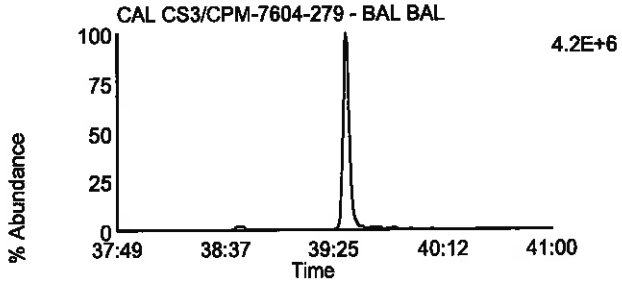
Data File: F130921A_16 G4 C11 - 435.8169
CAL CS3/CPM-7604-279 - BAL BAL



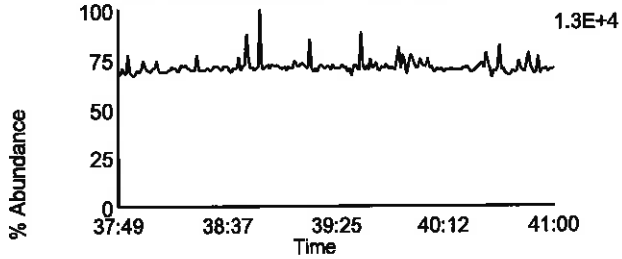
Data File: F130921A_16 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - BAL BAL



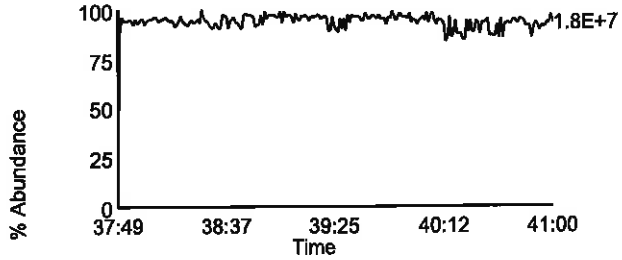
Data File: F130921A_16 G4 C12 - 437.814
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G4 C13 - 479.7165
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - BAL BAL

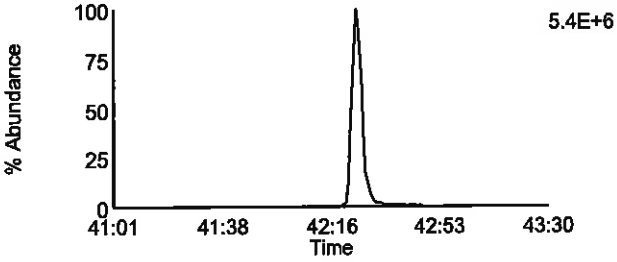


Homologue Group: Octas

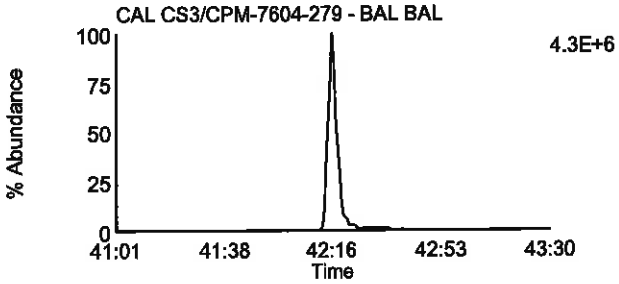
Data File Name: F130921A_16
Date Acquired: 9/21/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

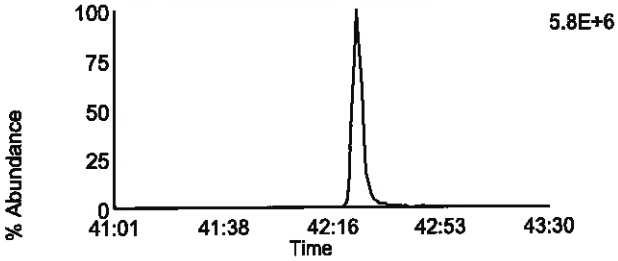
Data File: F130921A_16 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - BAL BAL



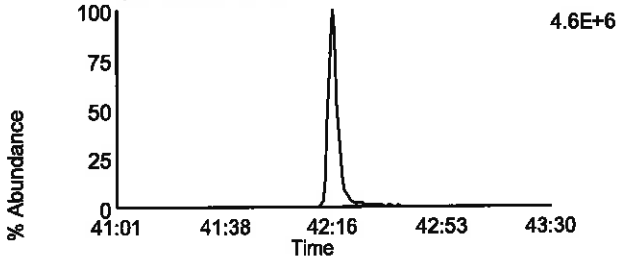
Data File: F130921A_16 G5 C8 - 457.7377
CAL CS3/CPM-7604-279 - BAL BAL



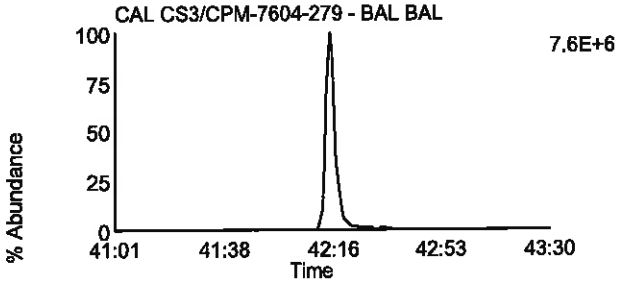
Data File: F130921A_16 G5 C5 - 443.7398
CAL CS3/CPM-7604-279 - BAL BAL



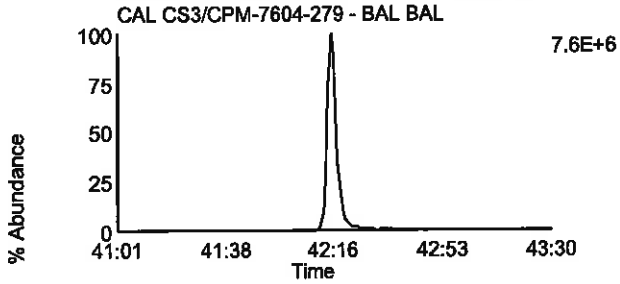
Data File: F130921A_16 G5 C9 - 459.7347
CAL CS3/CPM-7604-279 - BAL BAL



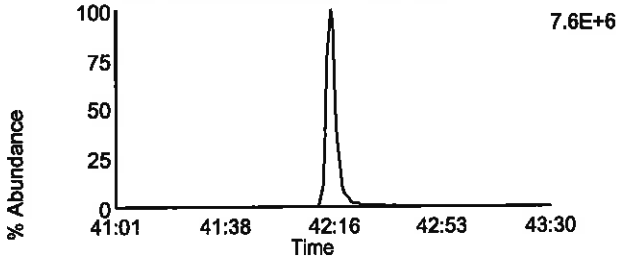
Data File: F130921A_16 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - BAL BAL



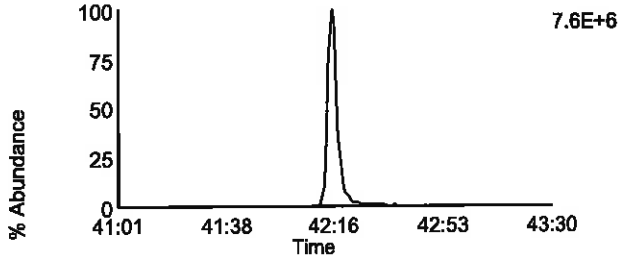
Data File: F130921A_16 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - BAL BAL



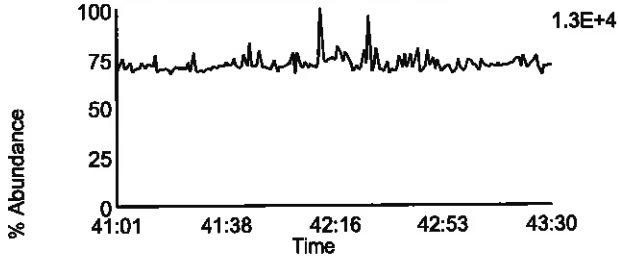
Data File: F130921A_16 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - BAL BAL



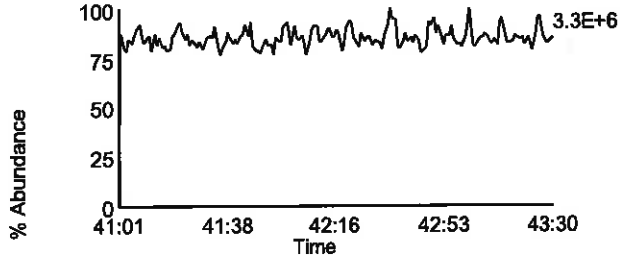
Data File: F130921A_16 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G5 C2 - 430.9728
CAL CS3/CPM-7604-279 - BAL BAL

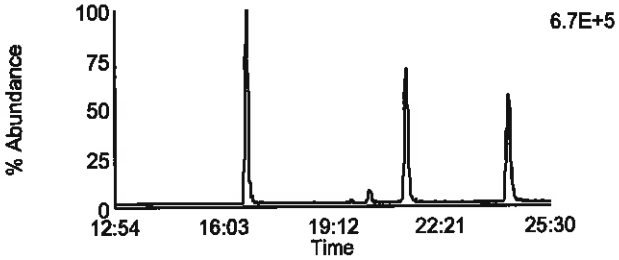


Homologue Group: Tetras

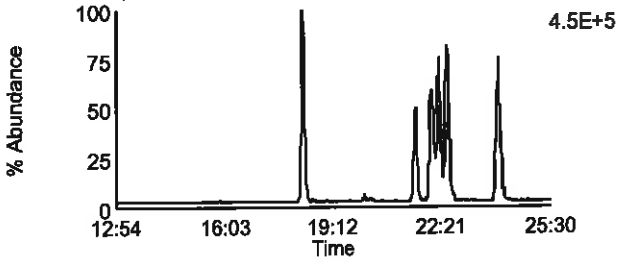
Data File Name: F130921B_16
Date Acquired: 9/22/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

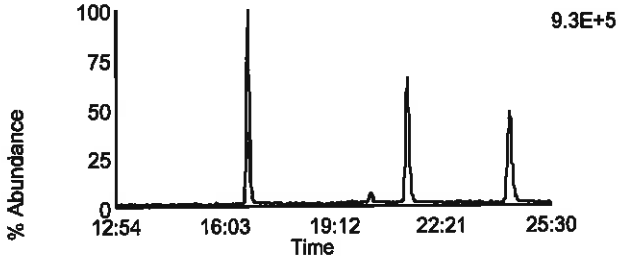
Data File: F130921B_16 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - BAL BAL



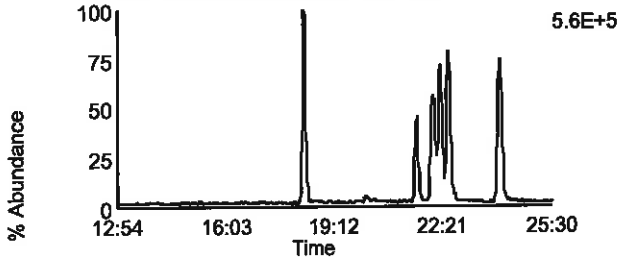
Data File: F130921B_16 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - BAL BAL



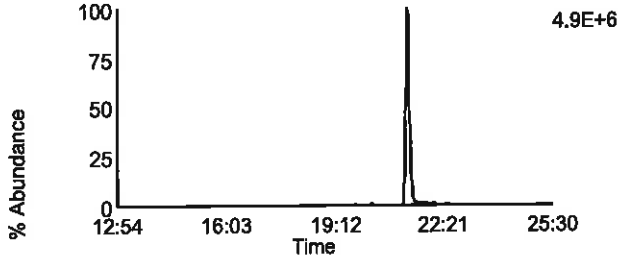
Data File: F130921B_16 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - BAL BAL



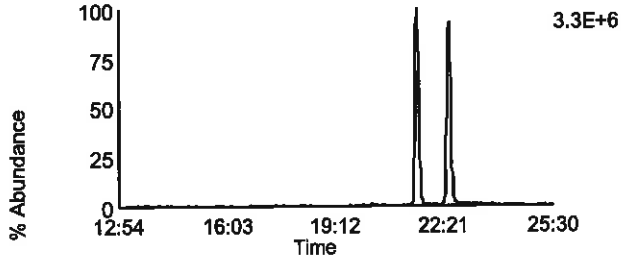
Data File: F130921B_16 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - BAL BAL



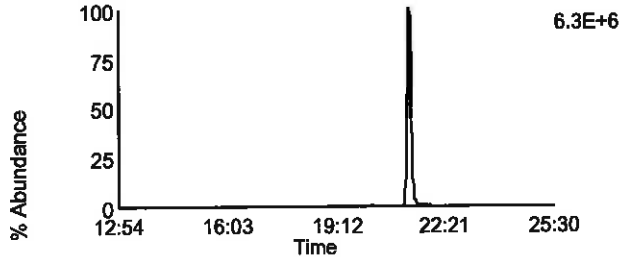
Data File: F130921B_16 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - BAL BAL



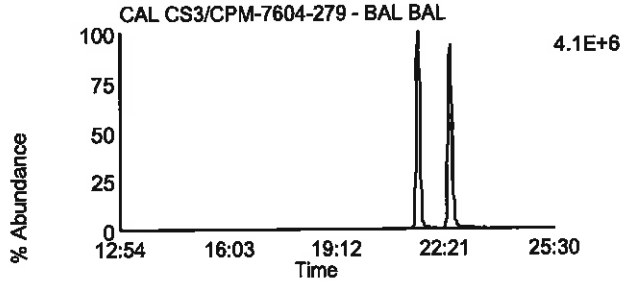
Data File: F130921B_16 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - BAL BAL



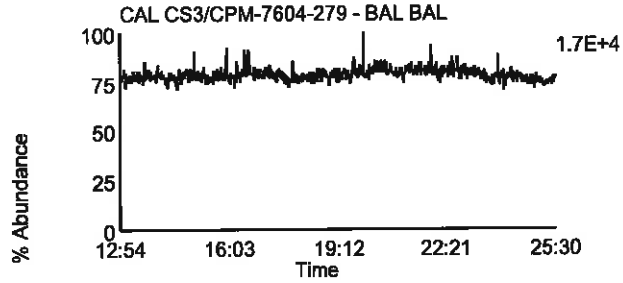
Data File: F130921B_16 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - BAL BAL



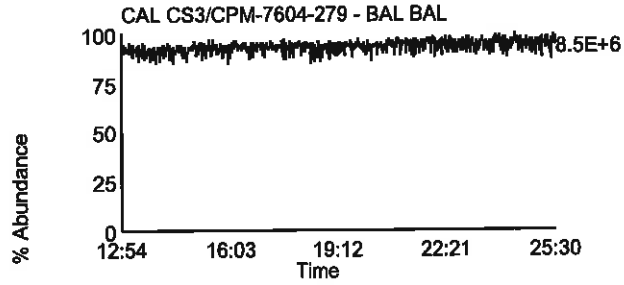
Data File: F130921B_16 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - BAL BAL



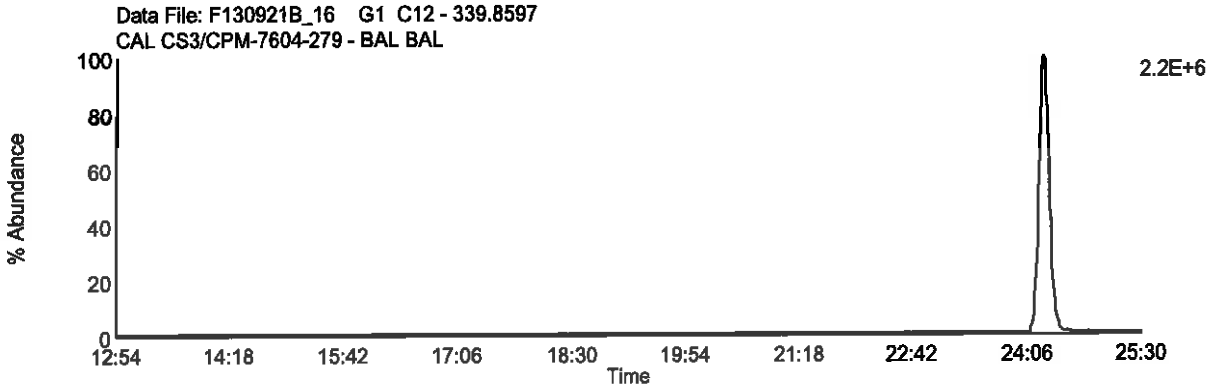
Data File: F130921B_16 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - BAL BAL

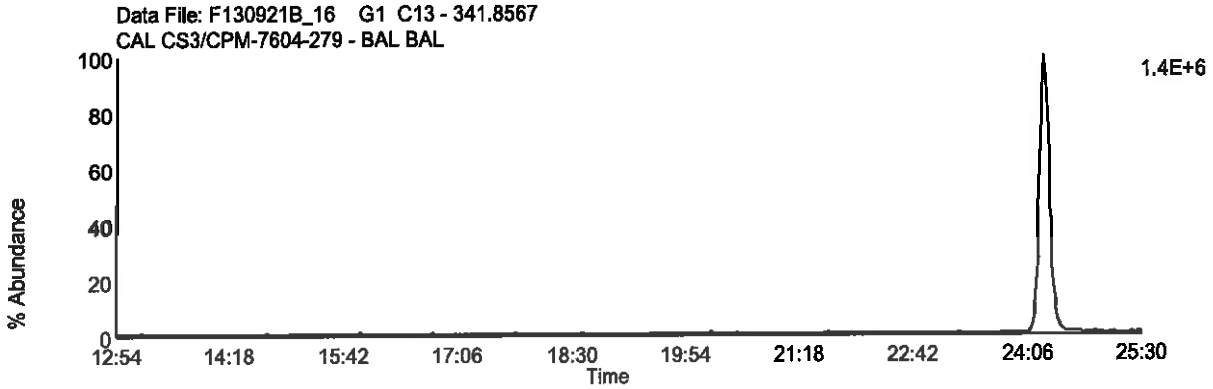


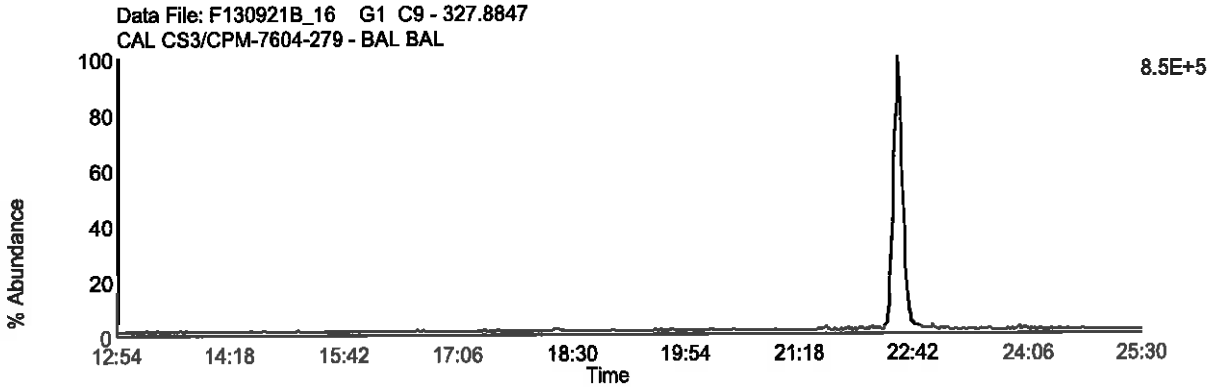
Homologue Group: Penta & Cleanup

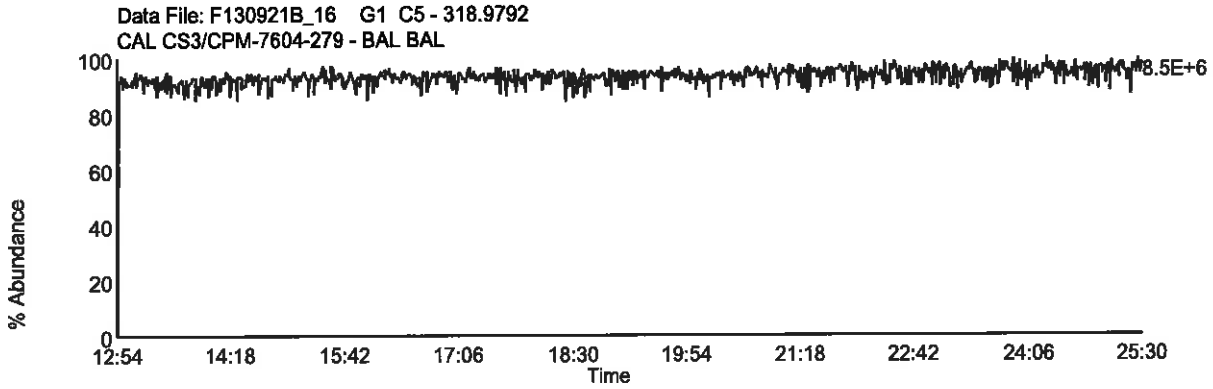
Data File Name: F130921B_16
Date Acquired: 9/22/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)







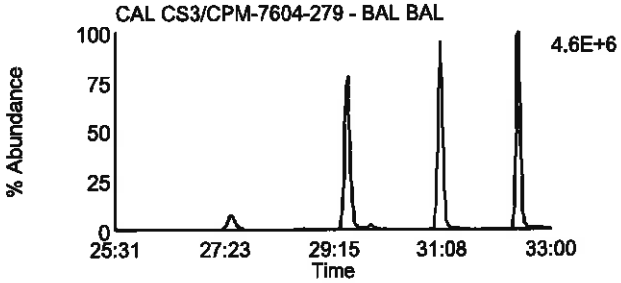


Homologue Group: Pentas

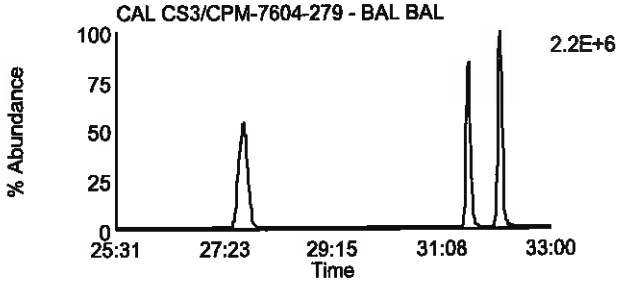
Data File Name: F130921B_16
Date Acquired: 9/22/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

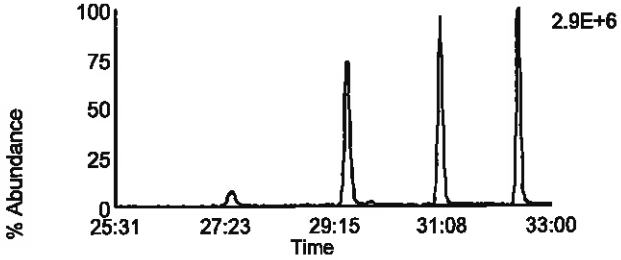
Data File: F130921B_16 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - BAL BAL



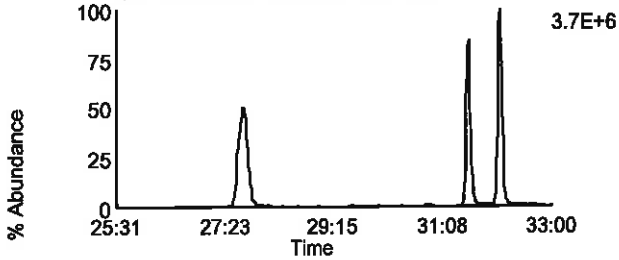
Data File: F130921B_16 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - BAL BAL



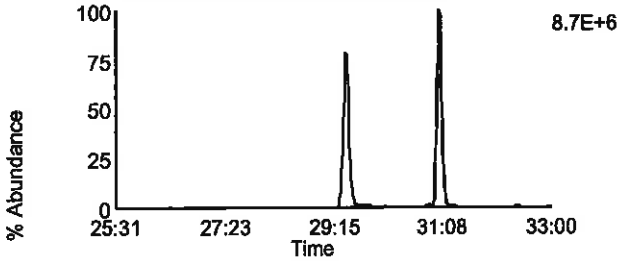
Data File: F130921B_16 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - BAL BAL



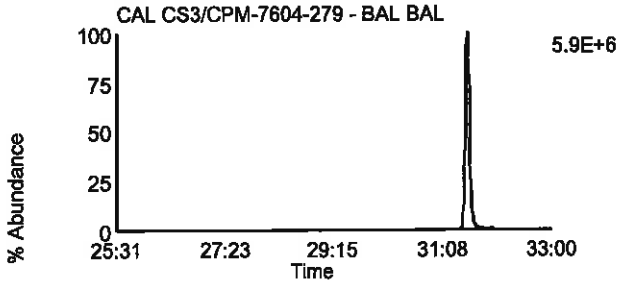
Data File: F130921B_16 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - BAL BAL



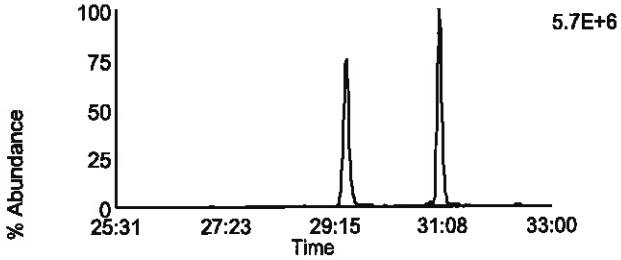
Data File: F130921B_16 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - BAL BAL



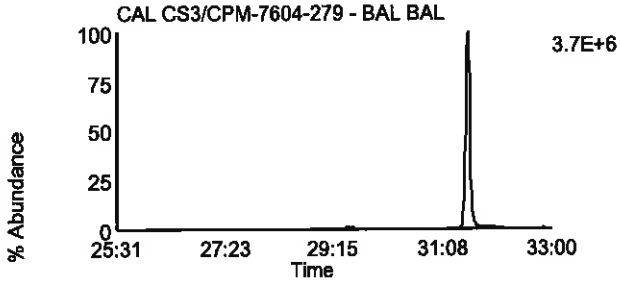
Data File: F130921B_16 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - BAL BAL



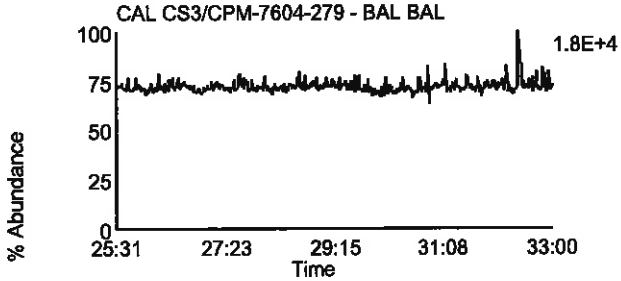
Data File: F130921B_16 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - BAL BAL



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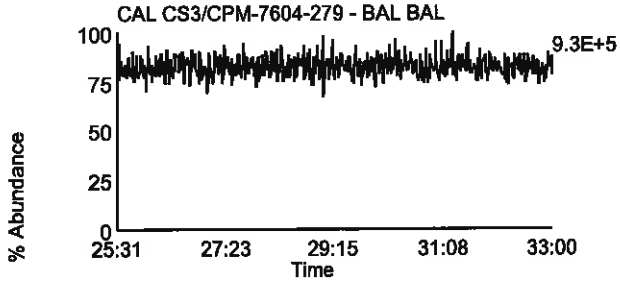
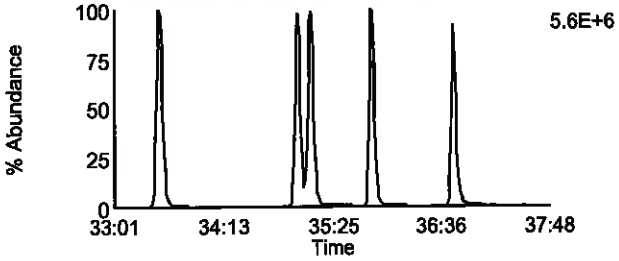


Homologue Group: Hexas

Data File Name: F130921B_16
Date Acquired: 9/22/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130921B_16 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - BAL BAL



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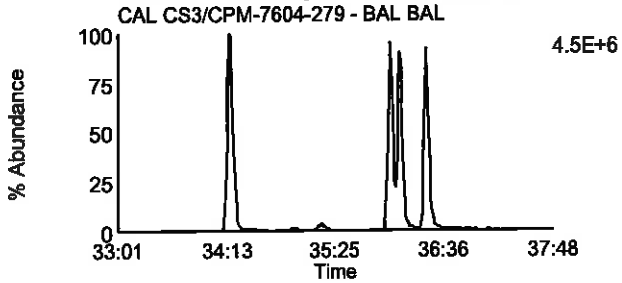
CAL CS3/CPM-7604-279 - BAL BAL



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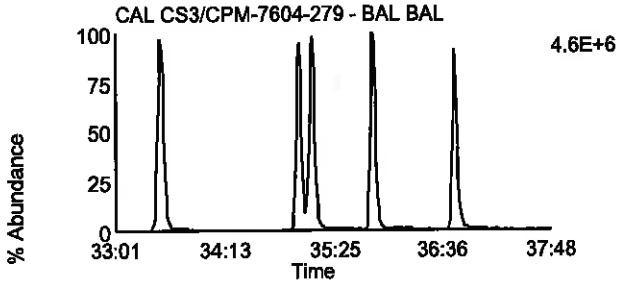
CAL CS3/CPM-7604-279 - BAL BAL



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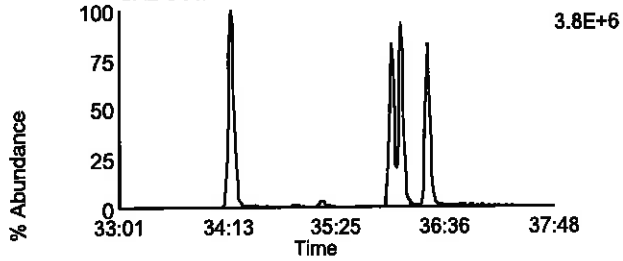
CAL CS3/CPM-7604-279 - BAL BAL



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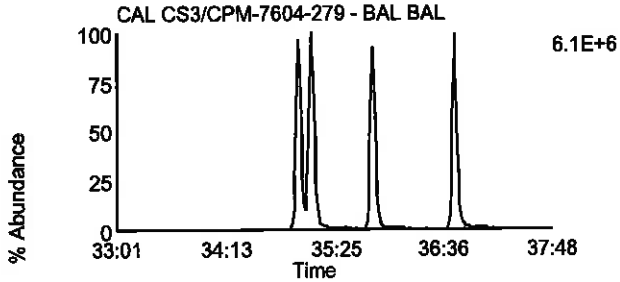
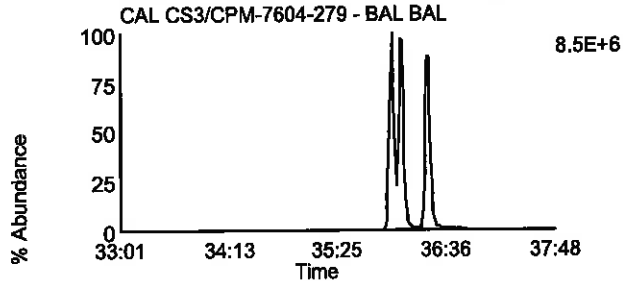
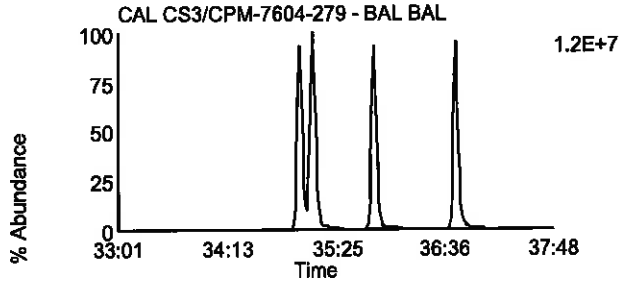
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - BAL BAL



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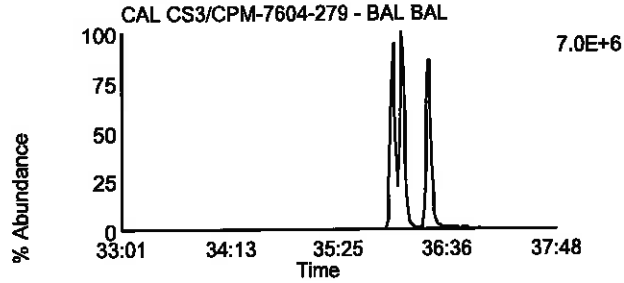
CAL CS3/CPM-7604-279 - BAL BAL



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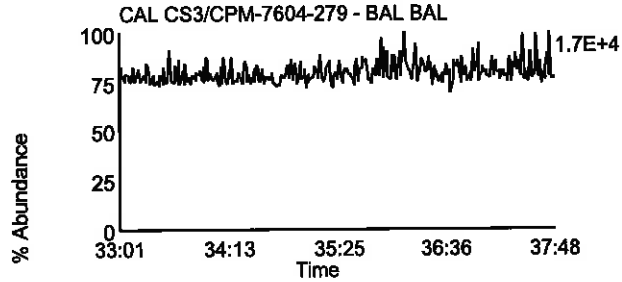
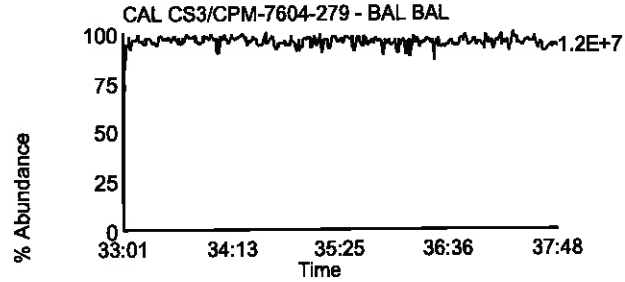
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - BAL BAL

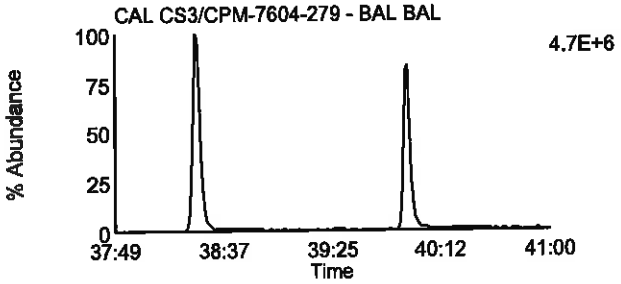


Homologue Group: Heptas

Data File Name: F130921B_16
Date Acquired: 9/22/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130921B_16 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - BAL BAL



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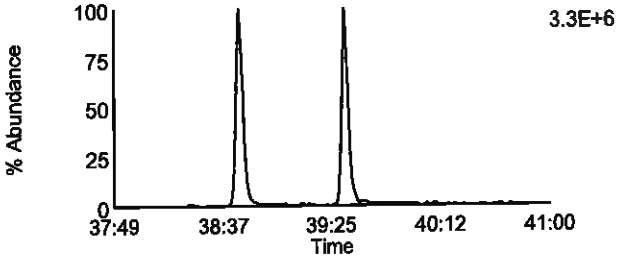
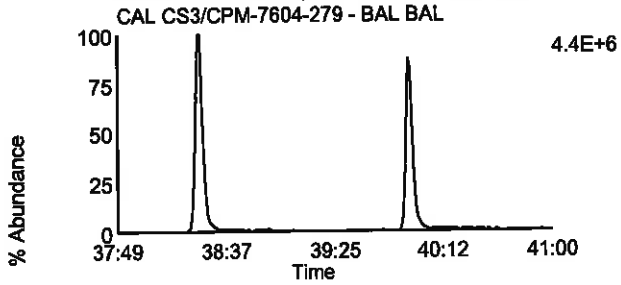
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - BAL BAL



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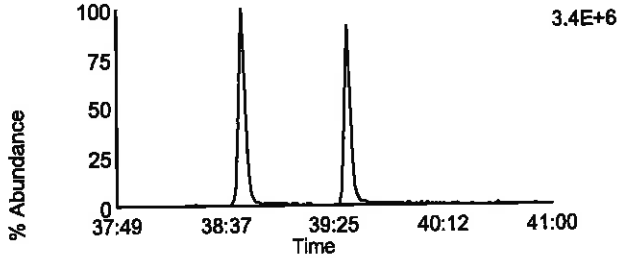
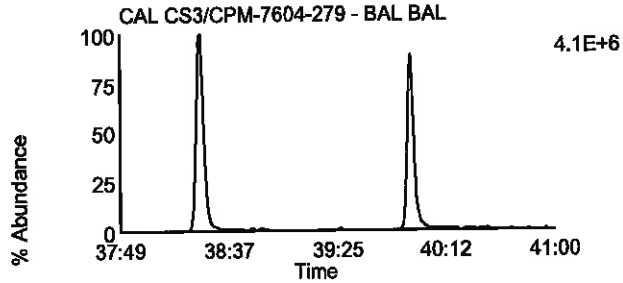
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - BAL BAL



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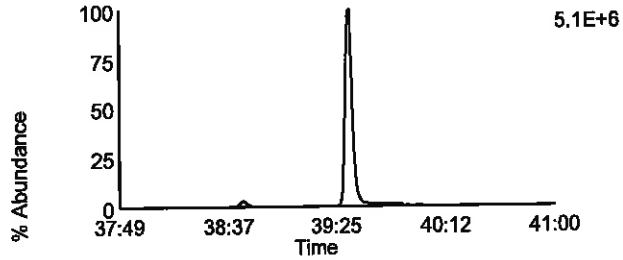
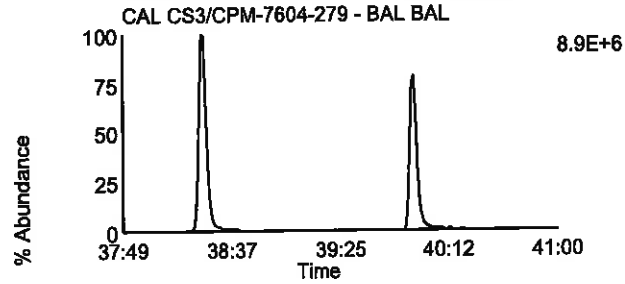
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - BAL BAL



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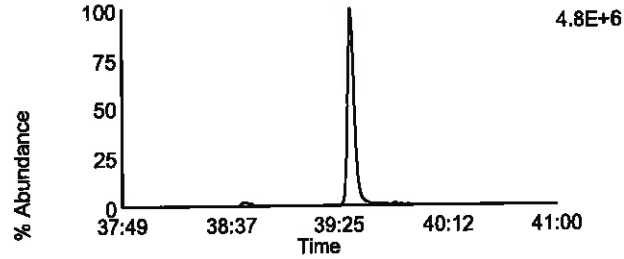
CAL CS3/CPM-7604-279 - BAL BAL



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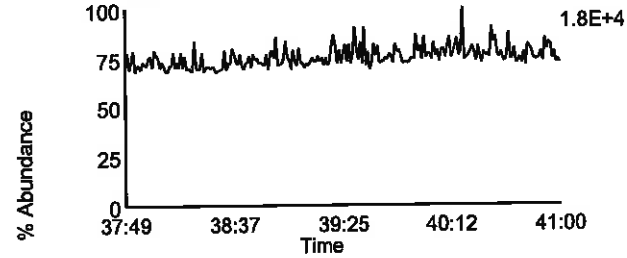
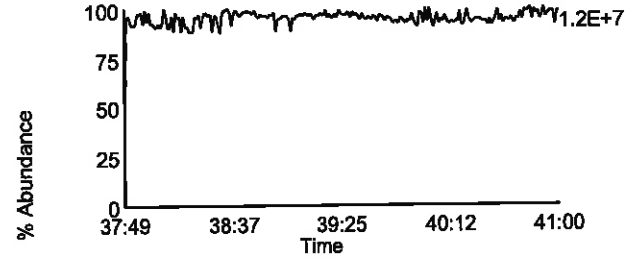
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - BAL BAL

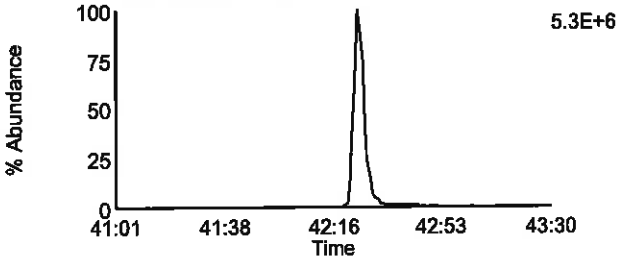


Homologue Group: Octas

Data File Name: F130921B_16
Date Acquired: 9/22/2013
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID:
Instrument: 10MSHR05 (F)

Data File: F130921B_16 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - BAL BAL



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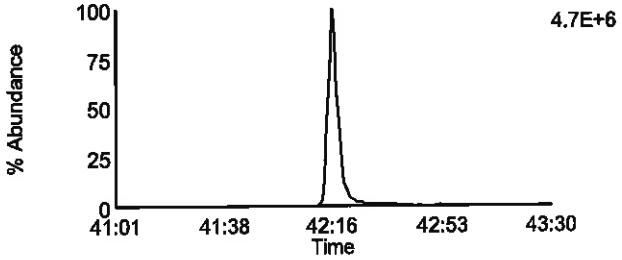
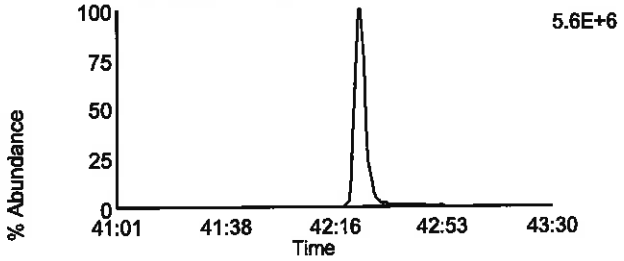


Data File: F130921B_16 G5 C5 - 443.7398
CAL CS3/CPM-7604-279 - BAL BAL



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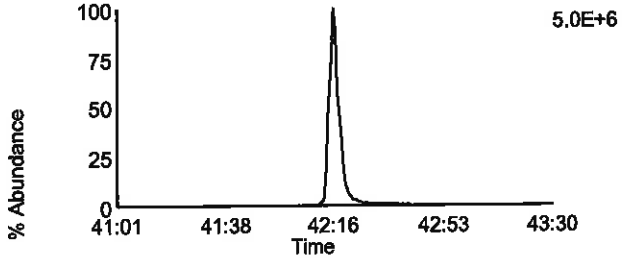
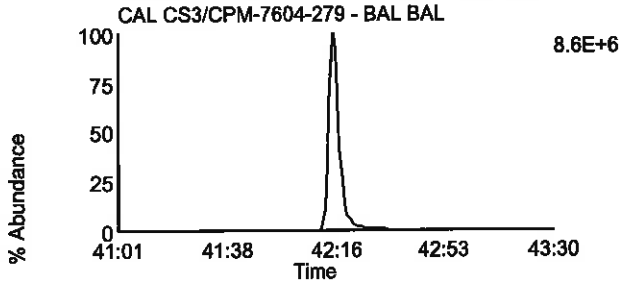
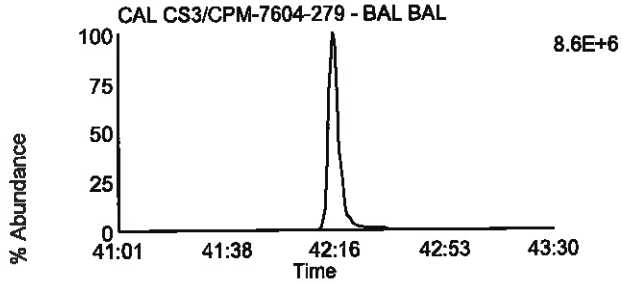
CAL CS3/CPM-7604-279 - BAL BAL



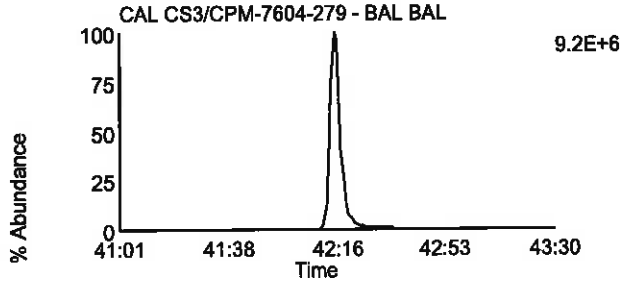
Data File: F130921B_16 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - BAL BAL



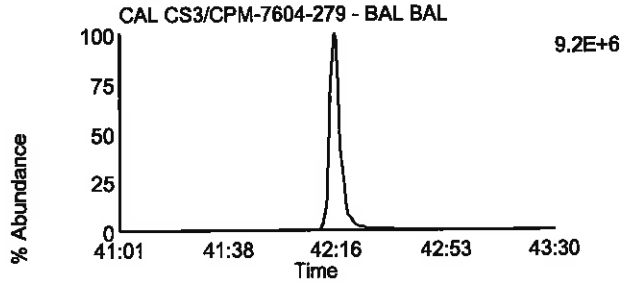
Data File: F130921B_16 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921B_16 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - BAL BAL



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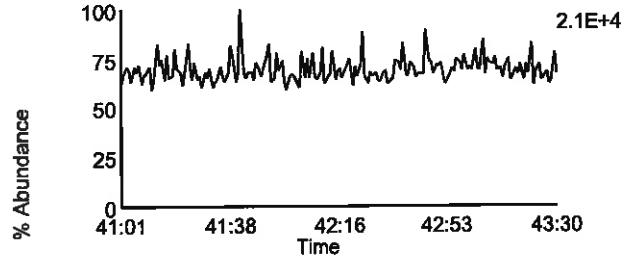
CAL CS3/CPM-7604-279 - BAL BAL



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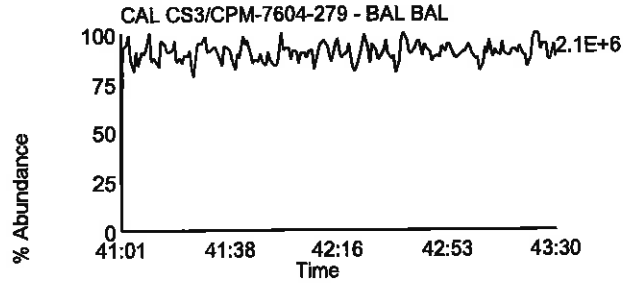
CAL CS3/CPM-7604-279 - BAL BAL



Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

Pace Analytical™

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS1-7604-273	Instrument ID	10MSHR05 (F)
Filename	F130918B_04	GC Column ID	USD174324H
Analyzed	09/18/2013 18:22	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:18	6.02e7	7.45e7	9.61e6	1.15e7	----	----	0.81	
2,3,7,8-TCDF	21:20	3.09e5	3.69e5	4.68e4	5.91e4	1.675e3	1.368e3	0.84	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:33	3.77e7	4.66e7	5.65e6	6.91e6	----	----	0.81	
2,3,7,8-TCDD-13C	22:28	3.43e7	4.22e7	4.95e6	6.00e6	----	----	0.81	
2,3,7,8-TCDD-37Cl4	22:30	3.82e5		5.80e4		----	----		
2,3,7,8-TCDD	22:29	2.00e5	2.31e5	3.19e4	3.79e4	7.628e2	8.716e2	0.86	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:27	7.12e7	4.40e7	1.14e7	7.23e6	----	----	1.62	
2,3,4,7,8-PeCDF-13C	31:03	7.06e7	4.34e7	1.48e7	9.29e6	----	----	1.63	
1,2,3,7,8-PeCDF	29:27	1.91e6	1.21e6	3.20e5	2.27e5	2.526e3	1.051e3	1.57	
2,3,4,7,8-PeCDF	31:04	1.93e6	1.28e6	3.61e5	2.38e5	4.564e3	1.951e3	1.51	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:32	3.88e7	2.44e7	7.80e6	4.98e6	----	----	1.59	
1,2,3,7,8-PeCDD	31:34	6.89e5	1.04e6	1.26e5	2.32e5	3.031e3	1.980e3	0.66	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:60	3.45e7	6.56e7	9.02e6	1.72e7	----	----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:09	3.86e7	7.13e7	1.00e7	1.77e7	----	----	0.54	
2,3,4,6,7,8-HxCDF-13C	35:49	3.68e7	6.98e7	1.03e7	1.93e7	----	----	0.53	
1,2,3,7,8,9-HxCDF-13C	36:43	3.33e7	6.19e7	8.95e6	1.65e7	----	----	0.54	
1,2,3,4,7,8-HxCDF	35:01	1.80e6	1.38e6	5.30e5	3.99e5	1.117e3	4.226e2	1.30	
1,2,3,6,7,8-HxCDF	35:09	1.98e6	1.54e6	5.20e5	4.01e5	1.700e3	3.871e2	1.29	
2,3,4,6,7,8-HxCDF	35:50	1.80e6	1.42e6	5.14e5	3.77e5	1.036e3	1.030e2	1.26	
1,2,3,7,8,9-HxCDF	36:45	1.48e6	1.26e6	3.83e5	3.37e5	8.472e2	8.312e2	1.18	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS1-7604-273	Instrument ID	10MSHR05 (F)
Filename	F130918B_04	GC Column ID	USD174324H
Analyzed	09/18/2013 18:22	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	35:60	3.60e7	2.73e7	1.07e7	7.77e6	----	----	1.32	
1,2,3,6,7,8-HxCDD-13C	36:07	3.99e7	3.18e7	1.12e7	8.81e6	----	----	1.26	
1,2,3,7,8,9-HxCDD-13C	36:24	3.89e7	3.13e7	1.08e7	8.73e6	----	----	1.24	
1,2,3,4,7,8-HxCDD	36:01	1.03e6	8.06e5	2.81e5	2.34e5	1.517e3	8.183e2	1.27	
1,2,3,6,7,8-HxCDD	36:07	1.04e6	8.57e5	3.26e5	2.31e5	1.624e3	9.024e2	1.21	
1,2,3,7,8,9-HxCDD	36:25	9.92e5	8.04e5	2.45e5	2.30e5	1.368e3	1.755e3	1.23	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:24	1.78e7	4.05e7	4.64e6	1.12e7	----	----	0.44	
1,2,3,4,7,8,9-HpCDF-13C	39:56	1.35e7	3.19e7	3.81e6	9.31e6	----	----	0.42	
1,2,3,4,6,7,8-HpCDF	38:25	1.01e6	9.29e5	2.78e5	2.68e5	6.039e2	4.329e2	1.09	
1,2,3,4,7,8,9-HpCDF	39:57	7.34e5	7.87e5	2.45e5	2.13e5	1.025e3	5.003e2	0.93	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:29	2.09e7	1.82e7	6.07e6	5.55e6	----	----	1.14	
1,2,3,4,6,7,8-HpCDD	39:30	5.72e5	5.32e5	1.66e5	1.60e5	8.367e2	5.856e2	1.08	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	1.69e6	1.84e6	4.13e5	4.71e5	6.889e2	3.526e2	0.91	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:15	4.85e7	5.33e7	1.23e7	1.31e7	----	----	0.91	
OCDD	42:16	1.25e6	1.36e6	3.10e5	3.33e5	2.237e2	7.351e1	0.92	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS2-7604-276	Instrument ID	10MSHR05 (F)
Filename	F130918B_03	GC Column ID	USD174324H
Analyzed	09/18/2013 17:38	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:17	6.74e7	8.42e7	1.03e7	1.29e7	----	----	0.80	
2,3,7,8-TCDF	21:18	1.42e6	1.81e6	2.37e5	2.68e5	----	----	0.78	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:32	4.39e7	5.48e7	6.91e6	8.39e6	----	----	0.80	
2,3,7,8-TCDD-13C	22:28	4.02e7	5.00e7	5.76e6	7.04e6	----	----	0.81	
2,3,7,8-TCDD-37Cl4	22:30	2.00e6		2.94e5		----	----		
2,3,7,8-TCDD	22:29	7.98e5	1.10e6	1.21e5	1.69e5	----	----	0.73	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:26	8.51e7	5.20e7	1.37e7	8.25e6	----	----	1.64	
2,3,4,7,8-PeCDF-13C	31:02	8.27e7	5.17e7	1.66e7	1.02e7	----	----	1.60	
1,2,3,7,8-PeCDF	29:27	9.60e6	5.94e6	1.55e6	9.24e5	----	----	1.62	
2,3,4,7,8-PeCDF	31:04	9.62e6	5.92e6	1.86e6	1.17e6	----	----	1.63	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:31	4.59e7	2.90e7	1.02e7	6.25e6	----	----	1.58	
1,2,3,7,8-PeCDD	31:32	3.28e6	5.12e6	7.00e5	1.06e6	----	----	0.64	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:59	4.09e7	7.74e7	1.14e7	2.08e7	----	----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:08	4.80e7	8.59e7	1.20e7	2.17e7	----	----	0.56	
2,3,4,6,7,8-HxCDF-13C	35:48	4.24e7	7.64e7	1.15e7	2.11e7	----	----	0.55	
1,2,3,7,8,9-HxCDF-13C	36:43	4.01e7	7.56e7	1.07e7	1.94e7	----	----	0.53	
1,2,3,4,7,8-HxCDF	35:01	8.36e6	6.56e6	2.21e6	1.81e6	----	----	1.27	
1,2,3,6,7,8-HxCDF	35:09	9.15e6	7.36e6	2.40e6	1.86e6	----	----	1.24	
2,3,4,6,7,8-HxCDF	35:49	9.03e6	7.10e6	2.47e6	1.91e6	----	----	1.27	
1,2,3,7,8,9-HxCDF	36:44	7.53e6	5.97e6	2.08e6	1.60e6	----	----	1.26	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS2-7604-276	Instrument ID	10MSHR05 (F)
Filename	F130918B_03	GC Column ID	USD174324H
Analyzed	09/18/2013 17:38	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	35:60	4.47e7	3.50e7	1.27e7	9.82e6	----	----	1.28	
1,2,3,6,7,8-HxCDD-13C	36:06	4.91e7	3.93e7	1.31e7	1.06e7	----	----	1.25	
1,2,3,7,8,9-HxCDD-13C	36:24	4.67e7	3.71e7	1.20e7	9.45e6	----	----	1.26	
1,2,3,4,7,8-HxCDD	36:01	5.04e6	3.95e6	1.48e6	1.24e6	----	----	1.28	
1,2,3,6,7,8-HxCDD	36:07	5.49e6	4.19e6	1.51e6	1.14e6	----	----	1.31	
1,2,3,7,8,9-HxCDD	36:25	5.08e6	4.08e6	1.41e6	1.13e6	----	----	1.24	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:23	2.14e7	4.57e7	6.36e6	1.32e7	----	----	0.47	
1,2,3,4,7,8,9-HpCDF-13C	39:56	1.79e7	3.77e7	5.76e6	1.23e7	----	----	0.47	
1,2,3,4,6,7,8-HpCDF	38:24	4.82e6	4.85e6	1.34e6	1.32e6	----	----	0.99	
1,2,3,4,7,8,9-HpCDF	39:57	3.81e6	3.56e6	1.13e6	1.06e6	----	----	1.07	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:29	2.48e7	2.44e7	6.76e6	6.94e6	----	----	1.01	
1,2,3,4,6,7,8-HpCDD	39:30	2.77e6	2.82e6	7.76e5	8.19e5	----	----	0.98	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	8.79e6	9.35e6	2.30e6	2.39e6	----	----	0.94	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:15	6.30e7	6.91e7	1.53e7	1.69e7	----	----	0.91	
OCDD	42:15	6.56e6	7.35e6	1.78e6	1.90e6	----	----	0.89	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR05 (F)
Filename	F130918B_02	GC Column ID	USD174324H
Analyzed	09/18/2013 16:50	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:18	9.61e7	1.20e8	1.46e7	1.83e7	----	----	0.80	
2,3,7,8-TCDF	21:19	1.09e7	1.34e7	1.64e6	2.06e6	----	----	0.81	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:34	5.71e7	7.00e7	8.57e6	1.09e7	----	----	0.82	
2,3,7,8-TCDD-13C	22:29	5.81e7	7.15e7	8.31e6	1.05e7	----	----	0.81	
2,3,7,8-TCDD-37Cl4	22:31	1.47e7		2.09e6		----	----		
2,3,7,8-TCDD	22:31	6.62e6	8.36e6	9.32e5	1.16e6	----	----	0.79	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:27	1.26e8	7.77e7	2.14e7	1.34e7	----	----	1.62	
2,3,4,7,8-PeCDF-13C	31:03	1.32e8	7.98e7	2.64e7	1.62e7	----	----	1.65	
1,2,3,7,8-PeCDF	29:28	7.04e7	4.48e7	1.16e7	7.37e6	----	----	1.57	
2,3,4,7,8-PeCDF	31:05	7.59e7	4.69e7	1.47e7	9.09e6	----	----	1.62	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:32	7.40e7	4.57e7	1.56e7	9.58e6	----	----	1.62	
1,2,3,7,8-PeCDD	31:34	2.69e7	4.17e7	5.56e6	8.48e6	----	----	0.64	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:60	6.31e7	1.18e8	1.80e7	3.31e7	----	----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:09	6.88e7	1.29e8	1.80e7	3.38e7	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C	35:49	6.58e7	1.21e8	1.93e7	3.50e7	----	----	0.54	
1,2,3,7,8,9-HxCDF-13C	36:43	6.67e7	1.24e8	1.75e7	3.27e7	----	----	0.54	
1,2,3,4,7,8-HxCDF	35:01	6.49e7	4.97e7	1.79e7	1.39e7	----	----	1.31	
1,2,3,6,7,8-HxCDF	35:09	6.94e7	5.48e7	1.85e7	1.43e7	----	----	1.27	
2,3,4,6,7,8-HxCDF	35:50	6.97e7	5.44e7	1.99e7	1.54e7	----	----	1.28	
1,2,3,7,8,9-HxCDF	36:45	6.38e7	4.90e7	1.69e7	1.30e7	----	----	1.30	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR05 (F)
Filename	F130918B_02	GC Column ID	USD174324H
Analyzed	09/18/2013 16:50	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:01	6.64e7	5.20e7	2.02e7	1.55e7	----	----	1.28	
1,2,3,6,7,8-HxCDD-13C	36:07	7.69e7	6.17e7	2.08e7	1.68e7	----	----	1.25	
1,2,3,7,8,9-HxCDD-13C	36:24	7.33e7	5.74e7	1.98e7	1.51e7	----	----	1.28	
1,2,3,4,7,8-HxCDD	36:01	3.93e7	3.04e7	1.16e7	8.88e6	----	----	1.30	
1,2,3,6,7,8-HxCDD	36:07	4.19e7	3.27e7	1.16e7	9.22e6	----	----	1.28	
1,2,3,7,8,9-HxCDD	36:25	4.16e7	3.31e7	1.14e7	9.02e6	----	----	1.26	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:24	3.39e7	7.35e7	9.84e6	2.07e7	----	----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	39:57	2.60e7	5.64e7	7.80e6	1.58e7	----	----	0.46	
1,2,3,4,6,7,8-HpCDF	38:25	3.61e7	3.53e7	1.00e7	9.66e6	----	----	1.02	
1,2,3,4,7,8,9-HpCDF	39:58	2.87e7	2.94e7	8.62e6	9.07e6	----	----	0.98	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:29	3.90e7	3.60e7	1.25e7	1.13e7	----	----	1.08	
1,2,3,4,6,7,8-HpCDD	39:30	2.23e7	2.19e7	6.22e6	6.32e6	----	----	1.02	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	7.10e7	7.54e7	1.77e7	1.93e7	----	----	0.94	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:15	9.54e7	1.05e8	2.45e7	2.65e7	----	----	0.90	
OCDD	42:16	5.13e7	5.73e7	1.31e7	1.46e7	----	----	0.90	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS4-7604-277	Instrument ID	10MSHR05 (F)
Filename	F130918B_06	GC Column ID	USD174324H
Analyzed	09/18/2013 19:54	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:17	6.97e7	8.68e7	1.04e7	1.29e7	----	----	0.80	
2,3,7,8-TCDF	21:18	3.16e7	4.00e7	4.84e6	6.11e6	----	----	0.79	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:32	4.33e7	5.46e7	6.62e6	8.08e6	----	----	0.79	
2,3,7,8-TCDD-13C	22:27	4.11e7	5.11e7	5.71e6	7.13e6	----	----	0.80	
2,3,7,8-TCDD-37Cl4	22:29	4.32e7		6.16e6		----	----		
2,3,7,8-TCDD	22:29	1.88e7	2.40e7	2.70e6	3.42e6	----	----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:25	8.91e7	5.49e7	1.42e7	8.82e6	----	----	1.62	
2,3,4,7,8-PeCDF-13C	31:02	8.64e7	5.25e7	1.64e7	1.01e7	----	----	1.65	
1,2,3,7,8-PeCDF	29:27	2.06e8	1.28e8	3.31e7	2.10e7	----	----	1.61	
2,3,4,7,8-PeCDF	31:04	2.06e8	1.30e8	3.97e7	2.53e7	----	----	1.59	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:30	4.82e7	3.08e7	9.89e6	6.24e6	----	----	1.57	
1,2,3,7,8-PeCDD	31:32	7.12e7	1.10e8	1.38e7	2.23e7	----	----	0.64	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:59	4.27e7	8.16e7	1.12e7	2.26e7	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:08	4.88e7	9.15e7	1.26e7	2.30e7	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C	35:48	4.35e7	7.93e7	1.22e7	2.22e7	----	----	0.55	
1,2,3,7,8,9-HxCDF-13C	36:42	4.21e7	7.76e7	1.09e7	2.07e7	----	----	0.54	
1,2,3,4,7,8-HxCDF	34:60	1.82e8	1.41e8	4.85e7	3.74e7	----	----	1.29	
1,2,3,6,7,8-HxCDF	35:09	2.00e8	1.53e8	5.07e7	3.88e7	----	----	1.30	
2,3,4,6,7,8-HxCDF	35:49	1.91e8	1.46e8	5.35e7	4.09e7	----	----	1.31	
1,2,3,7,8,9-HxCDF	36:44	1.68e8	1.28e8	4.46e7	3.43e7	----	----	1.31	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS4-7604-277	Instrument ID	10MSHR05 (F)
Filename	F130918B_06	GC Column ID	USD174324H
Analyzed	09/18/2013 19:54	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	35:60	4.53e7	3.40e7	1.29e7	9.67e6	----	----	1.33	
1,2,3,6,7,8-HxCDD-13C	36:06	5.12e7	4.17e7	1.43e7	1.13e7	----	----	1.23	
1,2,3,7,8,9-HxCDD-13C	36:23	4.69e7	3.73e7	1.30e7	1.00e7	----	----	1.26	
1,2,3,4,7,8-HxCDD	36:01	1.09e8	7.89e7	3.15e7	2.31e7	----	----	1.38	
1,2,3,6,7,8-HxCDD	36:07	1.09e8	8.87e7	3.06e7	2.43e7	----	----	1.23	
1,2,3,7,8,9-HxCDD	36:24	1.10e8	8.45e7	2.92e7	2.35e7	----	----	1.30	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:23	2.17e7	4.81e7	5.95e6	1.29e7	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	39:56	1.85e7	4.11e7	5.87e6	1.23e7	----	----	0.45	
1,2,3,4,6,7,8-HpCDF	38:24	9.59e7	9.42e7	2.73e7	2.50e7	----	----	1.02	
1,2,3,4,7,8,9-HpCDF	39:56	8.50e7	7.81e7	2.48e7	2.50e7	----	----	1.09	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:29	2.81e7	2.52e7	8.61e6	7.37e6	----	----	1.11	
1,2,3,4,6,7,8-HpCDD	39:29	6.64e7	6.30e7	2.15e7	1.95e7	----	----	1.05	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	1.98e8	2.11e8	5.18e7	5.14e7	----	----	0.93	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:14	6.43e7	6.89e7	1.66e7	1.75e7	----	----	0.93	
OCDD	42:15	1.42e8	1.60e8	3.54e7	4.03e7	----	----	0.89	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS5-7604-278	Instrument ID	10MSHR05 (F)
Filename	F130918B_05	GC Column ID	USD174324H
Analyzed	09/18/2013 19:08	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:18	8.07e7	1.03e8	1.24e7	1.58e7	----	----	0.79	
2,3,7,8-TCDF	21:18	1.86e8	2.33e8	2.87e7	3.51e7	----	----	0.80	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:33	4.95e7	6.21e7	7.54e6	9.48e6	----	----	0.80	
2,3,7,8-TCDD-13C	22:28	4.87e7	6.12e7	7.19e6	8.88e6	----	----	0.80	
2,3,7,8-TCDD-37Cl4	22:30	2.56e8		3.70e7		----	----		
2,3,7,8-TCDD	22:30	1.13e8	1.43e8	1.62e7	2.14e7	----	----	0.79	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:26	1.06e8	6.57e7	1.65e7	1.05e7	----	----	1.61	
2,3,4,7,8-PeCDF-13C	31:03	1.04e8	6.41e7	2.06e7	1.25e7	----	----	1.62	
1,2,3,7,8-PeCDF	29:27	1.24e9	7.66e8	2.04e8	1.26e8	----	----	1.61	
2,3,4,7,8-PeCDF	31:04	1.25e9	7.76e8	2.56e8	1.58e8	----	----	1.61	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:31	5.95e7	3.71e7	1.26e7	7.71e6	----	----	1.61	
1,2,3,7,8-PeCDD	31:33	4.37e8	6.75e8	9.34e7	1.46e8	----	----	0.65	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	34:60	5.32e7	9.94e7	1.47e7	2.69e7	----	----	0.54	
1,2,3,6,7,8-HxCDF-13C	35:09	6.11e7	1.11e8	1.55e7	2.88e7	----	----	0.55	
2,3,4,6,7,8-HxCDF-13C	35:48	5.33e7	9.96e7	1.50e7	2.82e7	----	----	0.53	
1,2,3,7,8,9-HxCDF-13C	36:43	5.43e7	1.01e8	1.53e7	2.82e7	----	----	0.54	
1,2,3,4,7,8-HxCDF	35:01	1.14e9	8.95e8	3.12e8	2.43e8	----	----	1.27	
1,2,3,6,7,8-HxCDF	35:09	1.24e9	9.68e8	3.23e8	2.48e8	----	----	1.28	
2,3,4,6,7,8-HxCDF	35:50	1.16e9	9.15e8	3.20e8	2.56e8	----	----	1.26	
1,2,3,7,8,9-HxCDF	36:44	1.06e9	8.07e8	2.92e8	2.30e8	----	----	1.31	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS5-7604-278	Instrument ID	10MSHR05 (F)
Filename	F130918B_05	GC Column ID	USD174324H
Analyzed	09/18/2013 19:08	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	35:60	5.69e7	4.42e7	1.73e7	1.34e7	----	----	1.29	
1,2,3,6,7,8-HxCDD-13C	36:07	6.46e7	5.05e7	1.74e7	1.36e7	----	----	1.28	
1,2,3,7,8,9-HxCDD-13C	36:24	6.00e7	4.71e7	1.64e7	1.27e7	----	----	1.27	
1,2,3,4,7,8-HxCDD	36:01	6.75e8	5.22e8	2.01e8	1.56e8	----	----	1.29	
1,2,3,6,7,8-HxCDD	36:07	6.89e8	5.34e8	1.85e8	1.46e8	----	----	1.29	
1,2,3,7,8,9-HxCDD	36:25	6.77e8	5.31e8	1.81e8	1.40e8	----	----	1.28	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:24	2.70e7	5.90e7	7.89e6	1.63e7	----	----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	39:56	2.23e7	5.05e7	6.64e6	1.57e7	----	----	0.44	
1,2,3,4,6,7,8-HpCDF	38:24	6.03e8	6.24e8	1.84e8	1.77e8	----	----	0.97	
1,2,3,4,7,8,9-HpCDF	39:57	5.61e8	5.22e8	1.81e8	1.65e8	----	----	1.07	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:29	3.42e7	3.09e7	9.56e6	8.75e6	----	----	1.11	
1,2,3,4,6,7,8-HpCDD	39:30	4.09e8	3.86e8	1.20e8	1.11e8	----	----	1.06	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	1.39e9	1.47e9	3.66e8	3.91e8	----	----	0.95	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:15	8.74e7	9.61e7	2.23e7	2.41e7	----	----	0.91	
OCDD	42:15	9.71e8	1.07e9	2.41e8	2.69e8	----	----	0.91	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____
Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS1-7604-273	Instrument ID	10MSHR06 (U)
Filename	U130729B_11	GC Column ID	USD227224H
Analyzed	07/29/2013 23:48	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:49	5.76e7	7.40e7	8.39e6	1.11e7	----	----	0.78	
2,3,7,8-TCDF	22:53	2.89e5	3.26e5	4.09e4	4.51e4	----	----	0.89	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:08	3.71e7	4.66e7	5.27e6	6.57e6	----	----	0.80	
2,3,7,8-TCDD-13C	24:07	3.70e7	4.76e7	5.21e6	6.42e6	----	----	0.78	
2,3,7,8-TCDD-37Cl4	24:07	4.71e5		7.50e4		----	----		
2,3,7,8-TCDD	24:09	2.10e5	2.82e5	2.76e4	4.45e4	----	----	0.74	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:27	5.99e7	3.83e7	1.12e7	7.18e6	----	----	1.56	
2,3,4,7,8-PeCDF-13C	31:54	5.90e7	3.74e7	1.20e7	7.73e6	----	----	1.58	
1,2,3,7,8-PeCDF	30:29	1.24e6	8.50e5	2.51e5	1.68e5	----	----	1.46	
2,3,4,7,8-PeCDF	31:56	1.33e6	9.30e5	2.82e5	2.19e5	----	----	1.43	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:22	3.74e7	2.36e7	8.17e6	5.12e6	----	----	1.58	
1,2,3,7,8-PeCDD	32:23	6.28e5	1.02e6	1.34e5	2.07e5	----	----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:47	2.36e7	4.52e7	6.57e6	1.23e7	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:55	2.86e7	5.51e7	7.15e6	1.37e7	----	----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:37	2.68e7	5.12e7	6.51e6	1.29e7	----	----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:36	2.37e7	4.47e7	5.55e6	1.05e7	----	----	0.53	
1,2,3,4,7,8-HxCDF	35:48	1.02e6	8.85e5	3.05e5	2.43e5	----	----	1.15	
1,2,3,6,7,8-HxCDF	35:56	1.17e6	9.33e5	3.09e5	2.50e5	----	----	1.25	
2,3,4,6,7,8-HxCDF	36:39	1.07e6	8.87e5	3.11e5	2.69e5	----	----	1.21	
1,2,3,7,8,9-HxCDF	37:37	8.74e5	7.51e5	2.04e5	1.96e5	----	----	1.16	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS1-7604-273	Instrument ID	10MSHR06 (U)
Filename	U130729B_11	GC Column ID	USD227224H
Analyzed	07/29/2013 23:48	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:49	3.07e7	2.41e7	9.32e6	7.13e6	----	----	1.27	
1,2,3,6,7,8-HxCDD-13C	36:56	3.78e7	2.98e7	9.38e6	7.44e6	----	----	1.27	
1,2,3,7,8,9-HxCDD-13C	37:14	3.56e7	2.82e7	8.26e6	6.71e6	----	----	1.26	
1,2,3,4,7,8-HxCDD	36:51	7.87e5	6.85e5	2.19e5	2.04e5	----	----	1.15	
1,2,3,6,7,8-HxCDD	36:57	8.83e5	7.72e5	2.35e5	1.82e5	----	----	1.14	
1,2,3,7,8,9-HxCDD	37:15	8.71e5	7.38e5	2.01e5	1.70e5	----	----	1.18	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	39:15	2.08e7	4.66e7	5.77e6	1.25e7	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	40:53	1.68e7	3.75e7	4.51e6	9.86e6	----	----	0.45	
1,2,3,4,6,7,8-HpCDF	39:16	1.16e6	1.13e6	3.25e5	3.36e5	----	----	1.03	
1,2,3,4,7,8,9-HpCDF	40:54	9.95e5	9.40e5	2.56e5	2.75e5	----	----	1.06	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	40:23	2.79e7	2.59e7	7.17e6	6.78e6	----	----	1.08	
1,2,3,4,6,7,8-HpCDD	40:23	7.84e5	7.93e5	1.91e5	1.86e5	----	----	0.99	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	43:28	1.35e6	1.44e6	3.57e5	3.34e5	----	----	0.94	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	43:16	4.44e7	4.88e7	1.05e7	1.15e7	----	----	0.91	
OCDD	43:16	1.11e6	1.39e6	2.50e5	3.23e5	----	----	0.79	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS2-7604-276	Instrument ID	10MSHR06 (U)
Filename	U130729B_10	GC Column ID	USD227224H
Analyzed	07/29/2013 23:00	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:49	5.19e7	6.80e7	7.11e6	9.25e6	----	----	0.76	
2,3,7,8-TCDF	22:52	9.32e5	1.28e6	1.42e5	1.93e5	----	----	0.73	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:08	3.56e7	4.47e7	5.00e6	6.36e6	----	----	0.80	
2,3,7,8-TCDD-13C	24:07	3.51e7	4.48e7	4.86e6	5.99e6	----	----	0.78	
2,3,7,8-TCDD-37Cl4	24:08	1.82e6		2.44e5		----	----		
2,3,7,8-TCDD	24:09	7.28e5	9.24e5	1.01e5	1.29e5	----	----	0.79	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:28	5.59e7	3.65e7	1.01e7	6.59e6	----	----	1.53	
2,3,4,7,8-PeCDF-13C	31:54	5.80e7	3.66e7	1.24e7	8.05e6	----	----	1.58	
1,2,3,7,8-PeCDF	30:29	4.87e6	3.18e6	9.66e5	5.95e5	----	----	1.53	
2,3,4,7,8-PeCDF	31:56	5.23e6	3.45e6	1.04e6	7.30e5	----	----	1.52	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:22	3.70e7	2.33e7	7.83e6	5.01e6	----	----	1.59	
1,2,3,7,8-PeCDD	32:23	2.30e6	3.80e6	5.13e5	7.98e5	----	----	0.60	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:47	2.36e7	4.51e7	6.42e6	1.22e7	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:55	2.72e7	5.38e7	6.73e6	1.31e7	----	----	0.51	
2,3,4,6,7,8-HxCDF-13C	36:38	2.49e7	4.75e7	6.45e6	1.24e7	----	----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:36	2.36e7	4.58e7	5.88e6	1.12e7	----	----	0.52	
1,2,3,4,7,8-HxCDF	35:48	4.13e6	3.32e6	1.03e6	8.73e5	----	----	1.24	
1,2,3,6,7,8-HxCDF	35:57	4.44e6	3.62e6	1.14e6	8.91e5	----	----	1.23	
2,3,4,6,7,8-HxCDF	36:39	4.52e6	3.63e6	1.22e6	1.01e6	----	----	1.25	
1,2,3,7,8,9-HxCDF	37:37	3.78e6	2.95e6	9.75e5	7.58e5	----	----	1.28	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS2-7604-276	Instrument ID	10MSHR06 (U)
Filename	U130729B_10	GC Column ID	USD227224H
Analyzed	07/29/2013 23:00	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:49	3.15e7	2.40e7	8.65e6	6.86e6	-----	-----	1.31	
1,2,3,6,7,8-HxCDD-13C	36:56	3.74e7	3.08e7	9.89e6	7.83e6	-----	-----	1.21	
1,2,3,7,8,9-HxCDD-13C	37:15	3.53e7	2.78e7	8.10e6	6.49e6	-----	-----	1.27	
1,2,3,4,7,8-HxCDD	36:50	3.16e6	2.66e6	8.77e5	7.46e5	-----	-----	1.19	
1,2,3,6,7,8-HxCDD	36:57	3.51e6	3.02e6	8.69e5	7.05e5	-----	-----	1.17	
1,2,3,7,8,9-HxCDD	37:15	3.47e6	2.93e6	8.75e5	6.90e5	-----	-----	1.18	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	39:15	2.07e7	4.54e7	6.02e6	1.28e7	-----	-----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	40:53	1.66e7	3.65e7	4.32e6	9.68e6	-----	-----	0.45	
1,2,3,4,6,7,8-HpCDF	39:16	4.58e6	4.49e6	1.25e6	1.23e6	-----	-----	1.02	
1,2,3,4,7,8,9-HpCDF	40:53	3.86e6	3.43e6	1.00e6	9.19e5	-----	-----	1.13	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	40:23	2.80e7	2.61e7	7.12e6	6.80e6	-----	-----	1.07	
1,2,3,4,6,7,8-HpCDD	40:23	2.91e6	2.81e6	7.69e5	7.64e5	-----	-----	1.04	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	43:28	5.28e6	5.89e6	1.24e6	1.39e6	-----	-----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	43:16	4.45e7	4.95e7	1.03e7	1.14e7	-----	-----	0.90	
OCDD	43:17	4.63e6	5.25e6	1.07e6	1.22e6	-----	-----	0.88	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-274	Instrument ID	10MSHR06 (U)
Filename	U130729B_09	GC Column ID	USD227224H
Analyzed	07/29/2013 22:12	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:51	2.12e8	2.73e8	3.05e7	3.91e7	-----	-----	0.78	
2,3,7,8-TCDF	22:52	1.84e7	2.44e7	2.63e6	3.51e6	-----	-----	0.76	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:10	1.41e8	1.79e8	2.03e7	2.58e7	-----	-----	0.79	
2,3,7,8-TCDD-13C	24:08	1.43e8	1.85e8	1.89e7	2.39e7	-----	-----	0.77	
2,3,7,8-TCDD-37Cl4	24:09	3.55e7		4.75e6		-----	-----		
2,3,7,8-TCDD	24:09	1.49e7	2.02e7	1.86e6	2.61e6	-----	-----	0.74	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:28	2.36e8	1.50e8	4.38e7	2.91e7	-----	-----	1.57	
2,3,4,7,8-PeCDF-13C	31:55	2.39e8	1.57e8	5.06e7	3.21e7	-----	-----	1.53	
1,2,3,7,8-PeCDF	30:29	1.01e8	6.63e7	1.95e7	1.25e7	-----	-----	1.53	
2,3,4,7,8-PeCDF	31:56	1.06e8	6.98e7	2.25e7	1.52e7	-----	-----	1.52	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:22	1.61e8	1.02e8	3.42e7	2.22e7	-----	-----	1.58	
1,2,3,7,8-PeCDD	32:23	4.76e7	7.89e7	1.08e7	1.73e7	-----	-----	0.60	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:48	9.66e7	1.86e8	2.56e7	5.07e7	-----	-----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:56	1.17e8	2.18e8	2.76e7	5.32e7	-----	-----	0.53	
2,3,4,6,7,8-HxCDF-13C	36:38	6.84e7	1.37e8	1.87e7	3.57e7	-----	-----	0.50	
1,2,3,7,8,9-HxCDF-13C	37:36	9.71e7	1.88e8	2.36e7	4.52e7	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:49	7.94e7	6.53e7	2.22e7	1.79e7	-----	-----	1.22	
1,2,3,6,7,8-HxCDF	35:57	9.42e7	7.52e7	2.30e7	1.90e7	-----	-----	1.25	
2,3,4,6,7,8-HxCDF	36:39	5.95e7	4.91e7	1.58e7	1.31e7	-----	-----	1.21	
1,2,3,7,8,9-HxCDF	37:37	7.28e7	5.96e7	1.76e7	1.41e7	-----	-----	1.22	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-274	Instrument ID	10MSHR06 (U)
Filename	U130729B_09	GC Column ID	USD227224H
Analyzed	07/29/2013 22:12	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:50	1.17e8	9.30e7	3.34e7	2.62e7	----	----	1.25	
1,2,3,6,7,8-HxCDD-13C	36:57	1.51e8	1.20e8	3.77e7	3.04e7	----	----	1.26	
1,2,3,7,8,9-HxCDD-13C	37:15	1.52e8	1.23e8	3.51e7	2.80e7	----	----	1.23	
1,2,3,4,7,8-HxCDD	36:51	5.73e7	4.64e7	1.68e7	1.33e7	----	----	1.24	
1,2,3,6,7,8-HxCDD	36:58	6.90e7	5.58e7	1.76e7	1.42e7	----	----	1.24	
1,2,3,7,8,9-HxCDD	37:16	7.25e7	5.65e7	1.67e7	1.35e7	----	----	1.28	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	39:15	8.55e7	1.92e8	2.40e7	5.34e7	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	40:54	6.91e7	1.49e8	1.83e7	4.01e7	----	----	0.46	
1,2,3,4,6,7,8-HpCDF	39:16	9.14e7	9.08e7	2.58e7	2.53e7	----	----	1.01	
1,2,3,4,7,8,9-HpCDF	40:54	7.46e7	7.10e7	1.90e7	1.88e7	----	----	1.05	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	40:23	1.17e8	1.10e8	3.25e7	3.05e7	----	----	1.06	
1,2,3,4,6,7,8-HpCDD	40:24	6.06e7	5.93e7	1.65e7	1.58e7	----	----	1.02	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	43:28	1.03e8	1.16e8	2.53e7	2.76e7	----	----	0.89	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	43:16	1.88e8	2.09e8	4.29e7	4.86e7	----	----	0.90	
OCDD	43:17	9.16e7	1.03e8	2.13e7	2.45e7	----	----	0.89	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS4-7604-277	Instrument ID	10MSHR06 (U)
Filename	U130729B_13	GC Column ID	USD227224H
Analyzed	07/30/2013 01:25	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:50	4.59e7	5.90e7	6.30e6	7.97e6	----	----	0.78	
2,3,7,8-TCDF	22:51	1.60e7	2.15e7	2.26e6	2.94e6	----	----	0.75	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:08	3.11e7	3.88e7	4.30e6	5.24e6	----	----	0.80	
2,3,7,8-TCDD-13C	24:07	3.06e7	3.94e7	4.00e6	5.27e6	----	----	0.78	
2,3,7,8-TCDD-37Cl4	24:09	3.11e7		3.94e6		----	----		
2,3,7,8-TCDD	24:08	1.25e7	1.63e7	1.70e6	2.16e6	----	----	0.77	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:27	4.93e7	3.12e7	8.98e6	5.87e6	----	----	1.58	
2,3,4,7,8-PeCDF-13C	31:54	4.81e7	3.11e7	1.01e7	6.51e6	----	----	1.55	
1,2,3,7,8-PeCDF	30:29	8.62e7	5.62e7	1.64e7	1.06e7	----	----	1.53	
2,3,4,7,8-PeCDF	31:56	8.83e7	5.68e7	1.91e7	1.23e7	----	----	1.55	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:21	3.13e7	1.97e7	6.67e6	4.22e6	----	----	1.59	
1,2,3,7,8-PeCDD	32:23	3.86e7	6.36e7	8.23e6	1.34e7	----	----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:47	1.92e7	3.71e7	5.15e6	1.00e7	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:55	2.30e7	4.33e7	5.75e6	1.11e7	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C	36:38	2.02e7	3.88e7	5.03e6	9.80e6	----	----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:36	1.87e7	3.75e7	4.44e6	8.78e6	----	----	0.50	
1,2,3,4,7,8-HxCDF	35:48	6.58e7	5.43e7	1.75e7	1.47e7	----	----	1.21	
1,2,3,6,7,8-HxCDF	35:56	7.47e7	6.22e7	1.78e7	1.51e7	----	----	1.20	
2,3,4,6,7,8-HxCDF	36:39	7.29e7	5.84e7	1.93e7	1.54e7	----	----	1.25	
1,2,3,7,8,9-HxCDF	37:37	6.00e7	4.74e7	1.48e7	1.20e7	----	----	1.27	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS4-7604-277	Instrument ID	10MSHR06 (U)
Filename	U130729B_13	GC Column ID	USD227224H
Analyzed	07/30/2013 01:25	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:49	2.43e7	1.92e7	7.24e6	5.67e6	----	----	1.27	
1,2,3,6,7,8-HxCDD-13C	36:56	3.07e7	2.45e7	7.37e6	6.00e6	----	----	1.25	
1,2,3,7,8,9-HxCDD-13C	37:14	2.82e7	2.23e7	6.76e6	5.53e6	----	----	1.26	
1,2,3,4,7,8-HxCDD	36:50	4.99e7	3.94e7	1.42e7	1.16e7	----	----	1.27	
1,2,3,6,7,8-HxCDD	36:57	5.49e7	4.56e7	1.39e7	1.15e7	----	----	1.20	
1,2,3,7,8,9-HxCDD	37:15	5.41e7	4.41e7	1.34e7	1.10e7	----	----	1.23	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	39:15	1.63e7	3.63e7	4.54e6	1.02e7	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	40:54	1.31e7	2.87e7	3.27e6	7.05e6	----	----	0.46	
1,2,3,4,6,7,8-HpCDF	39:16	7.40e7	6.88e7	2.06e7	2.00e7	----	----	1.08	
1,2,3,4,7,8,9-HpCDF	40:54	5.81e7	5.50e7	1.46e7	1.44e7	----	----	1.06	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	40:23	2.15e7	2.02e7	5.72e6	5.54e6	----	----	1.07	
1,2,3,4,6,7,8-HpCDD	40:24	4.40e7	4.25e7	1.17e7	1.13e7	----	----	1.04	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	43:28	8.61e7	9.66e7	1.92e7	2.23e7	----	----	0.89	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	43:16	3.46e7	3.90e7	7.70e6	8.69e6	----	----	0.89	
OCDD	43:17	7.04e7	8.08e7	1.59e7	1.77e7	----	----	0.87	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS5-7604-278	Instrument ID	10MSHR06 (U)
Filename	U130729B_12	GC Column ID	USD227224H
Analyzed	07/30/2013 00:36	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:49	5.21e7	6.79e7	7.27e6	9.34e6	----	----	0.77	
2,3,7,8-TCDF	22:51	9.09e7	1.21e8	1.34e7	1.75e7	----	----	0.75	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	23:09	3.49e7	4.39e7	4.99e6	6.28e6	----	----	0.80	
2,3,7,8-TCDD-13C	24:07	3.58e7	4.54e7	4.82e6	5.97e6	----	----	0.79	
2,3,7,8-TCDD-37Cl4	24:08	1.81e8		2.33e7		----	----		
2,3,7,8-TCDD	24:09	7.37e7	9.46e7	9.39e6	1.21e7	----	----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:27	5.85e7	3.69e7	1.07e7	7.12e6	----	----	1.59	
2,3,4,7,8-PeCDF-13C	31:54	5.79e7	3.80e7	1.26e7	8.11e6	----	----	1.52	
1,2,3,7,8-PeCDF	30:29	5.20e8	3.38e8	9.90e7	6.35e7	----	----	1.54	
2,3,4,7,8-PeCDF	31:56	5.24e8	3.55e8	1.14e8	7.59e7	----	----	1.48	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:22	3.83e7	2.41e7	8.37e6	5.20e6	----	----	1.59	
1,2,3,7,8-PeCDD	32:23	2.35e8	3.84e8	5.17e7	8.80e7	----	----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:47	2.36e7	4.54e7	6.48e6	1.23e7	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:56	2.78e7	5.39e7	6.73e6	1.27e7	----	----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:38	2.44e7	4.64e7	6.32e6	1.21e7	----	----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:36	2.42e7	4.56e7	5.86e6	1.11e7	----	----	0.53	
1,2,3,4,7,8-HxCDF	35:48	4.02e8	3.29e8	1.04e8	8.67e7	----	----	1.22	
1,2,3,6,7,8-HxCDF	35:57	4.70e8	3.81e8	1.14e8	9.25e7	----	----	1.23	
2,3,4,6,7,8-HxCDF	36:39	4.50e8	3.53e8	1.14e8	9.21e7	----	----	1.28	
1,2,3,7,8,9-HxCDF	37:37	3.82e8	3.10e8	9.41e7	7.67e7	----	----	1.23	

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Client Name	Advanced Technology Labs		
Client ID		Injected By	SMT
Lab ID	CS5-7604-278	Instrument ID	10MSHR06 (U)
Filename	U130729B_12	GC Column ID	USD227224H
Analyzed	07/30/2013 00:36	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:50	3.10e7	2.38e7	8.59e6	6.86e6	-----	-----	1.30	
1,2,3,6,7,8-HxCDD-13C	36:56	3.73e7	3.06e7	9.63e6	7.63e6	-----	-----	1.22	
1,2,3,7,8,9-HxCDD-13C	37:15	3.47e7	2.80e7	8.48e6	6.65e6	-----	-----	1.24	
1,2,3,4,7,8-HxCDD	36:51	3.08e8	2.50e8	8.77e7	6.96e7	-----	-----	1.23	
1,2,3,6,7,8-HxCDD	36:57	3.42e8	2.77e8	8.67e7	7.13e7	-----	-----	1.23	
1,2,3,7,8,9-HxCDD	37:15	3.42e8	2.82e8	8.18e7	6.70e7	-----	-----	1.21	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	39:16	2.04e7	4.51e7	5.43e6	1.23e7	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	40:54	1.69e7	3.65e7	4.43e6	9.66e6	-----	-----	0.46	
1,2,3,4,6,7,8-HpCDF	39:16	4.50e8	4.34e8	1.23e8	1.19e8	-----	-----	1.04	
1,2,3,4,7,8,9-HpCDF	40:54	3.72e8	3.58e8	9.45e7	8.99e7	-----	-----	1.04	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	40:23	2.72e7	2.50e7	7.31e6	6.78e6	-----	-----	1.09	
1,2,3,4,6,7,8-HpCDD	40:24	2.83e8	2.70e8	7.41e7	7.04e7	-----	-----	1.05	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	43:29	5.96e8	6.61e8	1.36e8	1.51e8	-----	-----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	43:17	4.60e7	5.15e7	1.02e7	1.12e7	-----	-----	0.89	
OCDD	43:18	4.81e8	5.49e8	1.05e8	1.16e8	-----	-----	0.88	

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PCDD/PCDF Detected Peak List

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Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR06 (U)
Filename	U130917A_22	GC Column ID	USD227224H
Analyzed	09/18/2013 02:01	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:41	6.70e7	8.61e7	9.41e6	1.21e7	----	----	0.78	
2,3,7,8-TCDF	21:43	5.75e6	7.43e6	8.05e5	1.07e6	----	----	0.77	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:58	4.42e7	5.57e7	6.32e6	7.91e6	----	----	0.79	
2,3,7,8-TCDD-13C	22:53	4.31e7	5.53e7	5.77e6	7.27e6	----	----	0.78	
2,3,7,8-TCDD-37Cl4	22:55	1.10e7		1.43e6		----	----		
2,3,7,8-TCDD	22:55	4.79e6	6.18e6	6.40e5	8.07e5	----	----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:34	6.78e7	4.38e7	1.20e7	7.74e6	----	----	1.55	
2,3,4,7,8-PeCDF-13C	31:08	6.93e7	4.46e7	1.36e7	8.90e6	----	----	1.56	
1,2,3,7,8-PeCDF	29:35	2.91e7	1.91e7	4.99e6	3.22e6	----	----	1.53	
2,3,4,7,8-PeCDF	31:09	2.94e7	1.97e7	5.94e6	3.94e6	----	----	1.49	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:36	4.44e7	2.81e7	8.82e6	5.62e6	----	----	1.58	
1,2,3,7,8-PeCDD	31:38	1.38e7	2.26e7	2.71e6	4.81e6	----	----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:11	2.81e7	5.38e7	7.33e6	1.41e7	----	----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:21	3.29e7	6.32e7	8.15e6	1.55e7	----	----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:04	2.91e7	5.71e7	7.69e6	1.46e7	----	----	0.51	
1,2,3,7,8,9-HxCDF-13C	37:03	2.63e7	5.02e7	6.42e6	1.21e7	----	----	0.52	
1,2,3,4,7,8-HxCDF	35:13	2.24e7	1.86e7	5.78e6	4.79e6	----	----	1.20	
1,2,3,6,7,8-HxCDF	35:22	2.58e7	2.12e7	6.11e6	5.24e6	----	----	1.21	
2,3,4,6,7,8-HxCDF	36:05	2.44e7	2.06e7	6.61e6	5.48e6	----	----	1.18	
1,2,3,7,8,9-HxCDF	37:04	1.89e7	1.58e7	4.56e6	3.64e6	----	----	1.20	

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Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR06 (U)
Filename	U130917A_22	GC Column ID	USD227224H
Analyzed	09/18/2013 02:01	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:16	3.67e7	2.97e7	1.06e7	8.35e6	-----	-----	1.24	
1,2,3,6,7,8-HxCDD-13C	36:23	4.64e7	3.68e7	1.16e7	9.17e6	-----	-----	1.26	
1,2,3,7,8,9-HxCDD-13C	36:42	4.07e7	3.23e7	9.30e6	7.52e6	-----	-----	1.26	
1,2,3,4,7,8-HxCDD	36:17	1.86e7	1.50e7	5.32e6	4.03e6	-----	-----	1.24	
1,2,3,6,7,8-HxCDD	36:24	2.05e7	1.71e7	5.19e6	4.44e6	-----	-----	1.20	
1,2,3,7,8,9-HxCDD	36:43	1.93e7	1.58e7	4.58e6	3.77e6	-----	-----	1.22	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:46	2.54e7	5.54e7	6.93e6	1.51e7	-----	-----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	40:24	1.91e7	4.22e7	4.95e6	1.12e7	-----	-----	0.45	
1,2,3,4,6,7,8-HpCDF	38:47	2.79e7	2.66e7	7.38e6	7.26e6	-----	-----	1.05	
1,2,3,4,7,8,9-HpCDF	40:25	2.07e7	2.04e7	5.66e6	5.72e6	-----	-----	1.02	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:55	2.99e7	2.82e7	8.27e6	7.45e6	-----	-----	1.06	
1,2,3,4,6,7,8-HpCDD	39:55	1.63e7	1.56e7	4.52e6	4.24e6	-----	-----	1.05	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:57	3.29e7	3.72e7	8.18e6	9.18e6	-----	-----	0.89	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:47	5.58e7	6.23e7	1.28e7	1.47e7	-----	-----	0.89	
OCDD	42:48	2.77e7	3.12e7	6.67e6	7.59e6	-----	-----	0.89	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR06 (U)
Filename	U130917B_15	GC Column ID	USD227224H
Analyzed	09/18/2013 13:51	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:43	5.73e7	7.32e7	8.35e6	1.06e7	----	----	0.78	
2,3,7,8-TCDF	21:45	5.04e6	6.61e6	7.27e5	9.27e5	----	----	0.76	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:60	3.55e7	4.41e7	5.36e6	6.53e6	----	----	0.80	
2,3,7,8-TCDD-13C	22:57	3.54e7	4.45e7	4.80e6	5.87e6	----	----	0.80	
2,3,7,8-TCDD-37Cl4	22:59	9.18e6		1.21e6		----	----		
2,3,7,8-TCDD	22:59	4.02e6	5.12e6	4.98e5	6.63e5	----	----	0.79	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:37	5.86e7	3.76e7	1.00e7	6.55e6	----	----	1.56	
2,3,4,7,8-PeCDF-13C	31:10	5.89e7	3.85e7	1.21e7	7.72e6	----	----	1.53	
1,2,3,7,8-PeCDF	29:38	2.54e7	1.67e7	4.27e6	2.78e6	----	----	1.52	
2,3,4,7,8-PeCDF	31:12	2.61e7	1.77e7	5.09e6	3.44e6	----	----	1.48	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:39	3.69e7	2.32e7	7.54e6	4.76e6	----	----	1.59	
1,2,3,7,8-PeCDD	31:40	1.18e7	1.93e7	2.31e6	3.81e6	----	----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:14	2.47e7	4.84e7	6.27e6	1.23e7	----	----	0.51	
1,2,3,6,7,8-HxCDF-13C	35:23	2.94e7	5.69e7	6.85e6	1.31e7	----	----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:07	2.64e7	5.12e7	6.73e6	1.31e7	----	----	0.51	
1,2,3,7,8,9-HxCDF-13C	37:05	2.41e7	4.61e7	5.64e6	1.08e7	----	----	0.52	
1,2,3,4,7,8-HxCDF	35:15	2.03e7	1.70e7	5.08e6	4.22e6	----	----	1.19	
1,2,3,6,7,8-HxCDF	35:24	2.34e7	1.92e7	5.77e6	4.79e6	----	----	1.22	
2,3,4,6,7,8-HxCDF	36:08	2.28e7	1.87e7	6.40e6	5.12e6	----	----	1.22	
1,2,3,7,8,9-HxCDF	37:05	1.81e7	1.51e7	4.57e6	3.75e6	----	----	1.20	

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Client ID		Injected By	SMT
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR06 (U)
Filename	U130917B_15	GC Column ID	USD227224H
Analyzed	09/18/2013 13:51	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:18	3.29e7	2.61e7	8.95e6	7.19e6	----	----	1.26	
1,2,3,6,7,8-HxCDD-13C	36:26	3.89e7	3.09e7	9.59e6	7.78e6	----	----	1.26	
1,2,3,7,8,9-HxCDD-13C	36:44	3.51e7	2.81e7	8.43e6	6.79e6	----	----	1.25	
1,2,3,4,7,8-HxCDD	36:19	1.67e7	1.36e7	4.72e6	3.84e6	----	----	1.23	
1,2,3,6,7,8-HxCDD	36:26	1.81e7	1.47e7	4.45e6	3.67e6	----	----	1.23	
1,2,3,7,8,9-HxCDD	36:45	1.73e7	1.43e7	4.12e6	3.42e6	----	----	1.21	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:49	2.07e7	4.65e7	5.57e6	1.25e7	----	----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	40:27	1.60e7	3.60e7	4.53e6	9.76e6	----	----	0.44	
1,2,3,4,6,7,8-HpCDF	38:49	2.40e7	2.31e7	6.63e6	6.43e6	----	----	1.04	
1,2,3,4,7,8,9-HpCDF	40:28	1.84e7	1.78e7	4.78e6	4.73e6	----	----	1.03	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:57	2.43e7	2.25e7	6.33e6	5.84e6	----	----	1.08	
1,2,3,4,6,7,8-HpCDD	39:58	1.32e7	1.23e7	3.54e6	3.29e6	----	----	1.08	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	43:00	3.09e7	3.39e7	7.67e6	8.15e6	----	----	0.91	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:50	4.78e7	5.30e7	1.12e7	1.21e7	----	----	0.90	
OCDD	42:51	2.47e7	2.75e7	5.59e6	6.25e6	----	----	0.90	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client ID		Injected By	BAL
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR05 (F)
Filename	F130921A_16	GC Column ID	USD174324H
Analyzed	09/21/2013 13:44	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:18	3.72e7	4.60e7	5.24e6	6.50e6	-----	-----	0.81	
2,3,7,8-TCDF	21:19	4.15e6	5.24e6	5.81e5	7.06e5	-----	-----	0.79	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:32	1.98e7	2.45e7	2.77e6	3.36e6	-----	-----	0.81	
2,3,7,8-TCDD-13C	22:29	1.98e7	2.50e7	2.68e6	3.19e6	-----	-----	0.79	
2,3,7,8-TCDD-37Cl4	22:31	5.33e6		7.27e5		-----	-----		
2,3,7,8-TCDD	22:31	2.45e6	3.02e6	3.22e5	4.08e5	-----	-----	0.81	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:27	4.82e7	2.98e7	7.37e6	4.65e6	-----	-----	1.62	
2,3,4,7,8-PeCDF-13C	31:04	5.00e7	3.09e7	9.33e6	5.80e6	-----	-----	1.62	
1,2,3,7,8-PeCDF	29:30	2.82e7	1.74e7	4.37e6	2.60e6	-----	-----	1.62	
2,3,4,7,8-PeCDF	31:06	2.95e7	1.86e7	5.50e6	3.46e6	-----	-----	1.59	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:33	2.72e7	1.74e7	5.16e6	3.42e6	-----	-----	1.56	
1,2,3,7,8-PeCDD	31:35	1.04e7	1.67e7	2.07e6	3.38e6	-----	-----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:01	2.61e7	4.87e7	6.81e6	1.22e7	-----	-----	0.54	
1,2,3,6,7,8-HxCDF-13C	35:09	3.03e7	5.55e7	7.45e6	1.32e7	-----	-----	0.55	
2,3,4,6,7,8-HxCDF-13C	35:49	2.66e7	4.96e7	6.90e6	1.30e7	-----	-----	0.54	
1,2,3,7,8,9-HxCDF-13C	36:44	2.57e7	4.68e7	6.95e6	1.27e7	-----	-----	0.55	
1,2,3,4,7,8-HxCDF	35:02	2.79e7	2.14e7	7.10e6	5.33e6	-----	-----	1.31	
1,2,3,6,7,8-HxCDF	35:10	3.05e7	2.32e7	7.60e6	5.76e6	-----	-----	1.31	
2,3,4,6,7,8-HxCDF	35:51	2.87e7	2.20e7	7.50e6	5.77e6	-----	-----	1.31	
1,2,3,7,8,9-HxCDF	36:45	2.46e7	1.93e7	6.60e6	4.98e6	-----	-----	1.28	

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Client ID		Injected By	BAL
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR05 (F)
Filename	F130921A_16	GC Column ID	USD174324H
Analyzed	09/21/2013 13:44	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:01	2.83e7	2.21e7	8.06e6	6.26e6	-----	-----	1.28	
1,2,3,6,7,8-HxCDD-13C	36:07	3.23e7	2.50e7	8.62e6	6.81e6	-----	-----	1.29	
1,2,3,7,8,9-HxCDD-13C	36:24	2.96e7	2.28e7	7.59e6	5.98e6	-----	-----	1.30	
1,2,3,4,7,8-HxCDD	36:01	1.66e7	1.26e7	4.75e6	3.67e6	-----	-----	1.32	
1,2,3,6,7,8-HxCDD	36:08	1.74e7	1.36e7	4.63e6	3.56e6	-----	-----	1.28	
1,2,3,7,8,9-HxCDD	36:26	1.68e7	1.30e7	4.48e6	3.44e6	-----	-----	1.29	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:25	1.35e7	2.93e7	3.45e6	7.58e6	-----	-----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	39:57	1.10e7	2.35e7	3.21e6	6.93e6	-----	-----	0.47	
1,2,3,4,6,7,8-HpCDF	38:25	1.66e7	1.61e7	4.40e6	4.34e6	-----	-----	1.04	
1,2,3,4,7,8,9-HpCDF	39:57	1.26e7	1.25e7	3.74e6	3.68e6	-----	-----	1.01	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:29	1.55e7	1.39e7	4.51e6	4.16e6	-----	-----	1.12	
1,2,3,4,6,7,8-HpCDD	39:30	9.20e6	8.69e6	2.75e6	2.59e6	-----	-----	1.06	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	2.22e7	2.34e7	5.35e6	5.83e6	-----	-----	0.95	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:15	2.97e7	3.12e7	7.57e6	7.58e6	-----	-----	0.95	
OCDD	42:16	1.66e7	1.85e7	4.32e6	4.63e6	-----	-----	0.90	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____
Reviewed By _____ Date _____

Client ID		Injected By	BAL
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR05 (F)
Filename	F130921B_16	GC Column ID	USD174324H
Analyzed	09/22/2013 01:59	ICAL ID	F130918

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:18	3.82e7	4.81e7	4.90e6	6.24e6	----	----	0.80	
2,3,7,8-TCDF	21:19	3.39e6	4.58e6	4.60e5	5.87e5	----	----	0.74	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:34	2.46e7	3.01e7	3.32e6	4.11e6	----	----	0.82	
2,3,7,8-TCDD-13C	22:30	2.49e7	3.04e7	3.10e6	3.84e6	----	----	0.82	
2,3,7,8-TCDD-37Cl4	22:31	6.22e6		8.41e5		----	----		
2,3,7,8-TCDD	22:31	2.83e6	3.38e6	3.59e5	4.28e5	----	----	0.84	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:27	4.77e7	2.99e7	6.82e6	4.26e6	----	----	1.60	
2,3,4,7,8-PeCDF-13C	31:04	4.92e7	3.10e7	8.71e6	5.69e6	----	----	1.59	
1,2,3,7,8-PeCDF	29:30	2.36e7	1.49e7	3.57e6	2.10e6	----	----	1.58	
2,3,4,7,8-PeCDF	31:06	2.45e7	1.56e7	4.35e6	2.77e6	----	----	1.57	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:33	3.17e7	2.00e7	5.91e6	3.70e6	----	----	1.58	
1,2,3,7,8-PeCDD	31:35	1.05e7	1.72e7	1.86e6	3.12e6	----	----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:01	2.42e7	4.56e7	5.88e6	1.09e7	----	----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:09	2.64e7	5.02e7	6.14e6	1.17e7	----	----	0.53	
2,3,4,6,7,8-HxCDF-13C	35:49	2.36e7	4.46e7	5.67e6	1.10e7	----	----	0.53	
1,2,3,7,8,9-HxCDF-13C	36:44	2.31e7	4.33e7	6.06e6	1.12e7	----	----	0.53	
1,2,3,4,7,8-HxCDF	35:02	2.26e7	1.78e7	5.52e6	4.41e6	----	----	1.27	
1,2,3,6,7,8-HxCDF	35:10	2.47e7	1.96e7	5.54e6	4.54e6	----	----	1.26	
2,3,4,6,7,8-HxCDF	35:50	2.30e7	1.88e7	5.60e6	4.63e6	----	----	1.22	
1,2,3,7,8,9-HxCDF	36:45	1.99e7	1.58e7	5.18e6	4.24e6	----	----	1.26	

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Client ID		Injected By	BAL
Lab ID	CS3/CPM-7604-279	Instrument ID	10MSHR05 (F)
Filename	F130921B_16	GC Column ID	USD174324H
Analyzed	09/22/2013 01:59	ICAL ID	F130918

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:01	2.99e7	2.36e7	8.52e6	6.60e6	----	----	1.27	
1,2,3,6,7,8-HxCDD-13C	36:07	3.32e7	2.69e7	8.30e6	7.02e6	----	----	1.24	
1,2,3,7,8,9-HxCDD-13C	36:24	3.13e7	2.52e7	7.56e6	5.97e6	----	----	1.24	
1,2,3,4,7,8-HxCDD	36:01	1.58e7	1.25e7	4.28e6	3.17e6	----	----	1.26	
1,2,3,6,7,8-HxCDD	36:07	1.62e7	1.32e7	4.02e6	3.57e6	----	----	1.23	
1,2,3,7,8,9-HxCDD	36:25	1.62e7	1.25e7	4.12e6	3.15e6	----	----	1.30	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:25	1.66e7	3.58e7	4.12e6	8.89e6	----	----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	39:57	1.31e7	2.71e7	3.67e6	6.97e6	----	----	0.48	
1,2,3,4,6,7,8-HpCDF	38:25	1.82e7	1.74e7	4.68e6	4.39e6	----	----	1.05	
1,2,3,4,7,8,9-HpCDF	39:58	1.43e7	1.40e7	3.90e6	3.85e6	----	----	1.03	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:30	1.95e7	1.71e7	5.06e6	4.77e6	----	----	1.14	
1,2,3,4,6,7,8-HpCDD	39:30	1.14e7	1.05e7	3.34e6	3.09e6	----	----	1.09	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:24	2.29e7	2.51e7	5.32e6	5.60e6	----	----	0.91	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:15	3.71e7	4.01e7	8.58e6	9.17e6	----	----	0.93	
OCDD	42:16	1.93e7	2.07e7	4.68e6	4.98e6	----	----	0.93	

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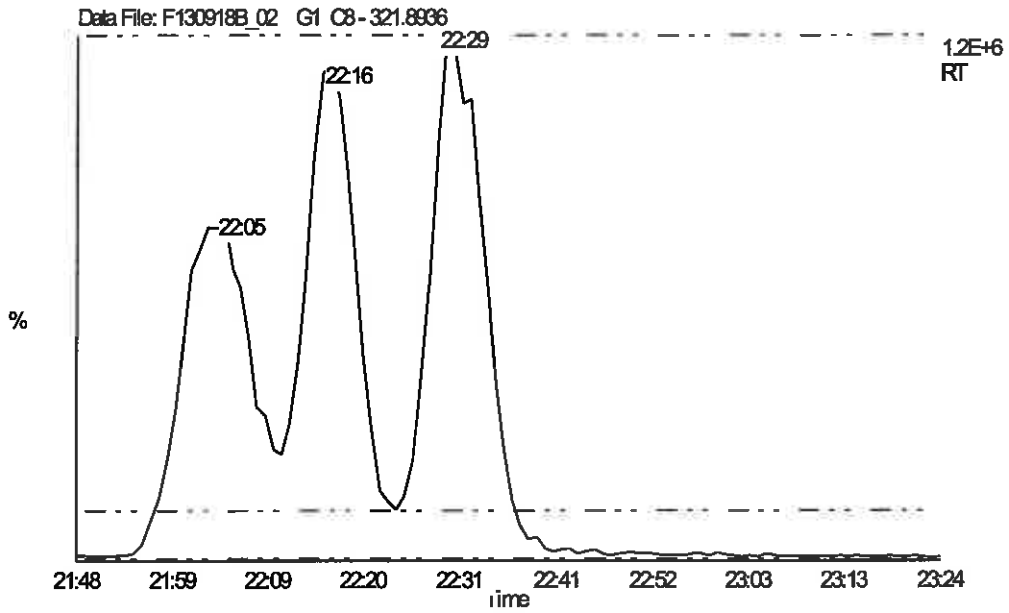
Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID	CS3/CPM-7604-279	Injected By	SMT	
Raw Data File	F130918B_02	Instrument ID	10MSHR05 (F)	
Date Analyzed	9/18/2013	GC Column Type	DB-5MS	0.25 uM
Time Analyzed	16:50	GC Column S/N	USD174324H	
Resolution	**9.1%**			



Group	Mass	First Eluter	Last Eluter
TCDF	305.8987	16:43	24:16
PeCDF	341.8567	24:17	32:25
HxCDF	373.8207	33:29	36:44
HpCDF	407.7818	38:25	39:58
OCDF	441.7428	42:24	42:24
TCDD	321.8936	18:18	23:59
PeCDD	357.8517	27:40	32:06
HxCDD	391.8127	34:14	36:24
HpCDD	425.7737	38:44	39:30
OCDD	459.7347	42:15	42:15
1234-TCDD-13C(RS)	331.9367	21:33	21:33
123789-HxCDD-13C(RS)	401.8559	36:23	36:23

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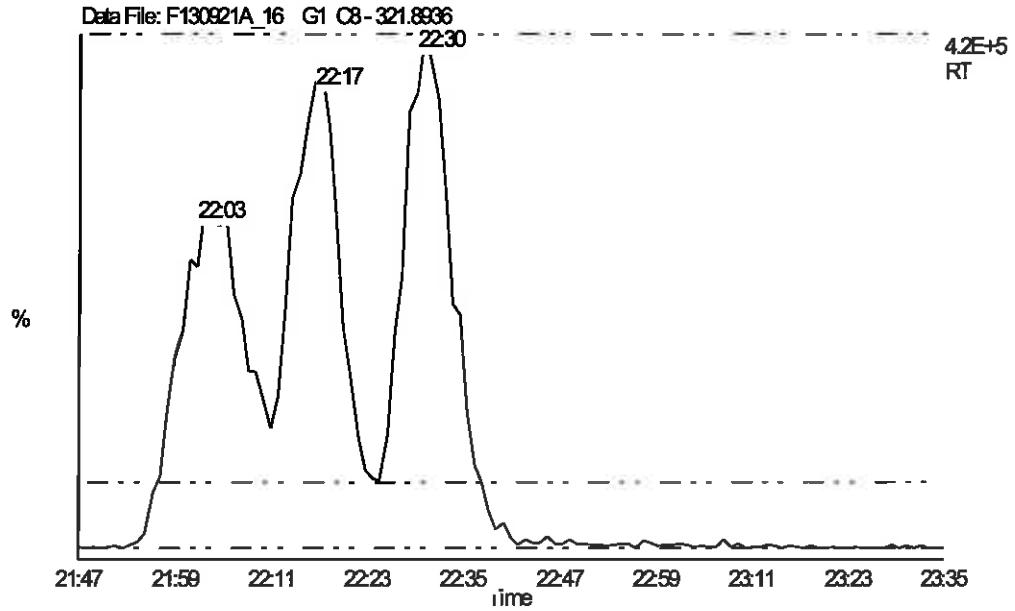
Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID	CS3/CPM-7604-279	Injected By	BAL	
Raw Data File	F130921A_16	Instrument ID	10MSHR05 (F)	
Date Analyzed	12/30/1899	GC Column Type	DB-5MS	0.25 uM
Time Analyzed	13:44	GC Column S/N	USD174324H	
Resolution	**12.9%**			



Group	Mass	First Eluter	Last Eluter
TCDF	305.8987	16:42	24:17
PeCDF	341.8567	24:18	32:25
HxCDF	373.8207	33:31	36:44
HpCDF	407.7818	38:25	39:57
OCDF	441.7428	42:24	0:00
TCDD	321.8936	18:17	23:58
PeCDD	357.8517	27:41	32:06
HxCDD	391.8127	34:14	36:24
HpCDD	425.7737	38:44	39:30
OCDD	459.7347	42:15	0:00
1234-TCDD-13C(RS)	331.9367	21:32	0:00
123789-HxCDD-13C(RS)	401.8559	36:23	0:00

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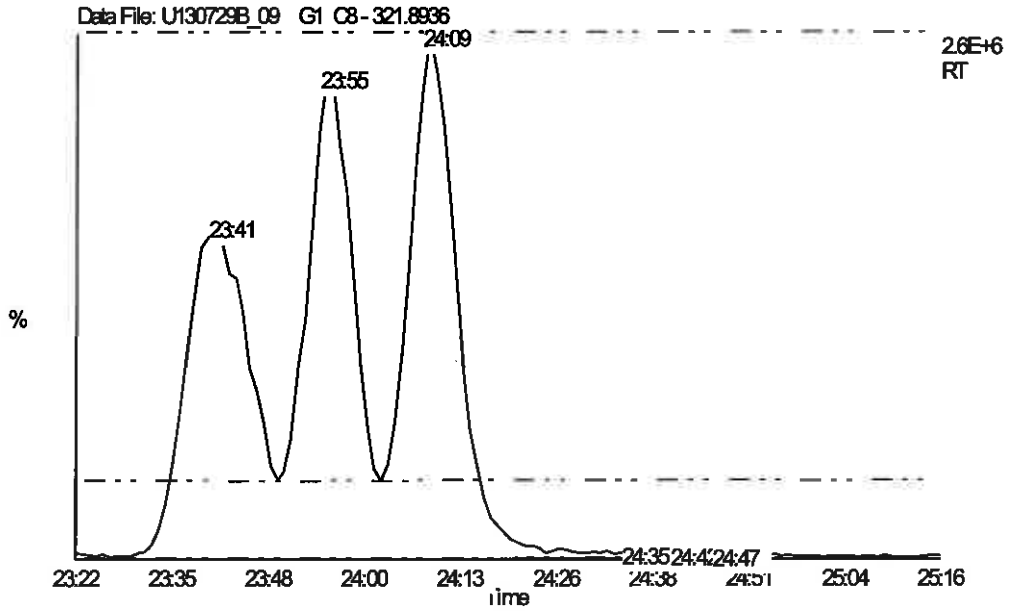
Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID	CS3/CPM-7604-274	Injected By	SMT	
Raw Data File	U130729B_09	Instrument ID	10MSHR06 (U)	
Date Analyzed	7/29/2013	GC Column Type	DB-5MS	0.25 uM
Time Analyzed	22:12	GC Column S/N	USD227224H	
Resolution	**14.9%**			



Group	Mass	First Eluter	Last Eluter
TCDF	305.8987	17:52	26:07
PeCDF	341.8567	26:04	33:15
HxCDF	373.8207	34:15	37:37
HpCDF	407.7818	39:16	40:53
OCDF	441.7428	43:27	0:00
TCDD	321.8936	19:36	25:48
PeCDD	357.8517	28:59	32:55
HxCDD	391.8127	35:00	37:15
HpCDD	425.7737	39:35	40:24
OCDD	459.7347	43:17	0:00
1234-TCDD-13C(RS)	331.9367	23:10	0:00
123789-HxCDD-13C(RS)	401.8559	37:15	0:00

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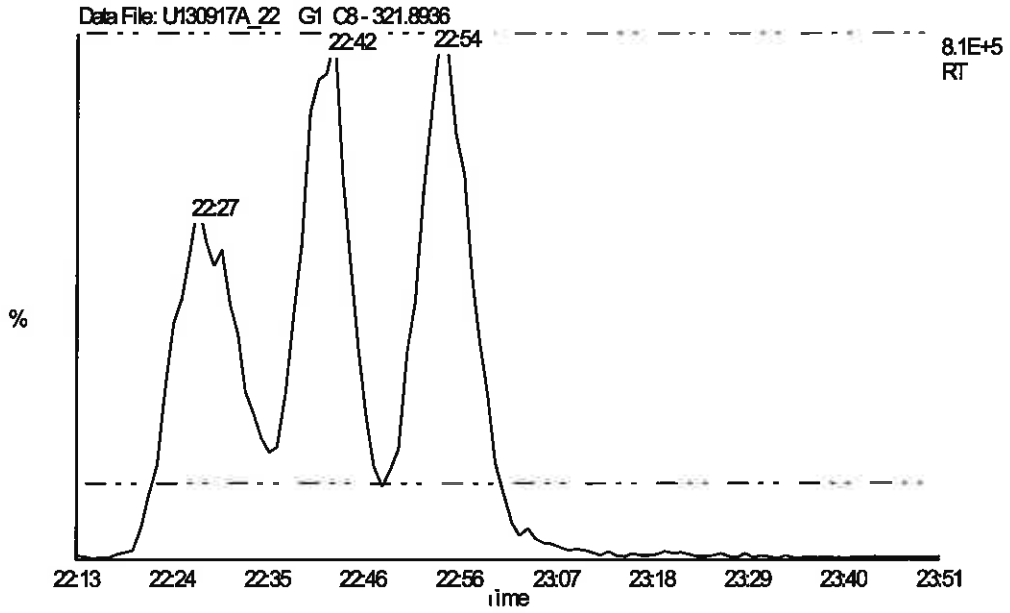
Fax: 612- 607-6444

Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID	CS3/CPM-7604-279	Injected By	SMT	
Raw Data File	U130917A_22	Instrument ID	10MSHR06 (U)	
Date Analyzed	12/30/1899	GC Column Type	DB-5MS	0.25 uM
Time Analyzed	02:01	GC Column S/N	USD227224H	
Resolution	**14.4%**			



Group	Mass	First Eluter	Last Eluter
TCDF	305.8987	16:58	24:44
PeCDF	341.8567	24:43	32:31
HxCDF	373.8207	33:36	37:03
HpCDF	407.7818	38:46	40:24
OCDF	441.7428	42:57	0:00
TCDD	321.8936	18:37	24:27
PeCDD	357.8517	27:57	32:10
HxCDD	391.8127	34:23	36:42
HpCDD	425.7737	39:06	39:55
OCDD	459.7347	42:47	0:00
1234-TCDD-13C(RS)	331.9367	21:57	0:00
123789-HxCDD-13C(RS)	401.8559	36:41	0:00

REPORT OF LABORATORY ANALYSIS

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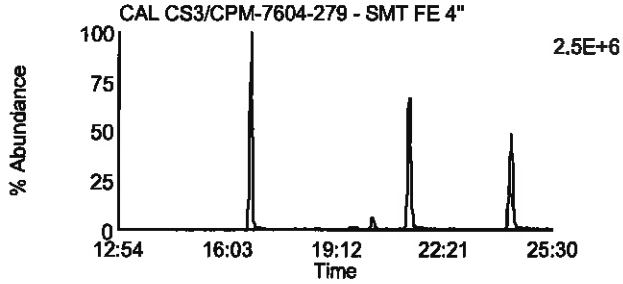
Homologue Group: Tetras

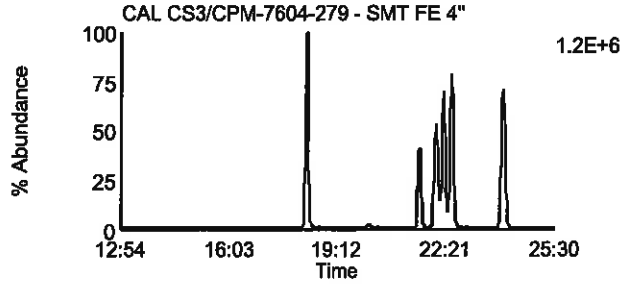
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

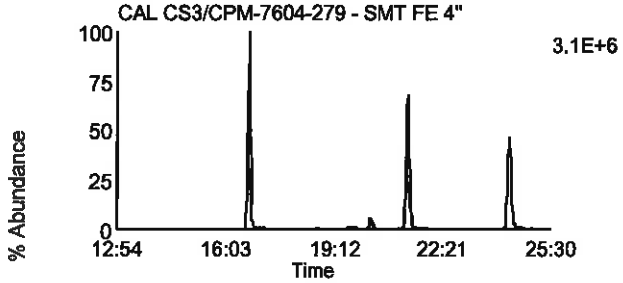
Data File: F130918B_02 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - SMT FE 4"



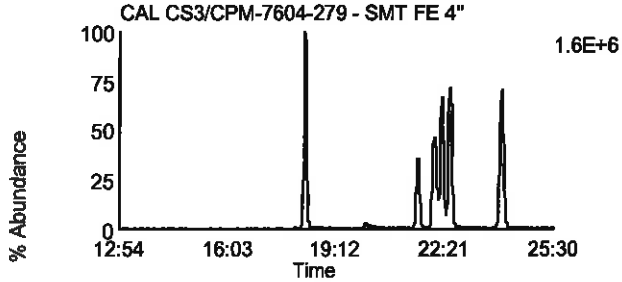
Data File: F130918B_02 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - SMT FE 4"



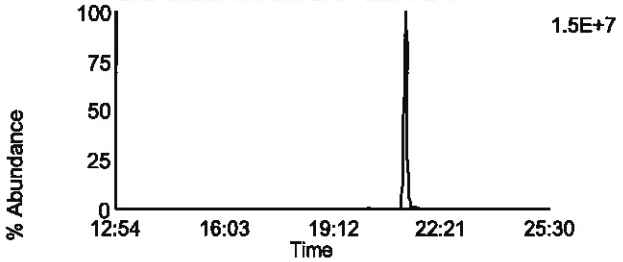
Data File: F130918B_02 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - SMT FE 4"



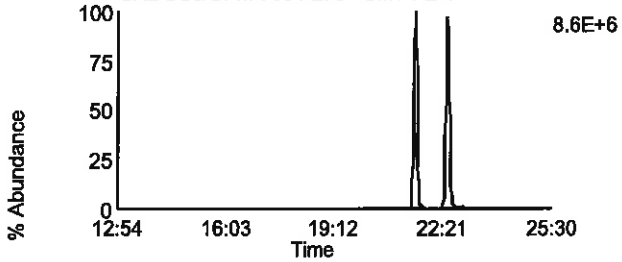
Data File: F130918B_02 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - SMT FE 4"



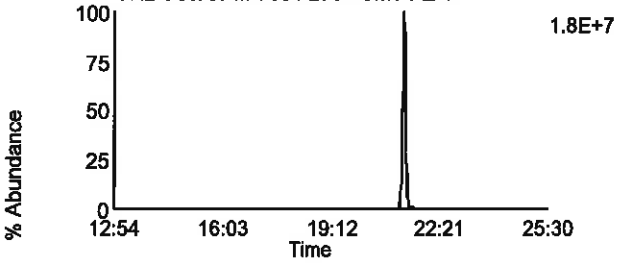
Data File: F130918B_02 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - SMT FE 4"



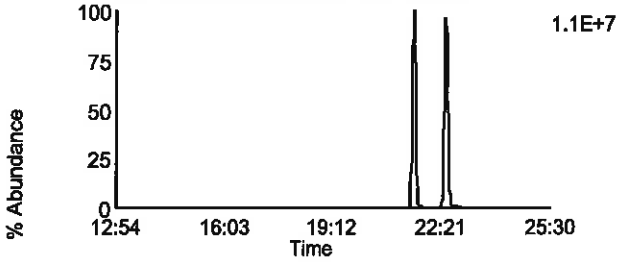
Data File: F130918B_02 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - SMT FE 4"



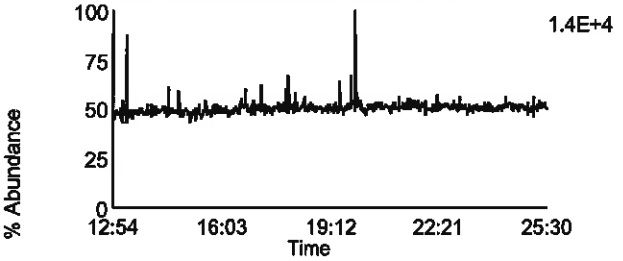
Data File: F130918B_02 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - SMT FE 4"



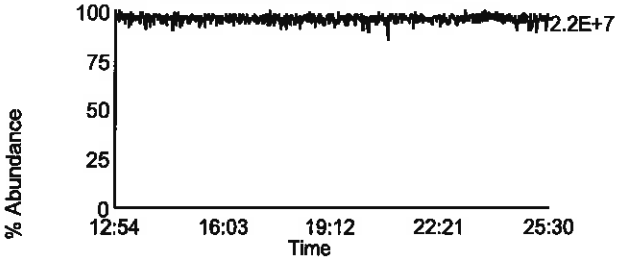
Data File: F130918B_02 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - SMT FE 4"



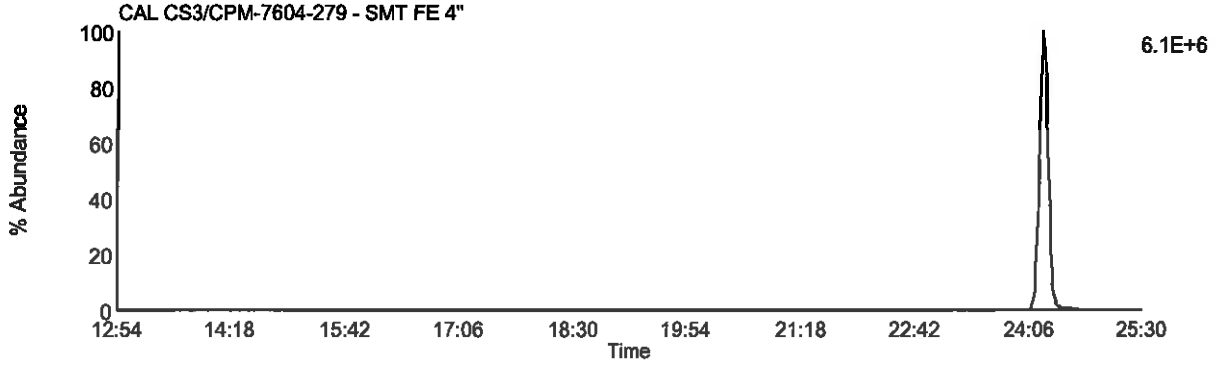
Data File: F130918B_02 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT FE 4"



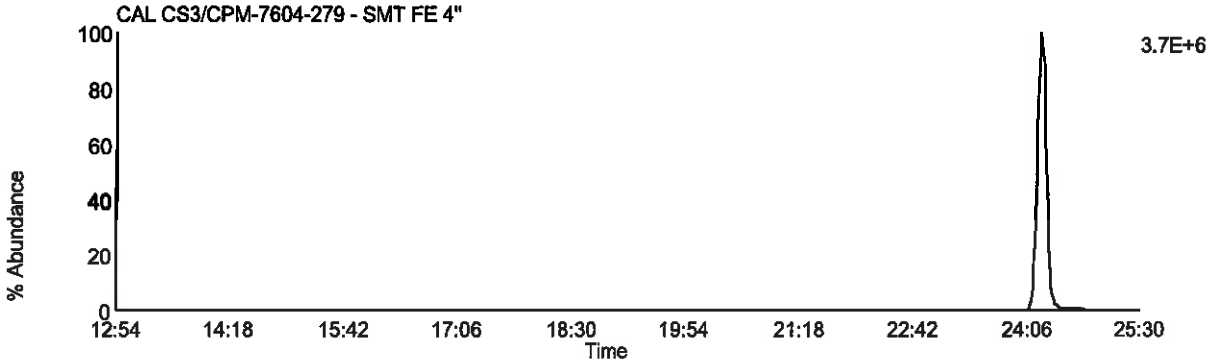
Homologue Group: Penta & Cleanup

Data File Name: F130918B_02	Lab Sample ID: CS3/CPM-7604-279
Date Acquired: 9/18/2013	Client Sample ID: CPM/WDM
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"	Instrument: 10MSHR05 (F)

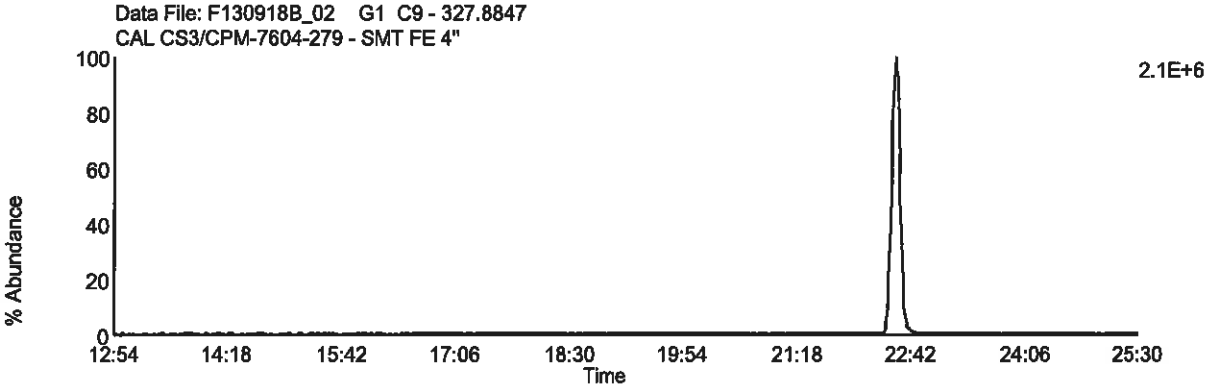
Data File: F130918B_02 G1 C12 - 339.8597
CAL CS3/CPM-7604-279 - SMT FE 4"



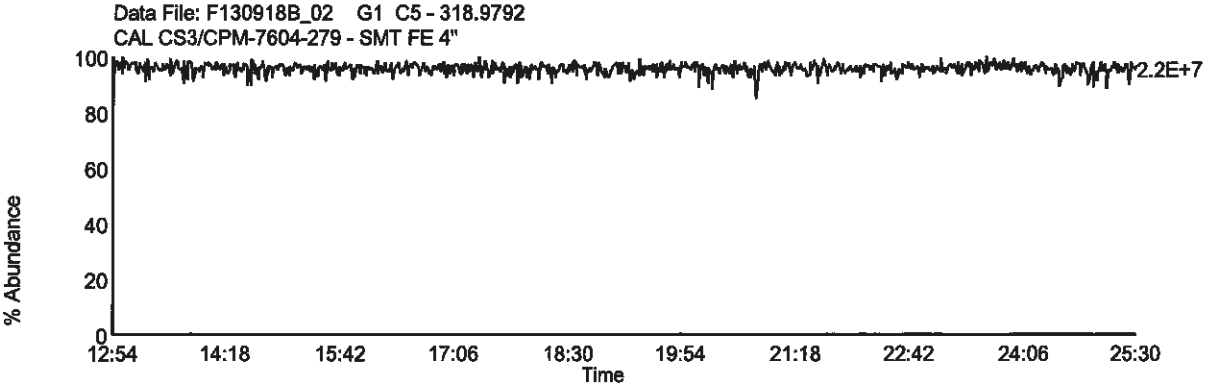
Data File: F130918B_02 G1 C13 - 341.8567
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C9 - 327.8847
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT FE 4"

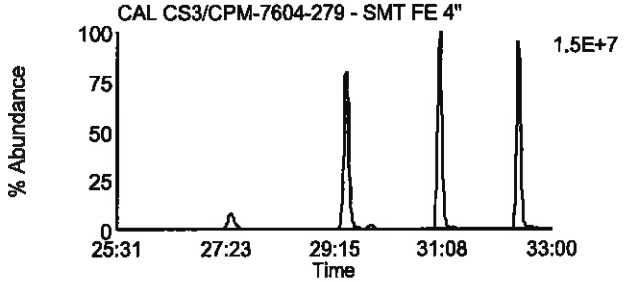


Homologue Group: Pentas

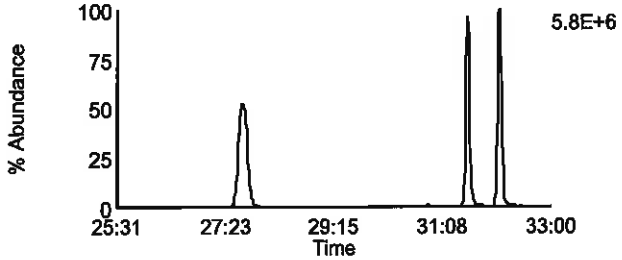
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

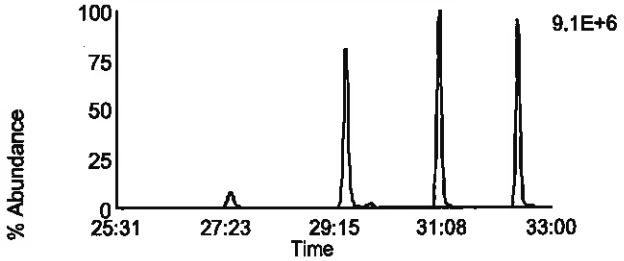
Data File: F130918B_02 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - SMT FE 4"



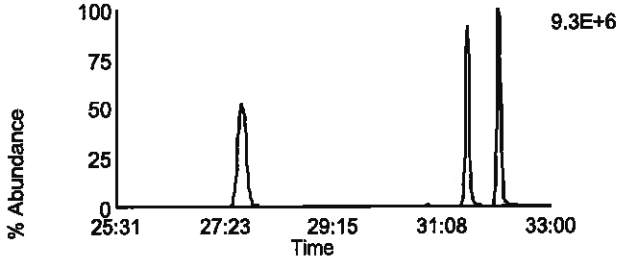
Data File: F130918B_02 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - SMT FE 4"



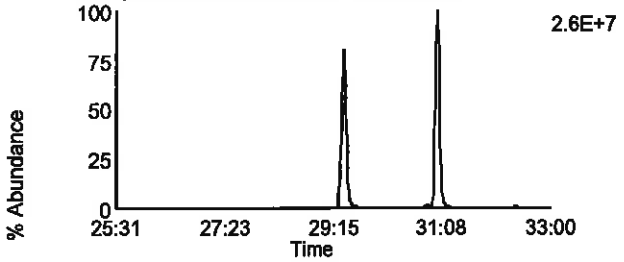
Data File: F130918B_02 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - SMT FE 4"



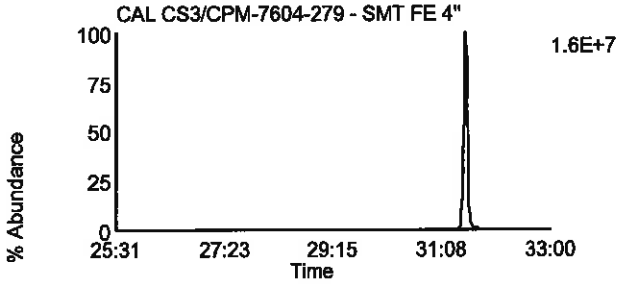
Data File: F130918B_02 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - SMT FE 4"



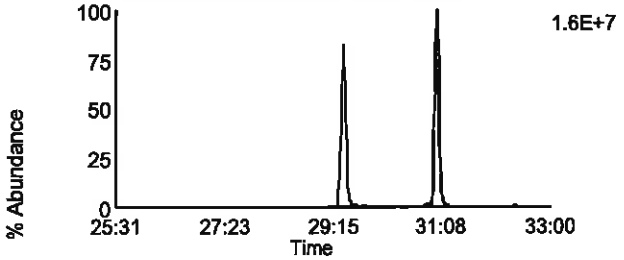
Data File: F130918B_02 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - SMT FE 4"



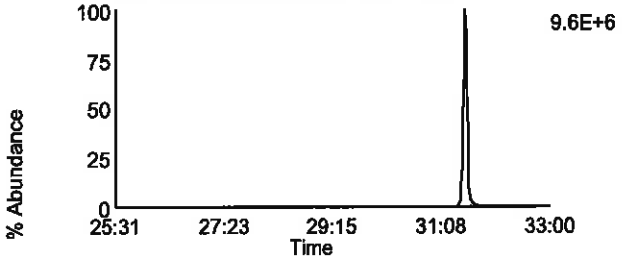
Data File: F130918B_02 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - SMT FE 4"



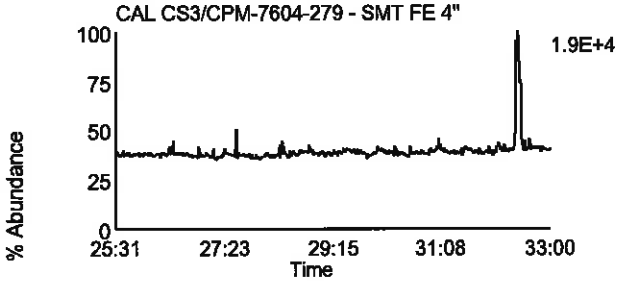
Data File: F130918B_02 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - SMT FE 4"



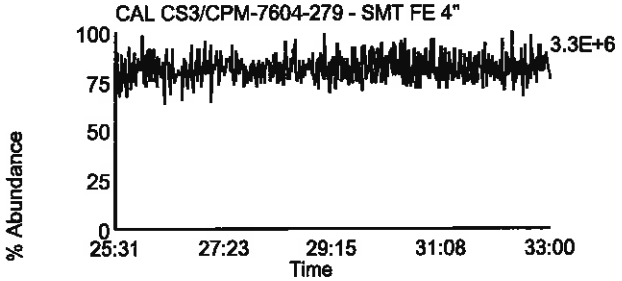
Data File: F130918B_02 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - SMT FE 4"

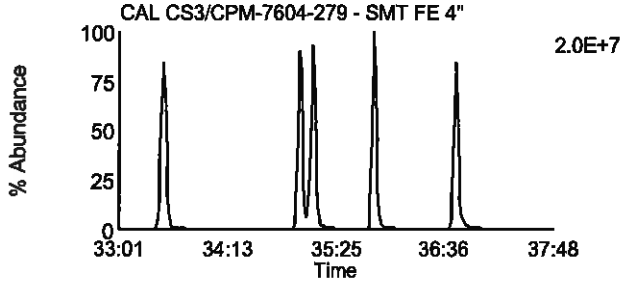


Homologue Group: Hexas

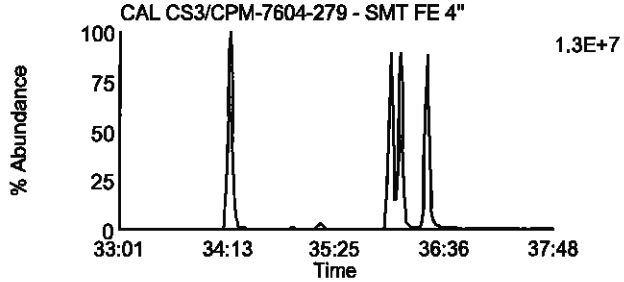
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

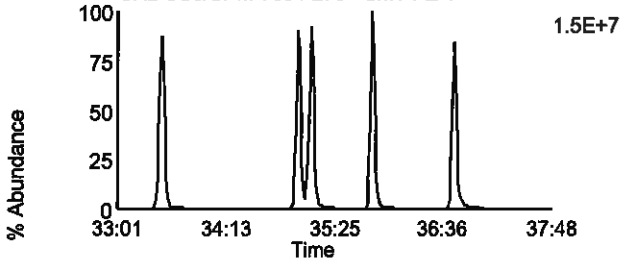
Data File: F130918B_02 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - SMT FE 4"



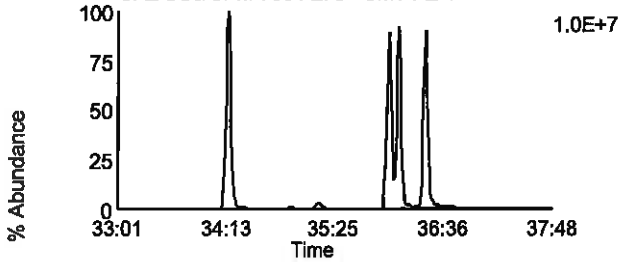
Data File: F130918B_02 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - SMT FE 4"



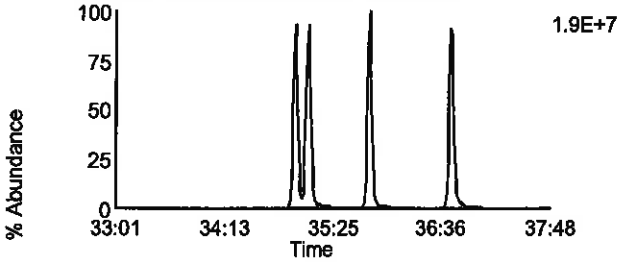
Data File: F130918B_02 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - SMT FE 4"



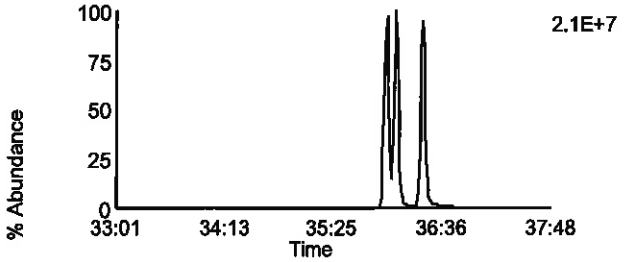
Data File: F130918B_02 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - SMT FE 4"



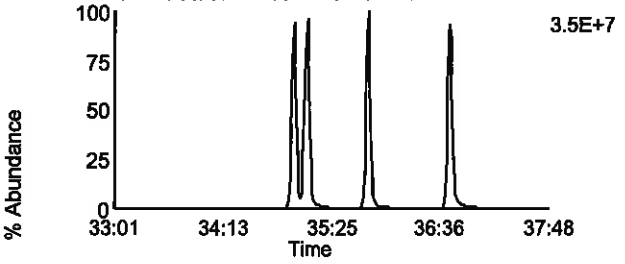
Data File: F130918B_02 G3 C5 - 383.8639
CAL CS3/CPM-7604-279 - SMT FE 4"



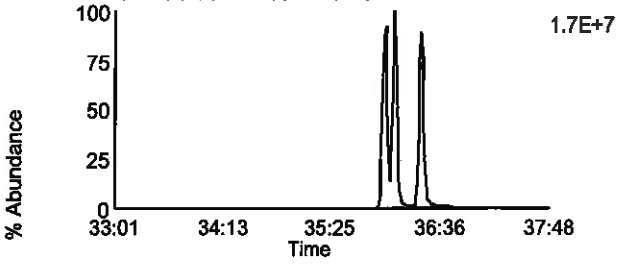
Data File: F130918B_02 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - SMT FE 4"



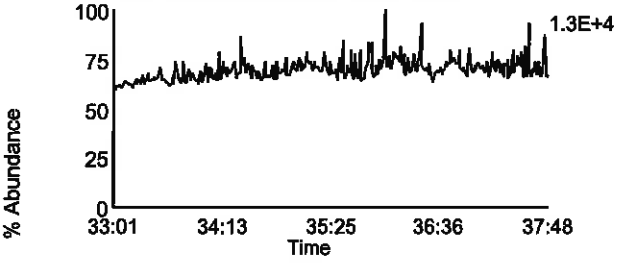
Data File: F130918B_02 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - SMT FE 4"



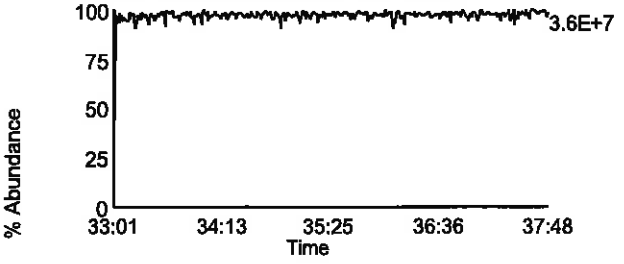
Data File: F130918B_02 G3 C10 - 403.8529
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - SMT FE 4"

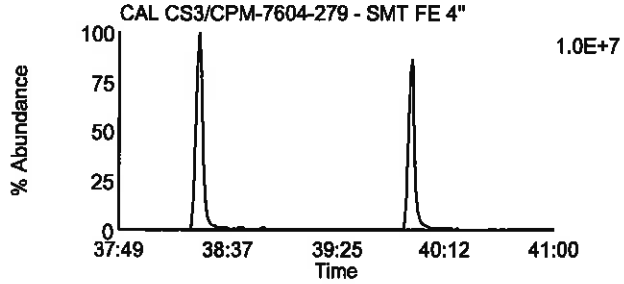


Homologue Group: Heptas

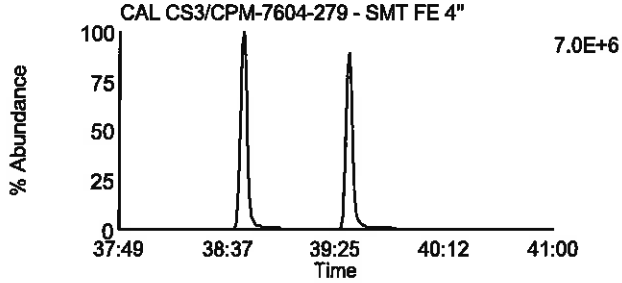
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

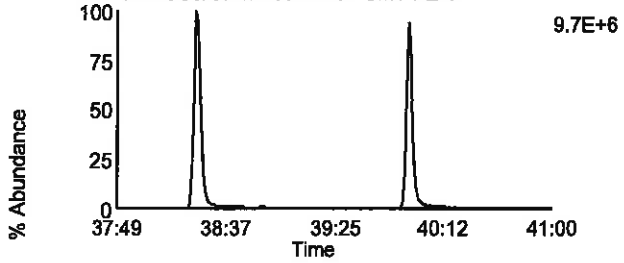
Data File: F130918B_02 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - SMT FE 4"



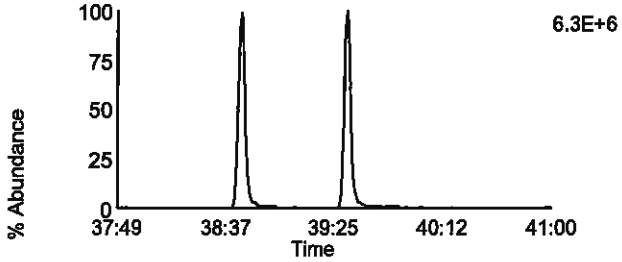
Data File: F130918B_02 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - SMT FE 4"



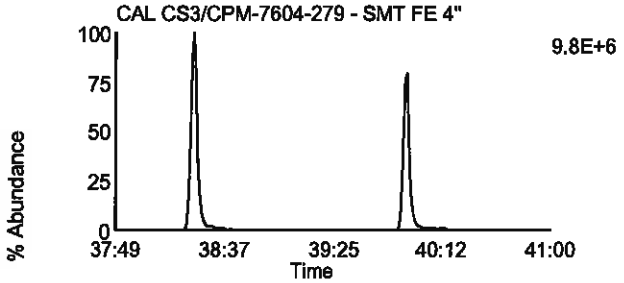
Data File: F130918B_02 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - SMT FE 4"



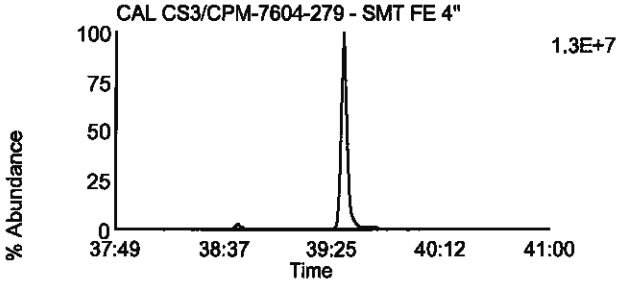
Data File: F130918B_02 G4 C9 - 425.7737
CAL CS3/CPM-7604-279 - SMT FE 4"



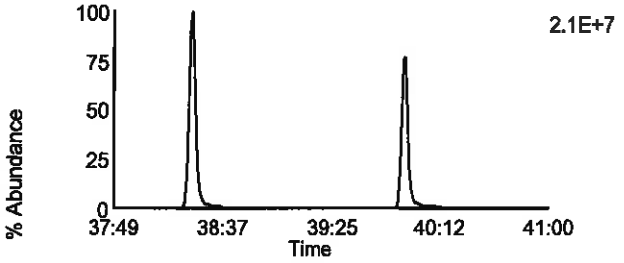
Data File: F130918B_02 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - SMT FE 4"



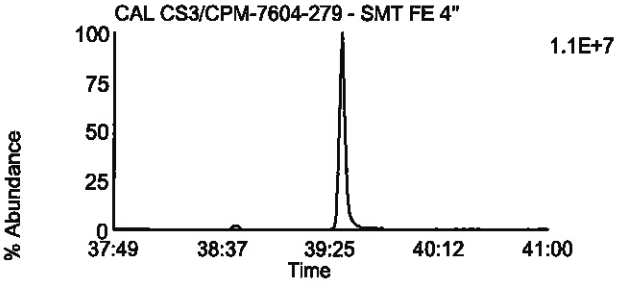
Data File: F130918B_02 G4 C11 - 435.8169
CAL CS3/CPM-7604-279 - SMT FE 4"



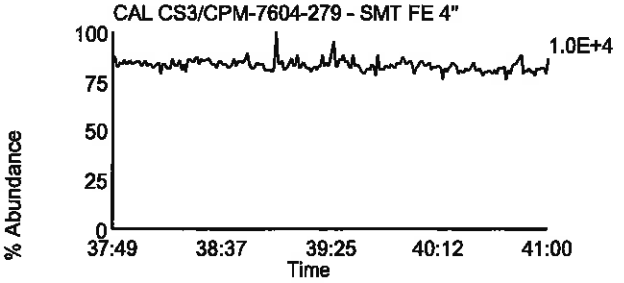
Data File: F130918B_02 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - SMT FE 4"



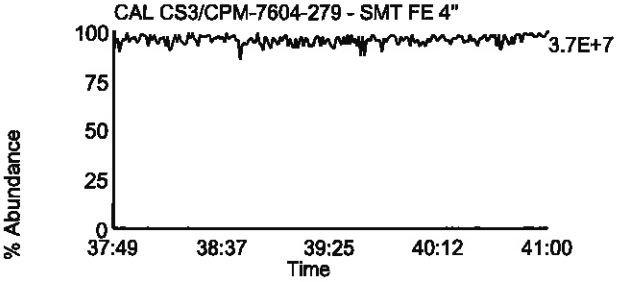
Data File: F130918B_02 G4 C12 - 437.814
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G4 C13 - 479.7165
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - SMT FE 4"

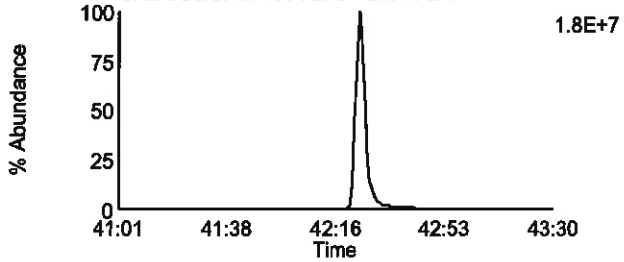


Homologue Group: Octas

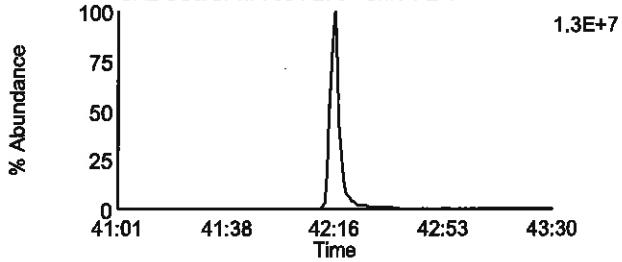
Data File Name: F130918B_02
Date Acquired: 9/18/2013
Sample Description: CAL CS3/CPM-7604-279 - SMT FE 4"

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

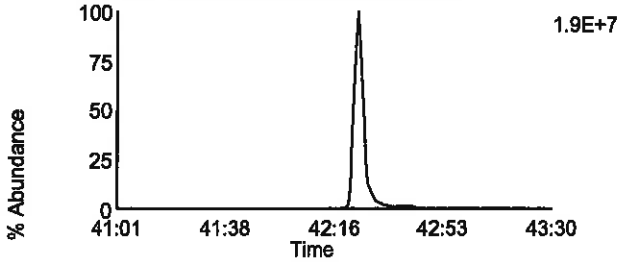
Data File: F130918B_02 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - SMT FE 4"



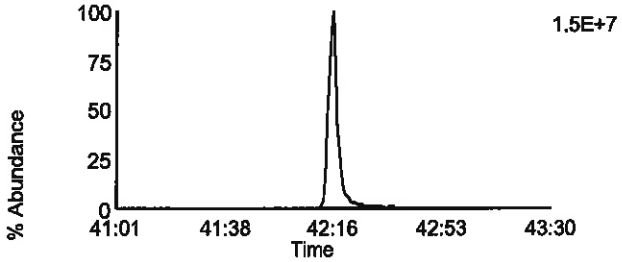
Data File: F130918B_02 G5 C8 - 457.7377
CAL CS3/CPM-7604-279 - SMT FE 4"



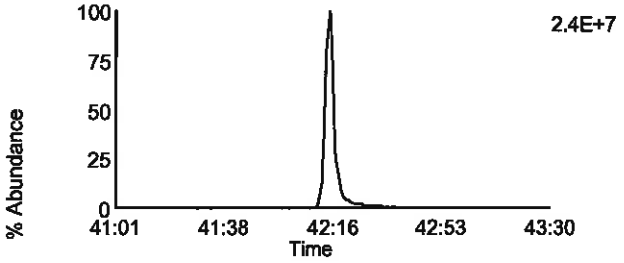
Data File: F130918B_02 G5 C5 - 443.7398
CAL CS3/CPM-7604-279 - SMT FE 4"



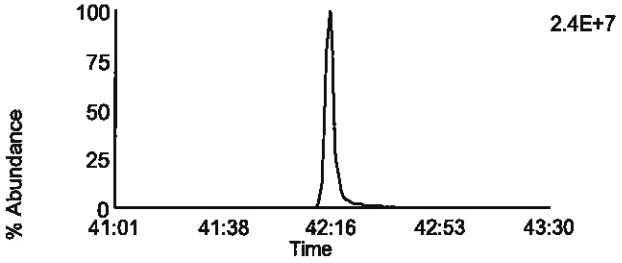
Data File: F130918B_02 G5 C9 - 459.7347
CAL CS3/CPM-7604-279 - SMT FE 4"



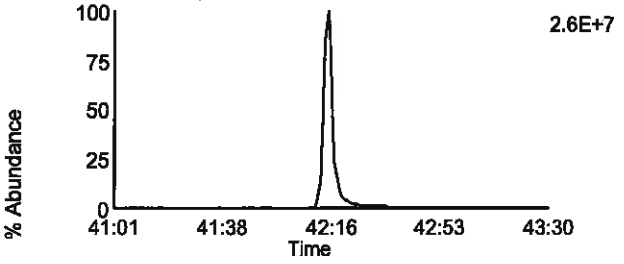
Data File: F130918B_02 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT FE 4"



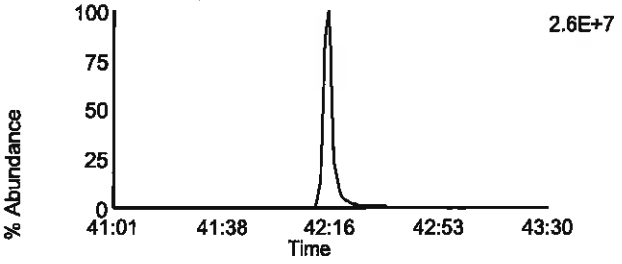
Data File: F130918B_02 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT FE 4"



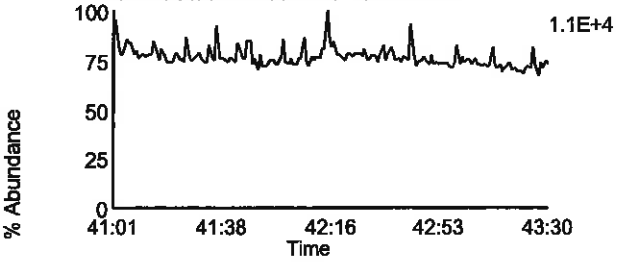
Data File: F130918B_02 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT FE 4"



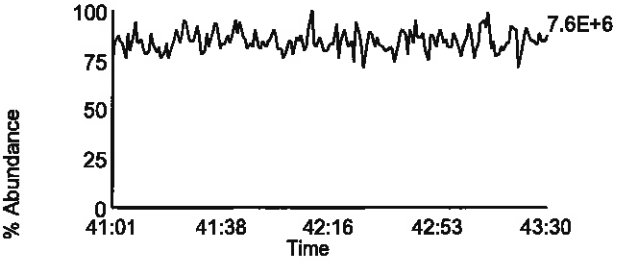
Data File: F130918B_02 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - SMT FE 4"



Data File: F130918B_02 G5 C2 - 430.9728
CAL CS3/CPM-7604-279 - SMT FE 4"

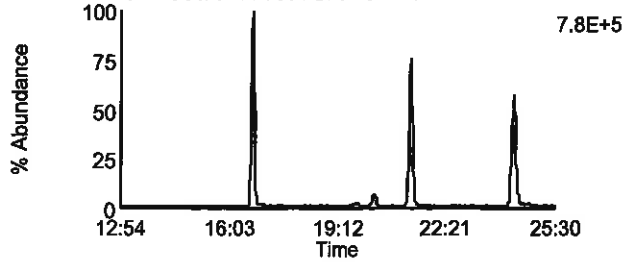


Homologue Group: Tetras

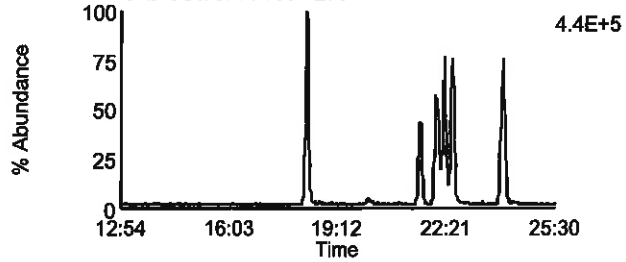
Data File Name: F130921A_16
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

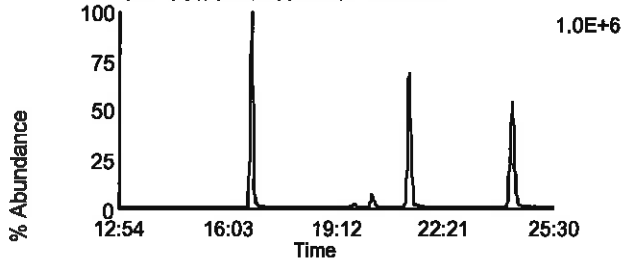
Data File: F130921A_16 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - BAL BAL



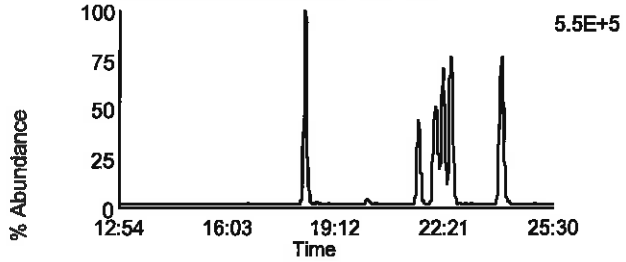
Data File: F130921A_16 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - BAL BAL



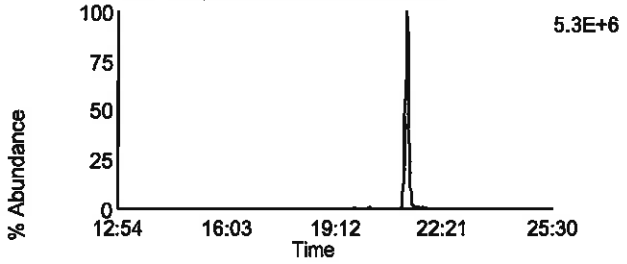
Data File: F130921A_16 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - BAL BAL



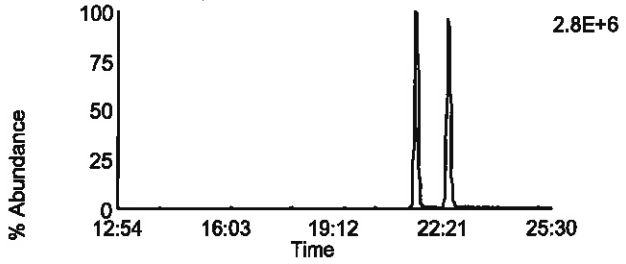
Data File: F130921A_16 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - BAL BAL



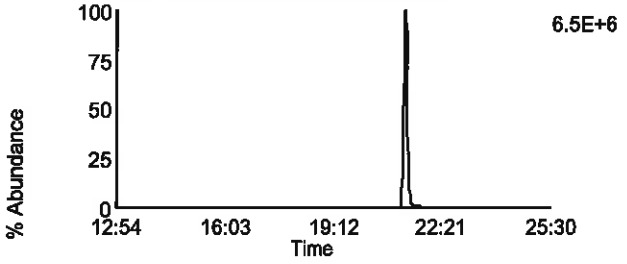
Data File: F130921A_16 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - BAL BAL



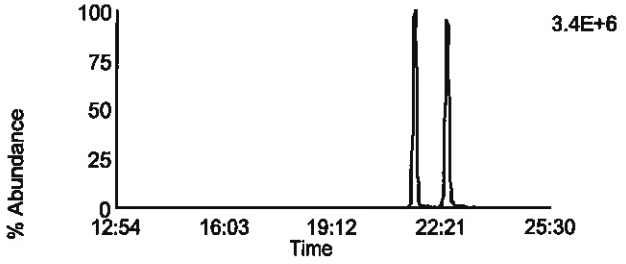
Data File: F130921A_16 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - BAL BAL



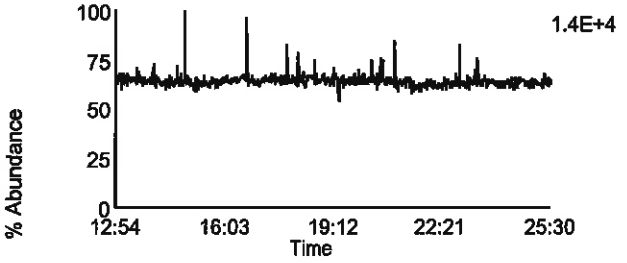
Data File: F130921A_16 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - BAL BAL



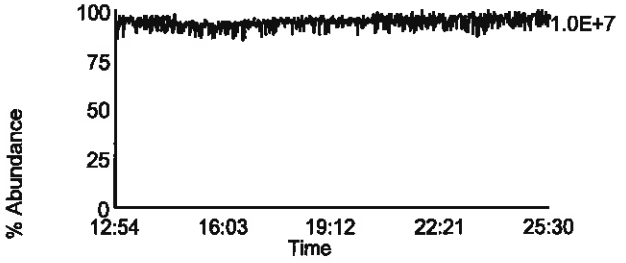
Data File: F130921A_16 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - BAL BAL



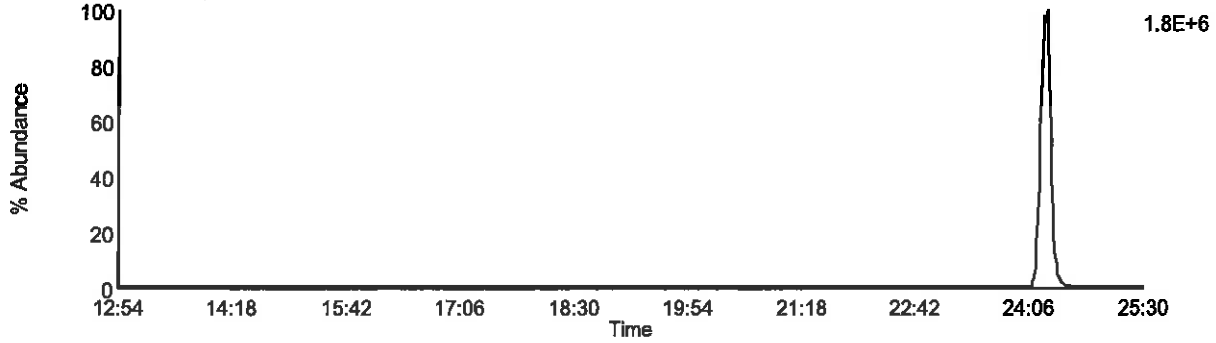
Data File: F130921A_16 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - BAL BAL



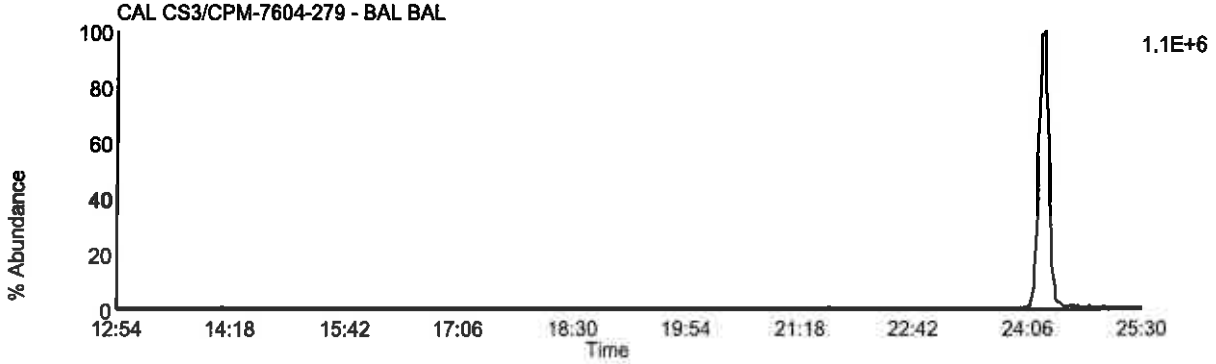
Homologue Group: Penta & Cleanup

Data File Name: F130921A_16	Lab Sample ID: CS3/CPM-7604-279
Date Acquired: 12/30/1899	Client Sample ID: CPM/WDM
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL	Instrument: 10MSHR05 (F)

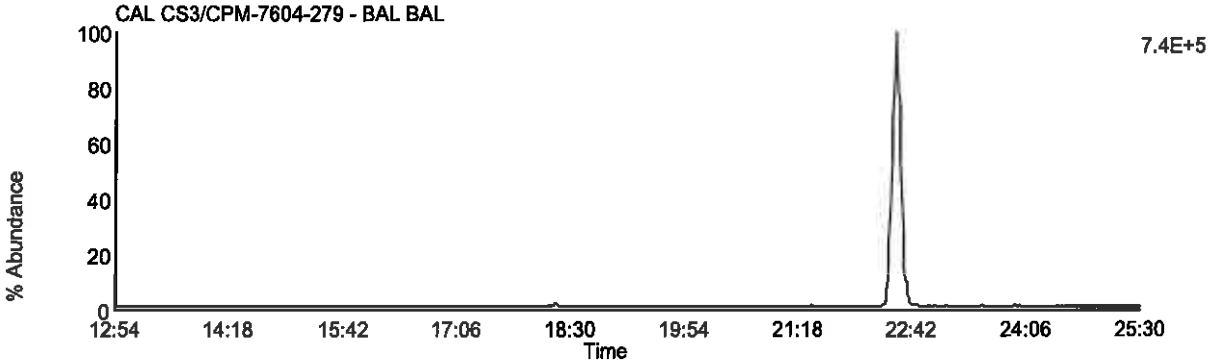
Data File: F130921A_16 G1 C12 - 339.8597
CAL CS3/CPM-7604-279 - BAL BAL



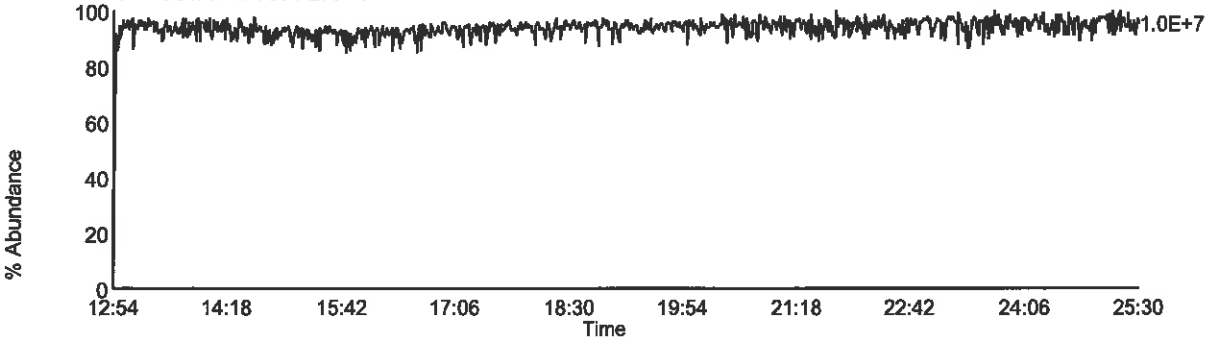
Data File: F130921A_16 G1 C13 - 341.8567
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G1 C9 - 327.8847
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - BAL BAL

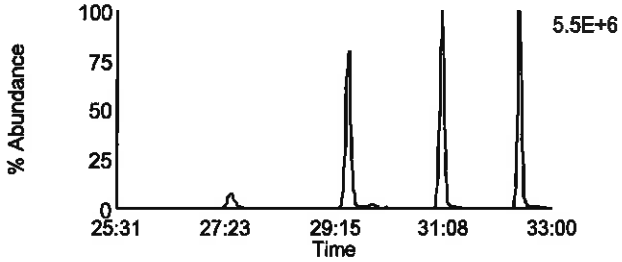


Homologue Group: Pentas

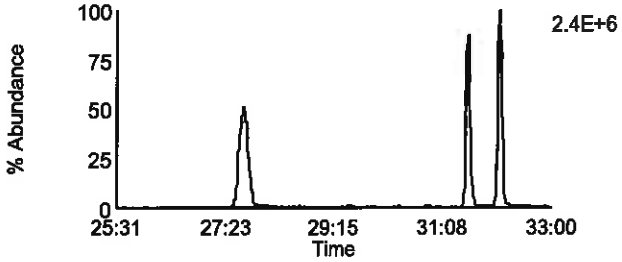
Data File Name: F130921A_16
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

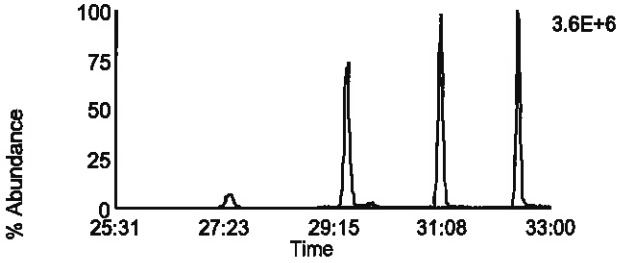
Data File: F130921A_16 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - BAL BAL



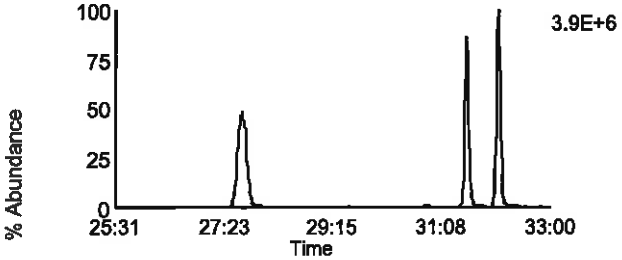
Data File: F130921A_16 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - BAL BAL



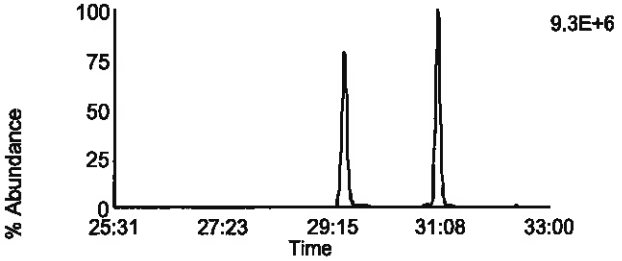
Data File: F130921A_16 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - BAL BAL



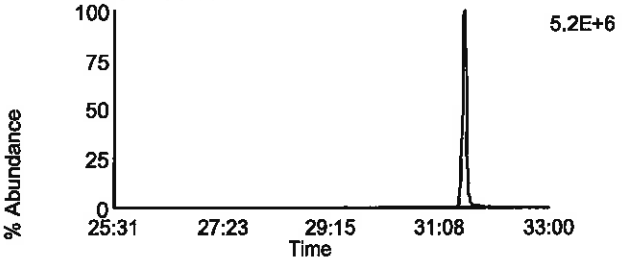
Data File: F130921A_16 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - BAL BAL



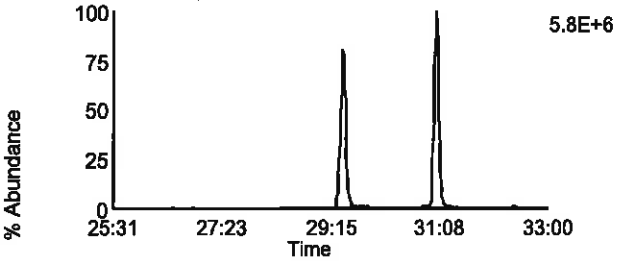
Data File: F130921A_16 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - BAL BAL



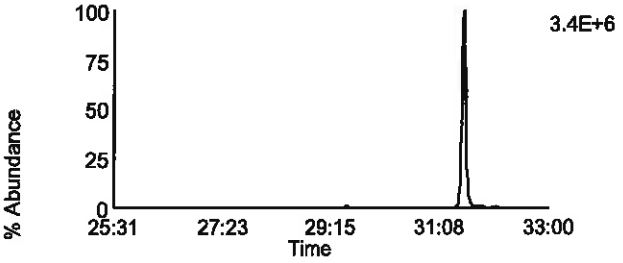
Data File: F130921A_16 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - BAL BAL



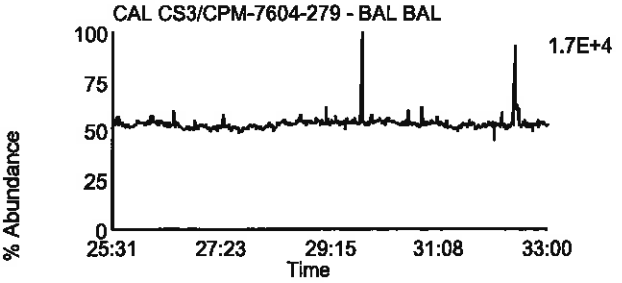
Data File: F130921A_16 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - BAL BAL



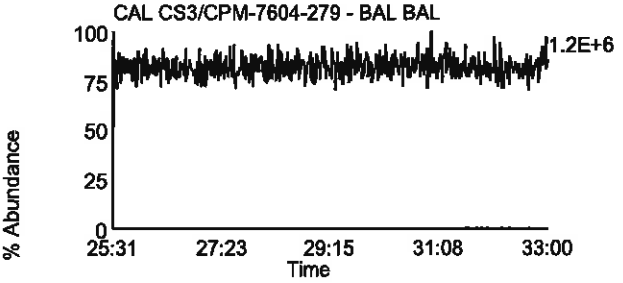
Data File: F130921A_16 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - BAL BAL

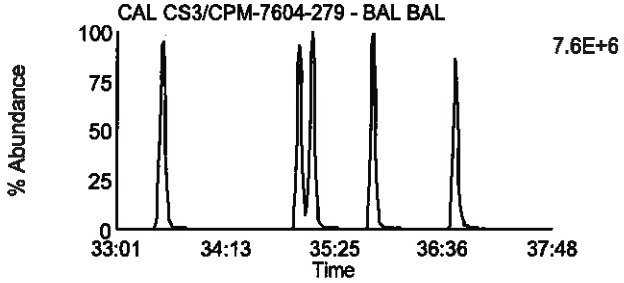


Homologue Group: Hexas

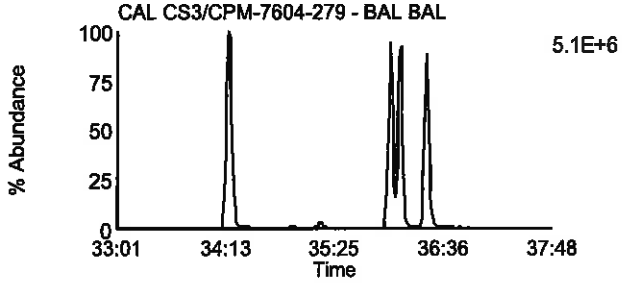
Data File Name: F130921A_16
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

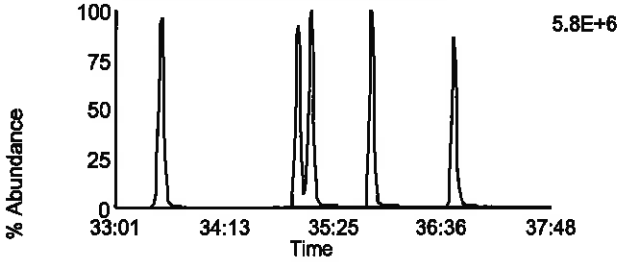
Data File: F130921A_16 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - BAL BAL



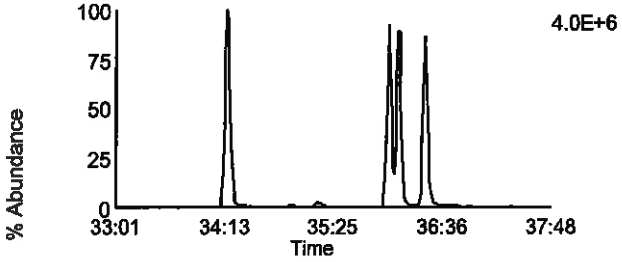
Data File: F130921A_16 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - BAL BAL



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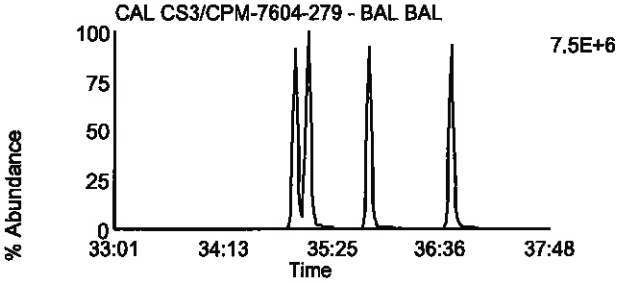
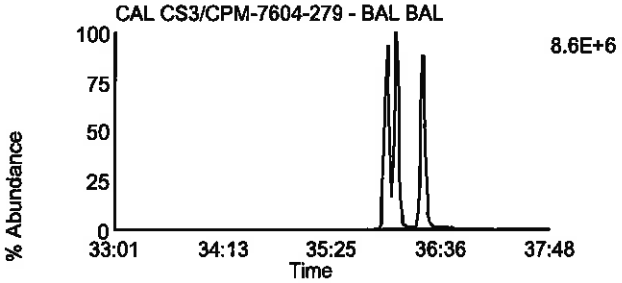
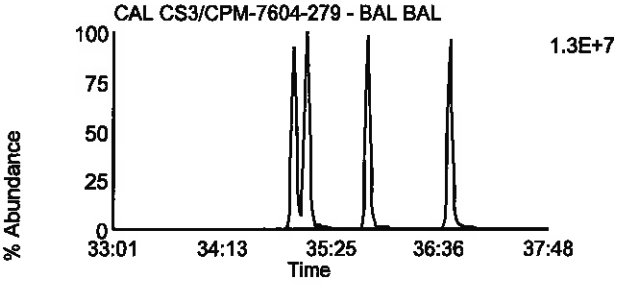
CAL CS3/CPM-7604-279 - BAL BAL



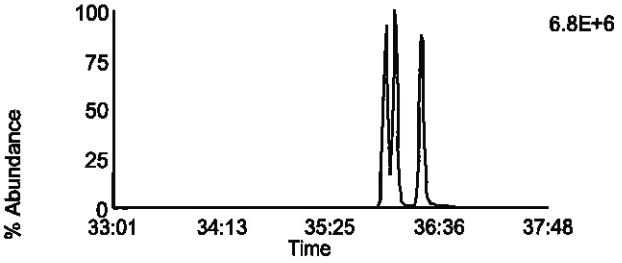
Data File: F130921A_16 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - BAL BAL



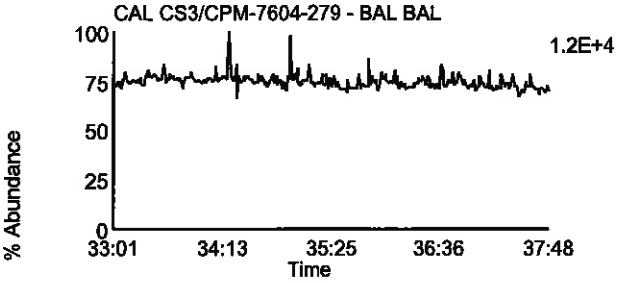
Data File: F130921A_16 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - BAL BAL



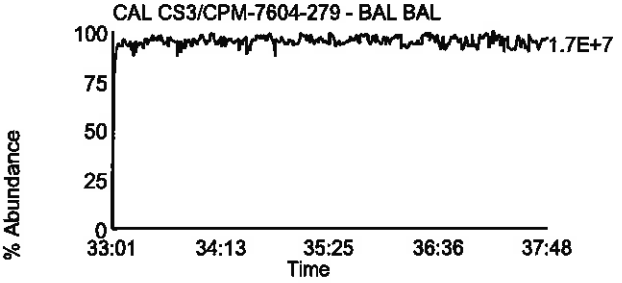
Data File: F130921A_16 G3 C10 - 403.8529
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - BAL BAL

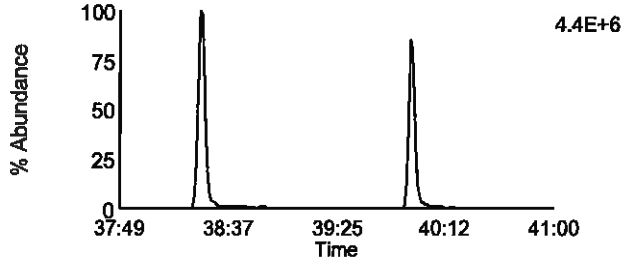


Homologue Group: Heptas

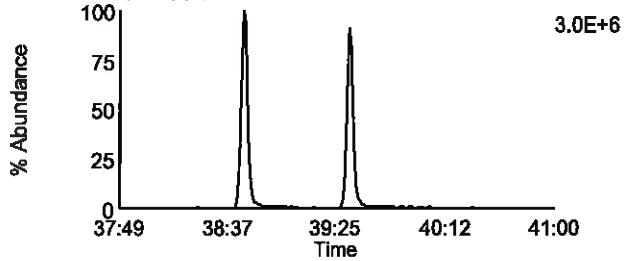
Data File Name: F130921A_16
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - **BAL BAL**

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

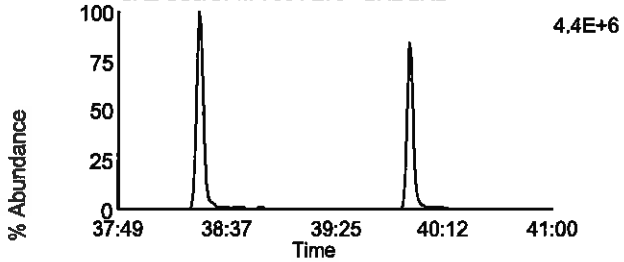
Data File: F130921A_16 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - BAL BAL



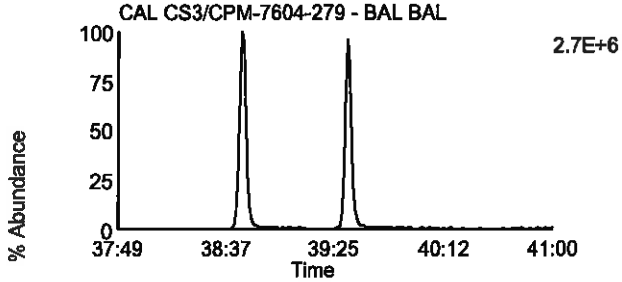
Data File: F130921A_16 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - BAL BAL



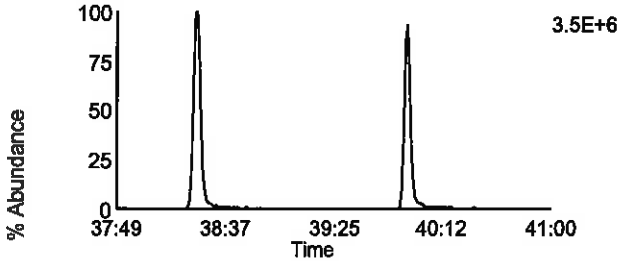
Data File: F130921A_16 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - BAL BAL



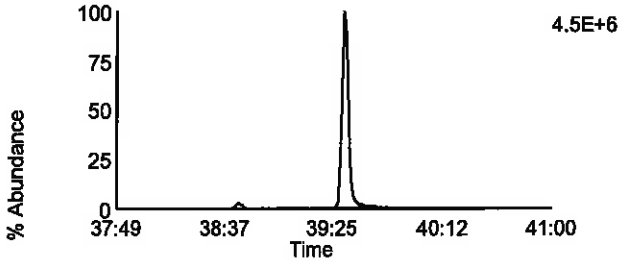
Data File: F130921A_16 G4 C9 - 425.7737
CAL CS3/CPM-7604-279 - BAL BAL



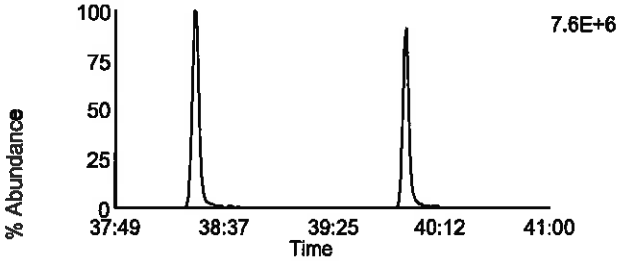
Data File: F130921A_16 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - BAL BAL



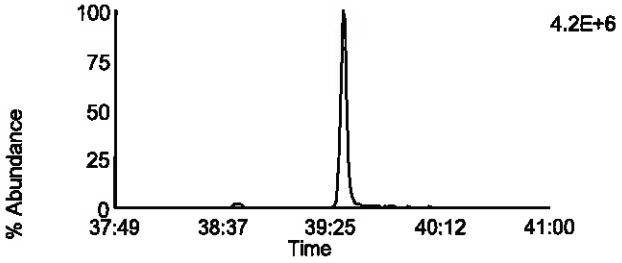
Data File: F130921A_16 G4 C11 - 435.8169
CAL CS3/CPM-7604-279 - BAL BAL



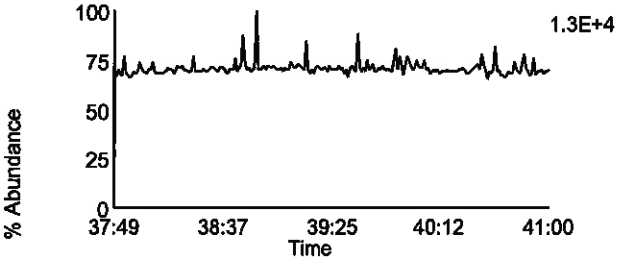
Data File: F130921A_16 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - BAL BAL



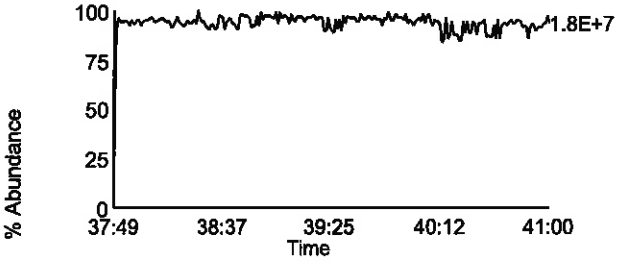
Data File: F130921A_16 G4 C12 - 437.814
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G4 C13 - 479.7165
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G4 C1 - 380.976
CAL CS3/CPM-7604-279 - BAL BAL

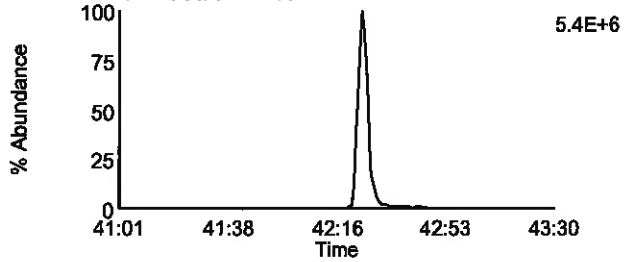


Homologue Group: Octas

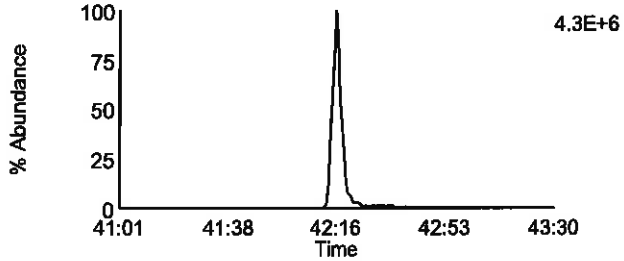
Data File Name: F130921A_16
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - BAL BAL

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR05 (F)

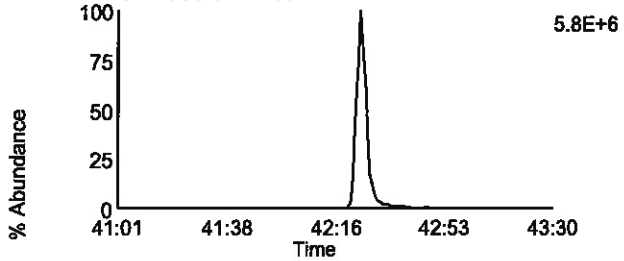
Data File: F130921A_16 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - BAL BAL



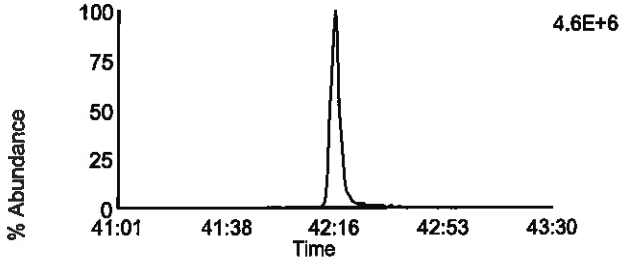
Data File: F130921A_16 G5 C8 - 457.7377
CAL CS3/CPM-7604-279 - BAL BAL



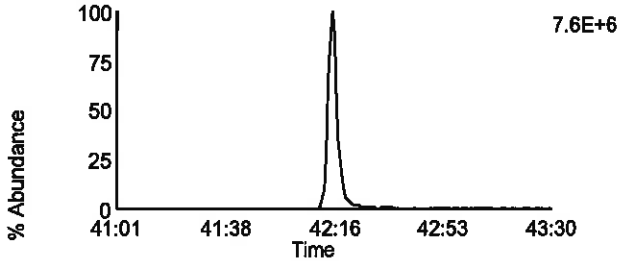
Data File: F130921A_16 G5 C5 - 443.7398
CAL CS3/CPM-7604-279 - BAL BAL



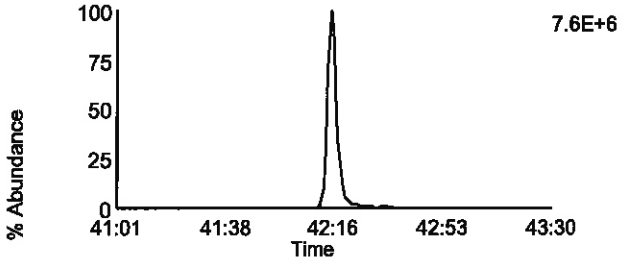
Data File: F130921A_16 G5 C9 - 459.7347
CAL CS3/CPM-7604-279 - BAL BAL



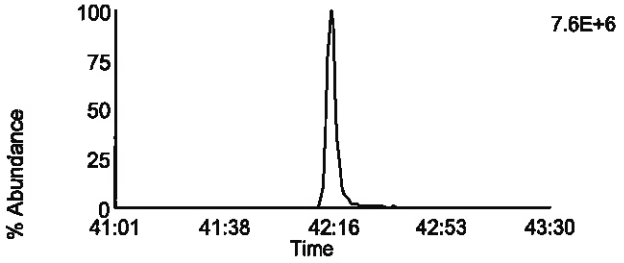
Data File: F130921A_16 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - BAL BAL



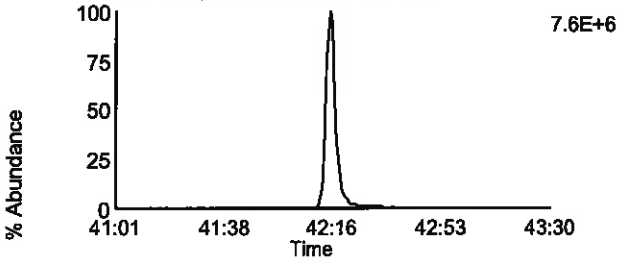
Data File: F130921A_16 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - BAL BAL



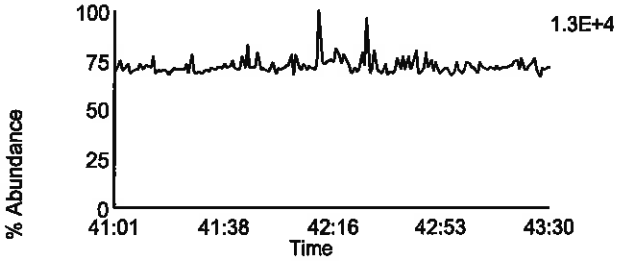
Data File: F130921A_16 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - BAL BAL



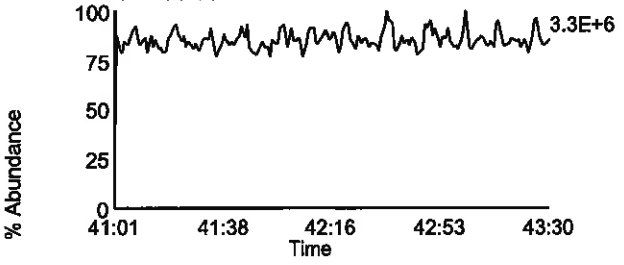
Data File: F130921A_16 G5 C12 - 471.7749
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G5 C13 - 513.6775
CAL CS3/CPM-7604-279 - BAL BAL



Data File: F130921A_16 G5 C2 - 430.9728
CAL CS3/CPM-7604-279 - BAL BAL

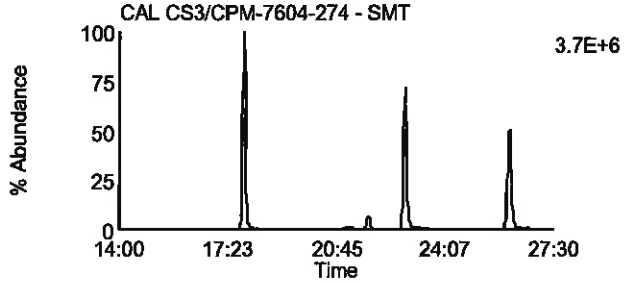


Homologue Group: Tetras

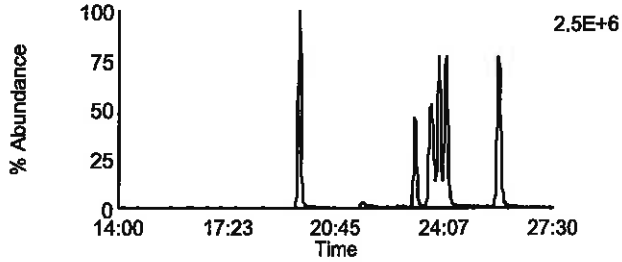
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

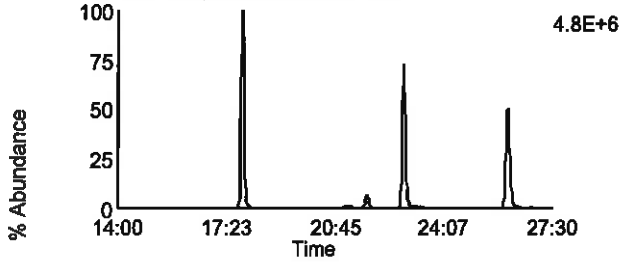
Data File: U130729B_09 G1 C1 - 303.9016
CAL CS3/CPM-7604-274 - SMT



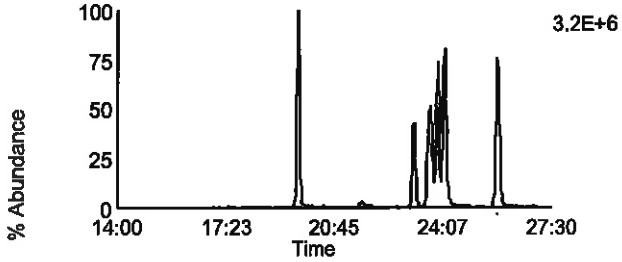
Data File: U130729B_09 G1 C7 - 319.8965
CAL CS3/CPM-7604-274 - SMT



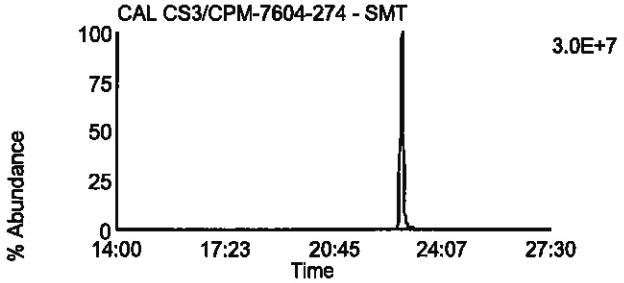
Data File: U130729B_09 G1 C2 - 305.8987
CAL CS3/CPM-7604-274 - SMT



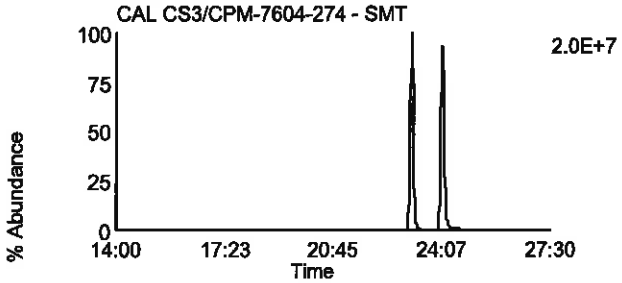
Data File: U130729B_09 G1 C8 - 321.8936
CAL CS3/CPM-7604-274 - SMT



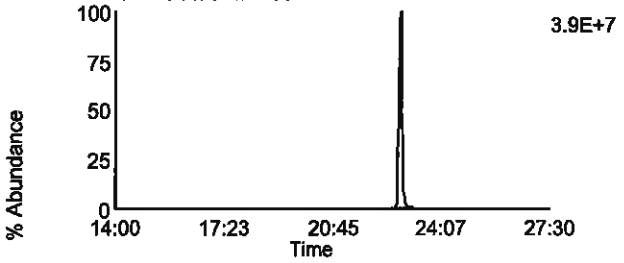
Data File: U130729B_09 G1 C3 - 315.9418
CAL CS3/CPM-7604-274 - SMT



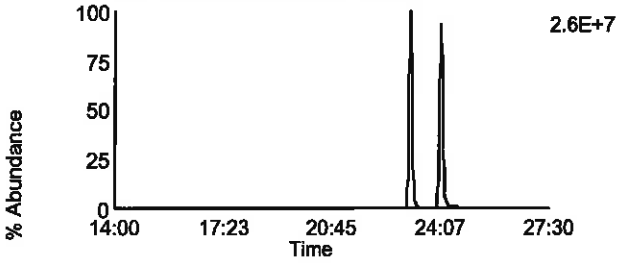
Data File: U130729B_09 G1 C10 - 331.9367
CAL CS3/CPM-7604-274 - SMT



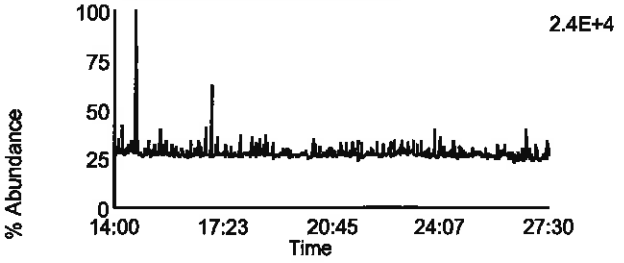
Data File: U130729B_09 G1 C4 - 317.9389
CAL CS3/CPM-7604-274 - SMT



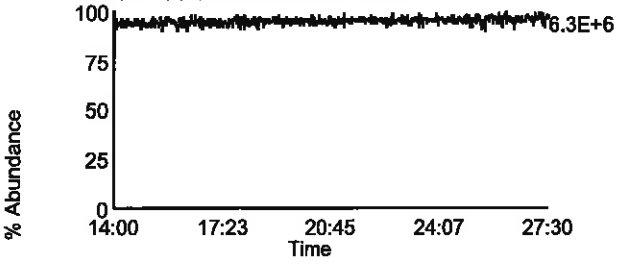
Data File: U130729B_09 G1 C11 - 333.9338
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C14 - 375.8364
CAL CS3/CPM-7604-274 - SMT



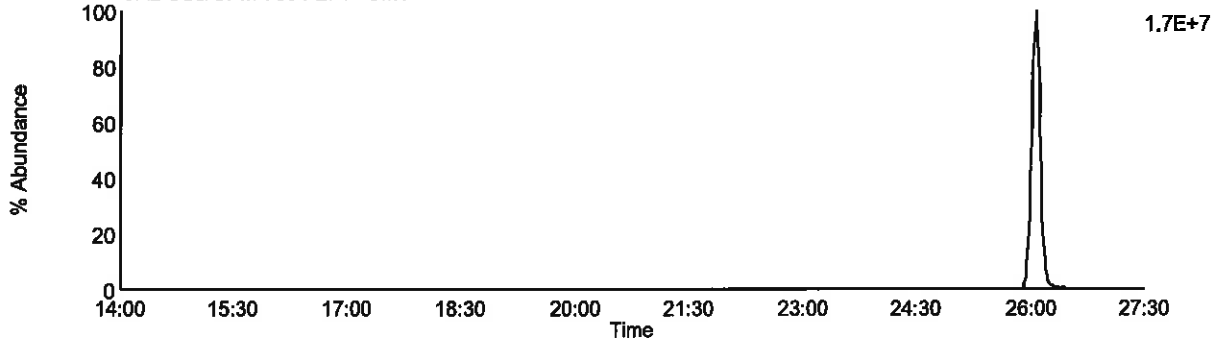
Data File: U130729B_09 G1 C5 - 318.9792
CAL CS3/CPM-7604-274 - SMT



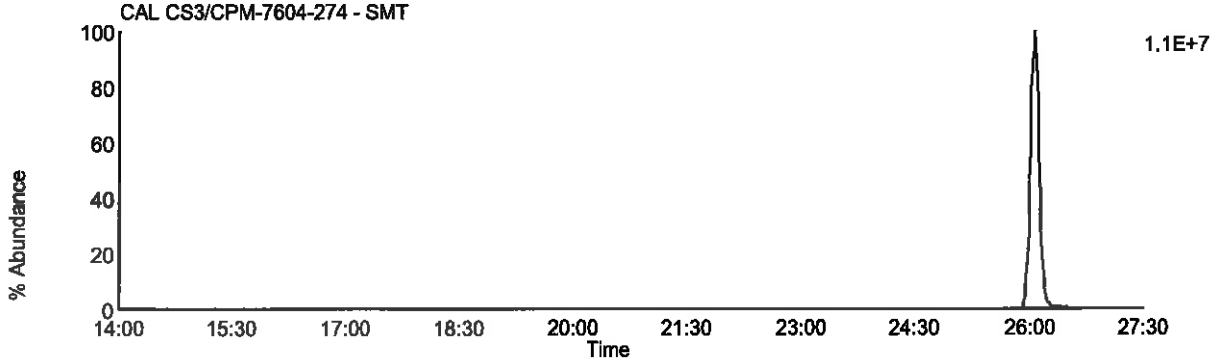
Homologue Group: Penta & Cleanup

Data File Name: U130729B_09	Lab Sample ID: CS3/CPM-7604-274
Date Acquired: 7/29/2013	Client Sample ID: CPM/WDM
Sample Description: CAL CS3/CPM-7604-274 - SMT	Instrument: 10MSHR06 (U)

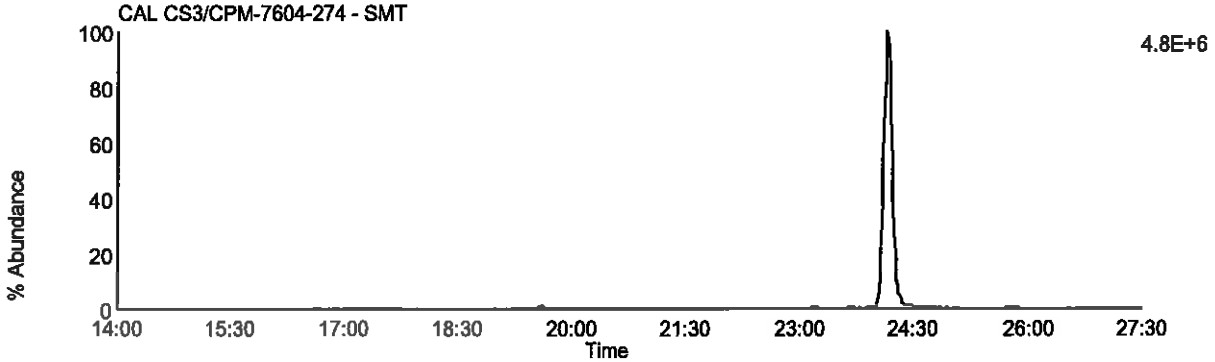
Data File: U130729B_09 G1 C12 - 339.8597
CAL CS3/CPM-7604-274 - SMT



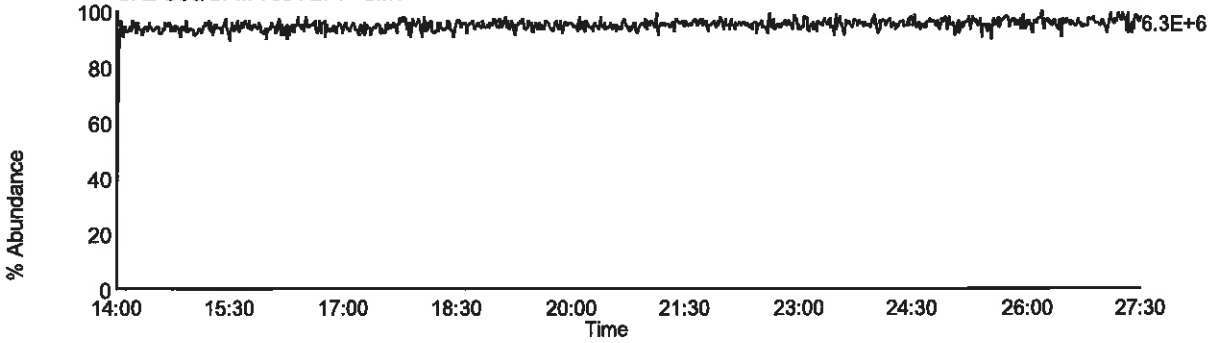
Data File: U130729B_09 G1 C13 - 341.8567
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C9 - 327.8847
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G1 C5 - 318.9792
CAL CS3/CPM-7604-274 - SMT

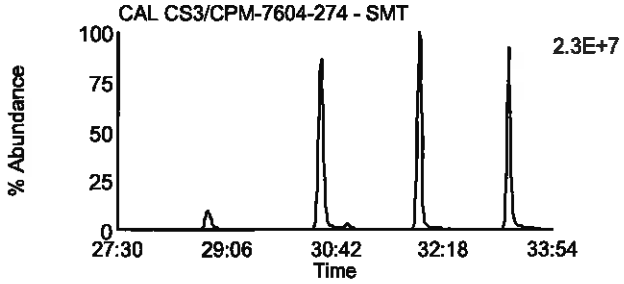


Homologue Group: Pentas

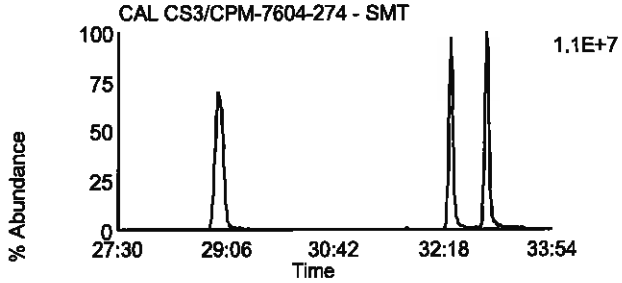
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

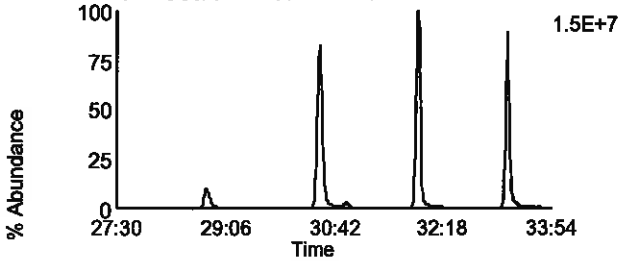
Data File: U130729B_09 G2 C1 - 339.8597
CAL CS3/CPM-7604-274 - SMT



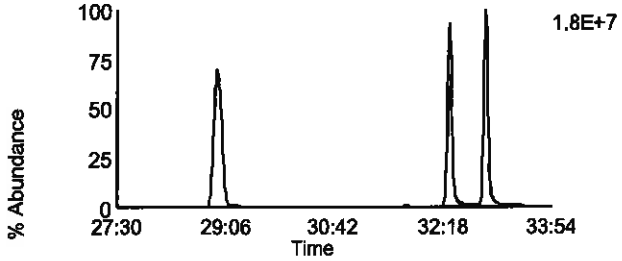
Data File: U130729B_09 G2 C4 - 353.8576
CAL CS3/CPM-7604-274 - SMT



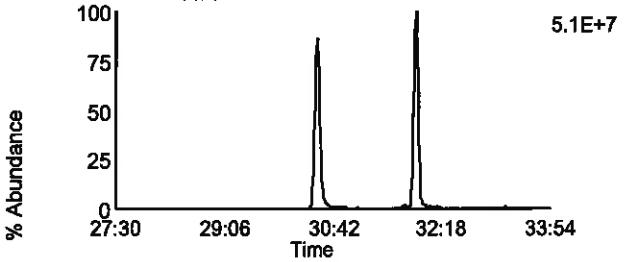
Data File: U130729B_09 G2 C2 - 341.8567
CAL CS3/CPM-7604-274 - SMT



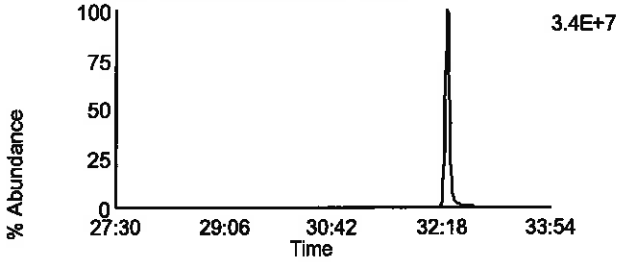
Data File: U130729B_09 G2 C8 - 355.8546
CAL CS3/CPM-7604-274 - SMT



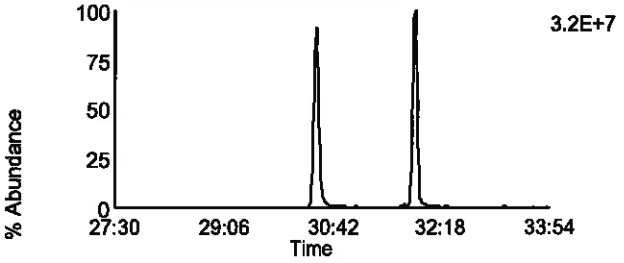
Data File: U130729B_09 G2 C3 - 351.8999
CAL CS3/CPM-7604-274 - SMT



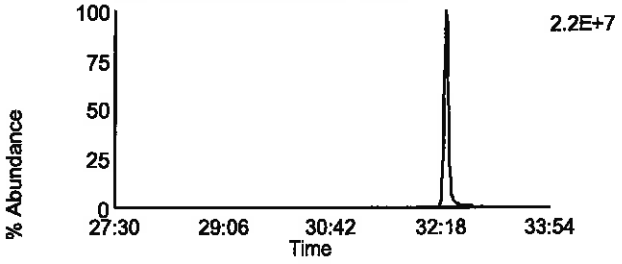
Data File: U130729B_09 G2 C10 - 367.8948
CAL CS3/CPM-7604-274 - SMT



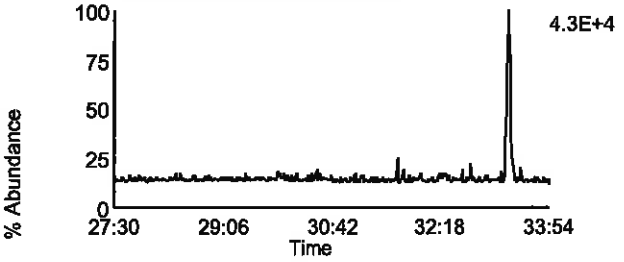
Data File: U130729B_09 G2 C5 - 353.8969
CAL CS3/CPM-7604-274 - SMT



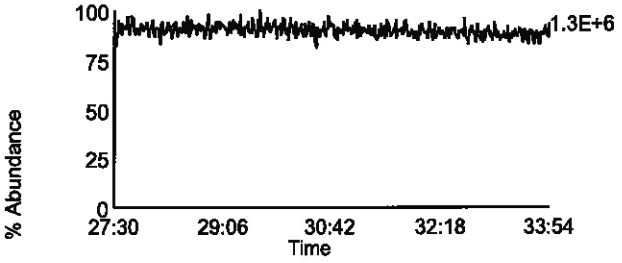
Data File: U130729B_09 G2 C11 - 369.8918
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G2 C12 - 409.7974
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G2 C6 - 354.9792
CAL CS3/CPM-7604-274 - SMT

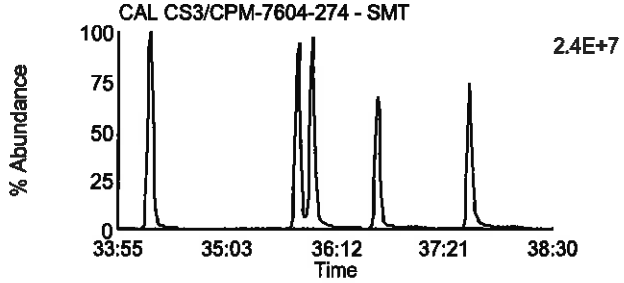


Homologue Group: Hexas

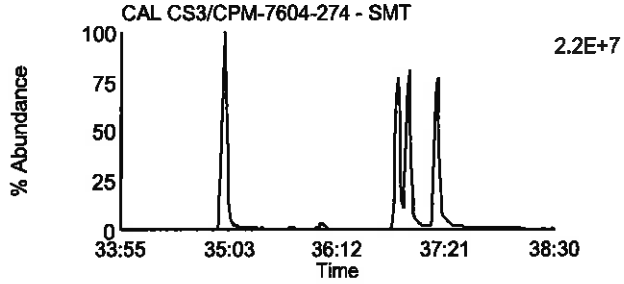
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

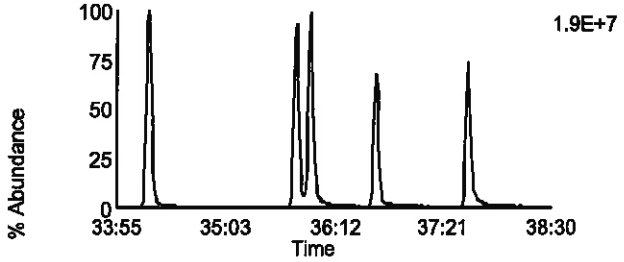
Data File: U130729B_09 G3 C1 - 373.8207
CAL CS3/CPM-7604-274 - SMT



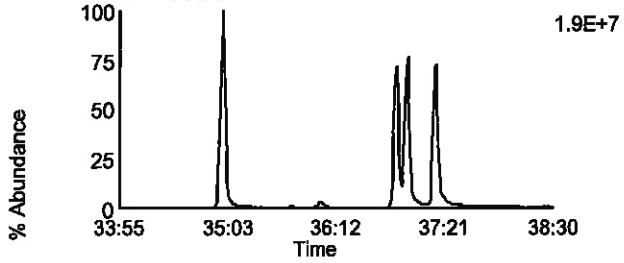
Data File: U130729B_09 G3 C7 - 389.8156
CAL CS3/CPM-7604-274 - SMT



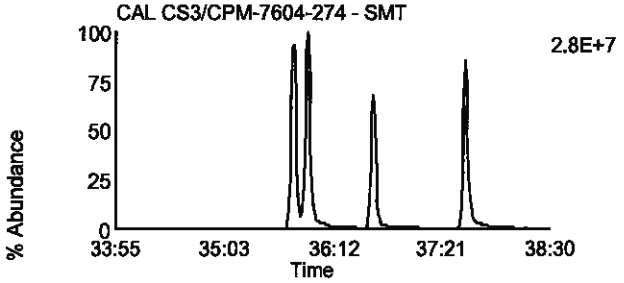
Data File: U130729B_09 G3 C2 - 375.8178
CAL CS3/CPM-7604-274 - SMT



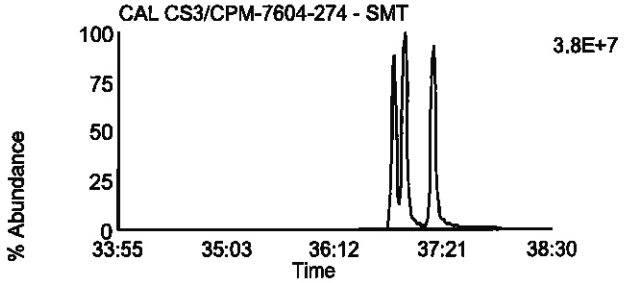
Data File: U130729B_09 G3 C8 - 391.8127
CAL CS3/CPM-7604-274 - SMT



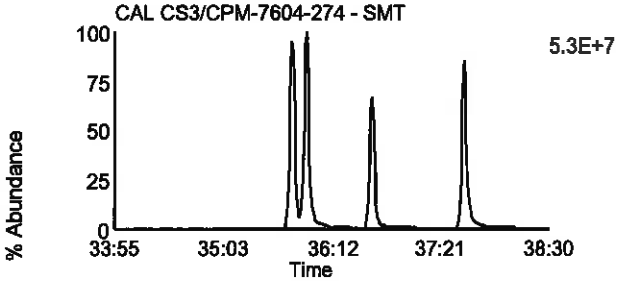
Data File: U130729B_09 G3 C5 - 383.8639
CAL CS3/CPM-7604-274 - SMT



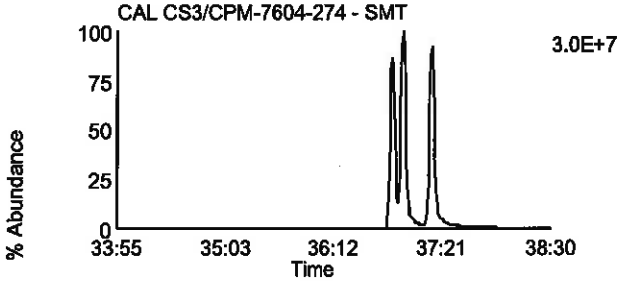
Data File: U130729B_09 G3 C9 - 401.8559
CAL CS3/CPM-7604-274 - SMT



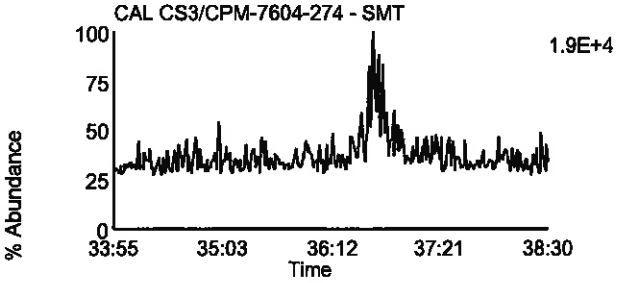
Data File: U130729B_09 G3 C6 - 385.861
CAL CS3/CPM-7604-274 - SMT



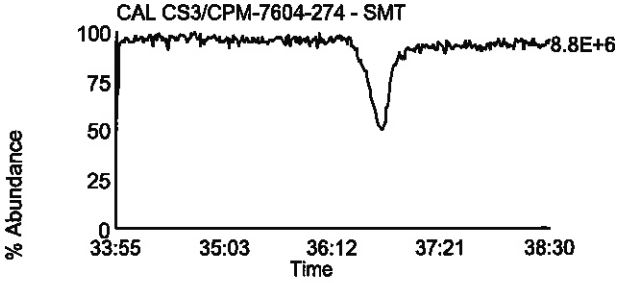
Data File: U130729B_09 G3 C10 - 403.8529
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G3 C11 - 445.7555
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G3 C3 - 380.976
CAL CS3/CPM-7604-274 - SMT

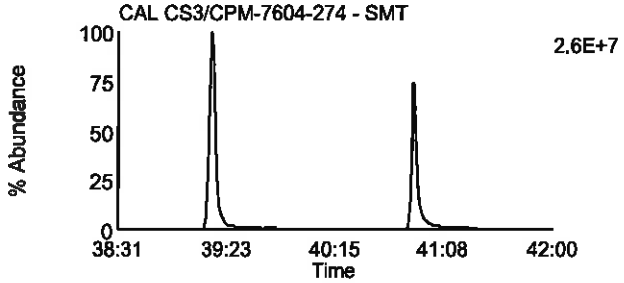


Homologue Group: Heptas

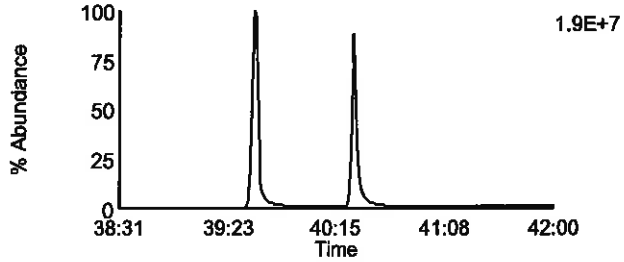
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

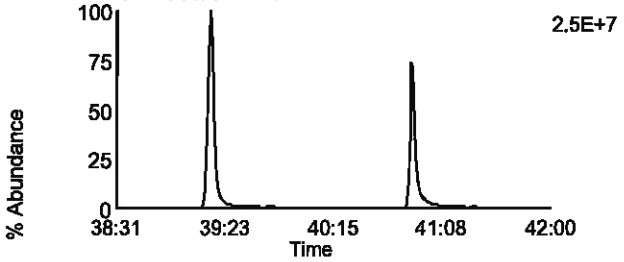
Data File: U130729B_09 G4 C3 - 407.7818
CAL CS3/CPM-7604-274 - SMT



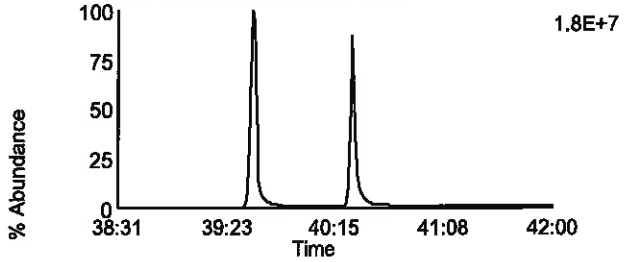
Data File: U130729B_09 G4 C8 - 423.7767
CAL CS3/CPM-7604-274 - SMT



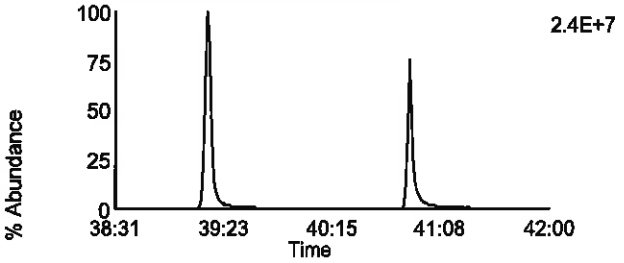
Data File: U130729B_09 G4 C4 - 409.7788
CAL CS3/CPM-7604-274 - SMT



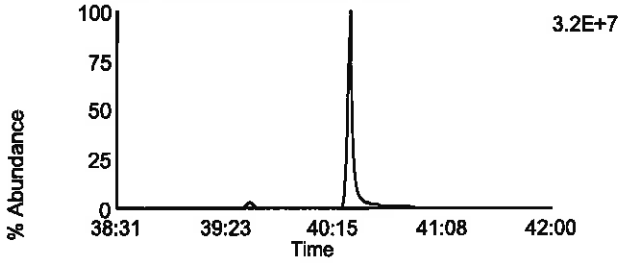
Data File: U130729B_09 G4 C9 - 425.7737
CAL CS3/CPM-7604-274 - SMT



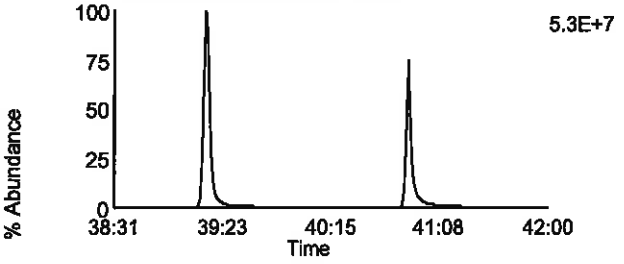
Data File: U130729B_09 G4 C6 - 417.825
CAL CS3/CPM-7604-274 - SMT



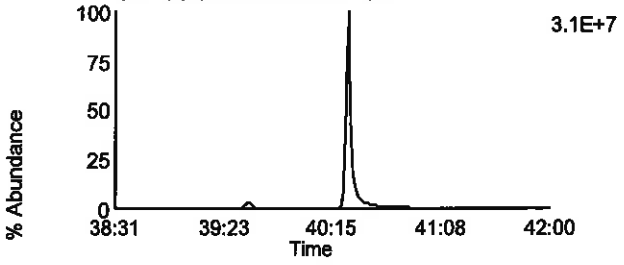
Data File: U130729B_09 G4 C11 - 435.8169
CAL CS3/CPM-7604-274 - SMT



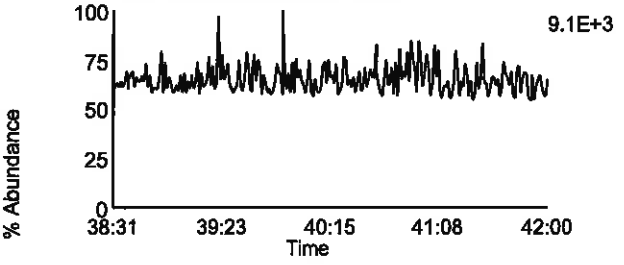
Data File: U130729B_09 G4 C7 - 419.822
CAL CS3/CPM-7604-274 - SMT



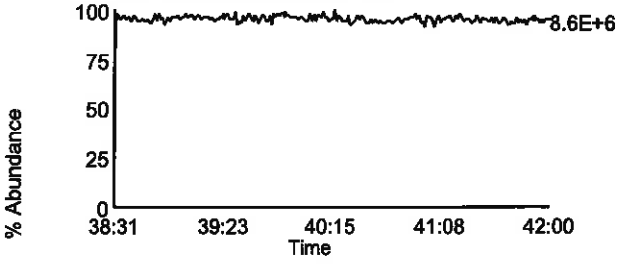
Data File: U130729B_09 G4 C12 - 437.814
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G4 C13 - 479.7165
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G4 C1 - 380.976
CAL CS3/CPM-7604-274 - SMT

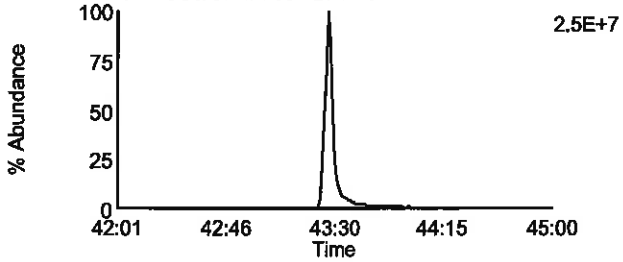


Homologue Group: Octas

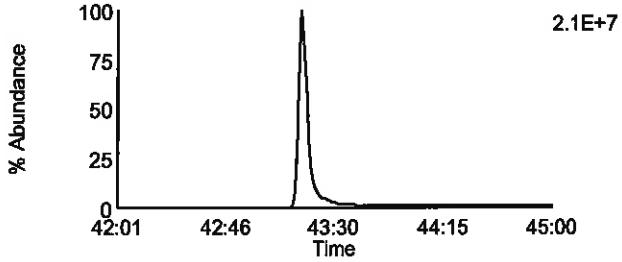
Data File Name: U130729B_09
Date Acquired: 7/29/2013
Sample Description: CAL CS3/CPM-7604-274 - SMT

Lab Sample ID: CS3/CPM-7604-274
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

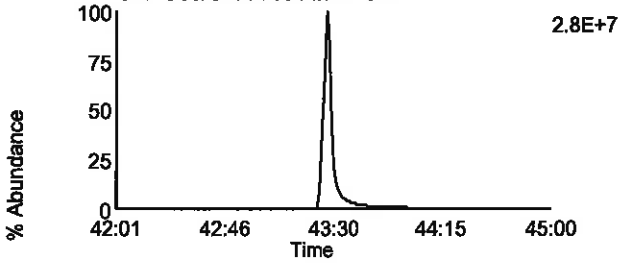
Data File: U130729B_09 G5 C4 - 441.7428
CAL CS3/CPM-7604-274 - SMT



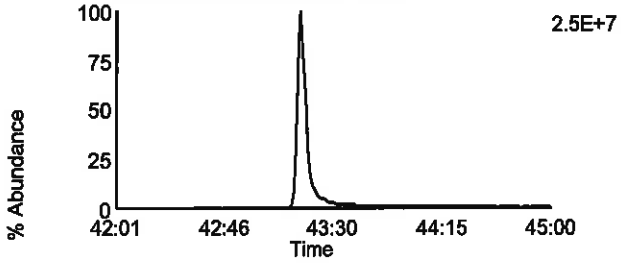
Data File: U130729B_09 G5 C8 - 457.7377
CAL CS3/CPM-7604-274 - SMT



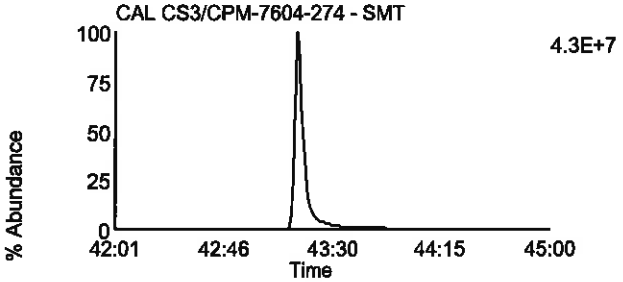
Data File: U130729B_09 G5 C5 - 443.7398
CAL CS3/CPM-7604-274 - SMT



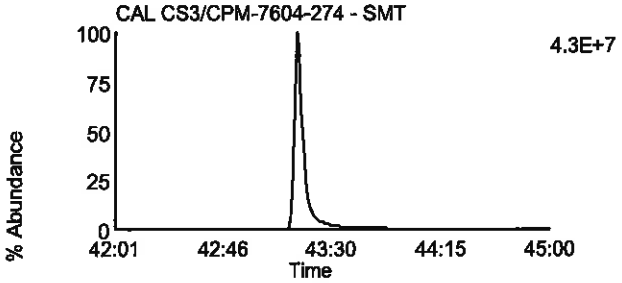
Data File: U130729B_09 G5 C9 - 459.7347
CAL CS3/CPM-7604-274 - SMT



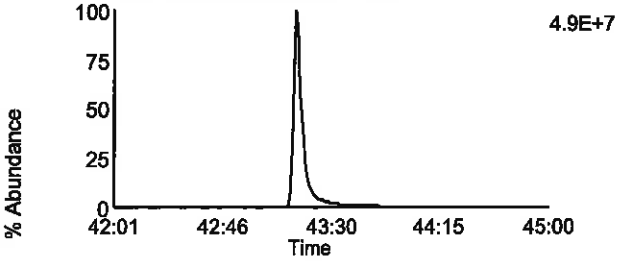
Data File: U130729B_09 G5 C11 - 469.7779
CAL CS3/CPM-7604-274 - SMT



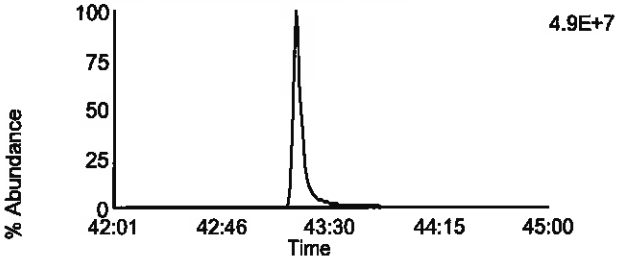
Data File: U130729B_09 G5 C11 - 469.7779
CAL CS3/CPM-7604-274 - SMT



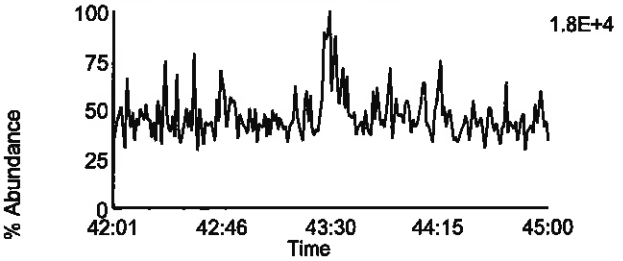
Data File: U130729B_09 G5 C12 - 471.7749
CAL CS3/CPM-7604-274 - SMT



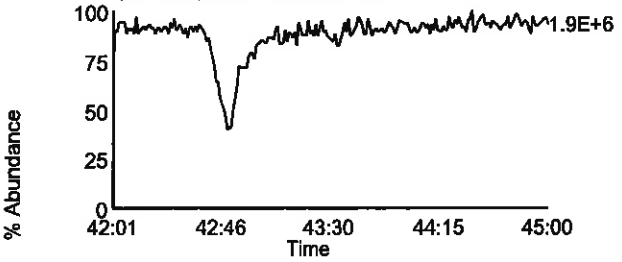
Data File: U130729B_09 G5 C12 - 471.7749
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G5 C13 - 513.6775
CAL CS3/CPM-7604-274 - SMT



Data File: U130729B_09 G5 C2 - 430.9728
CAL CS3/CPM-7604-274 - SMT

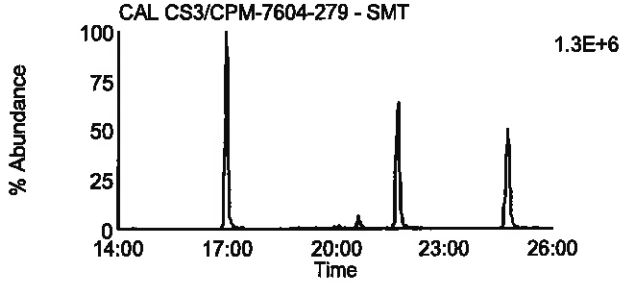


Homologue Group: Tetras

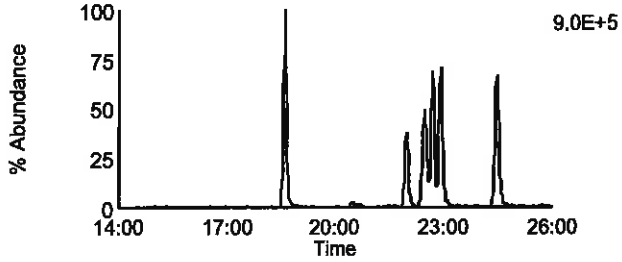
Data File Name: U130917A_22
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

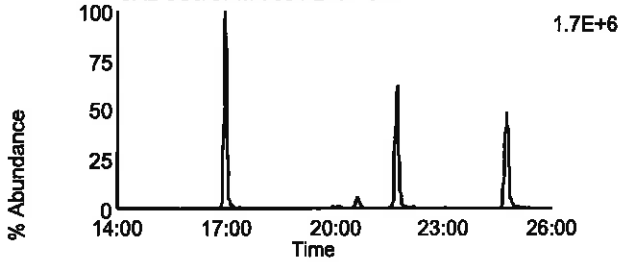
Data File: U130917A_22 G1 C1 - 303.9016
CAL CS3/CPM-7604-279 - SMT



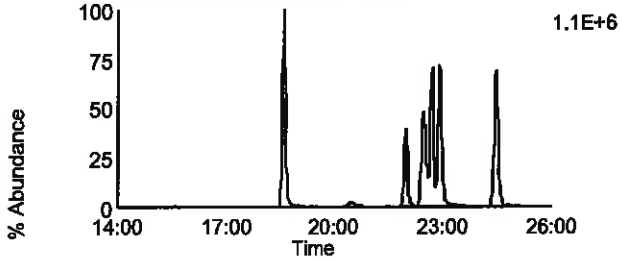
Data File: U130917A_22 G1 C7 - 319.8965
CAL CS3/CPM-7604-279 - SMT



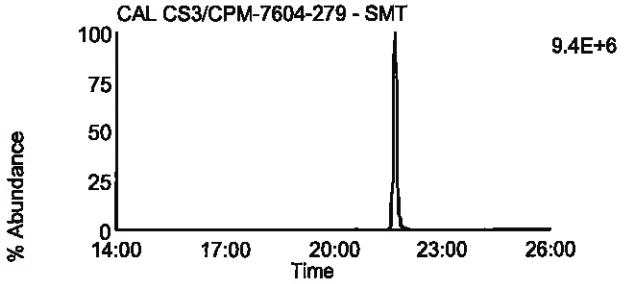
Data File: U130917A_22 G1 C2 - 305.8987
CAL CS3/CPM-7604-279 - SMT



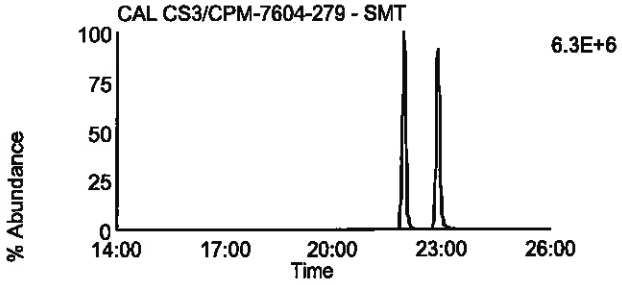
Data File: U130917A_22 G1 C8 - 321.8936
CAL CS3/CPM-7604-279 - SMT



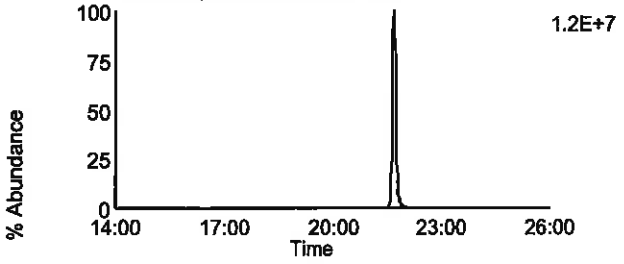
Data File: U130917A_22 G1 C3 - 315.9418
CAL CS3/CPM-7604-279 - SMT



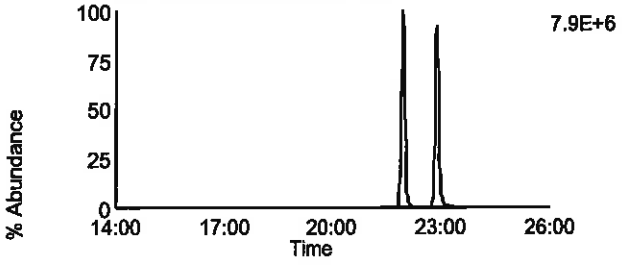
Data File: U130917A_22 G1 C10 - 331.9367
CAL CS3/CPM-7604-279 - SMT



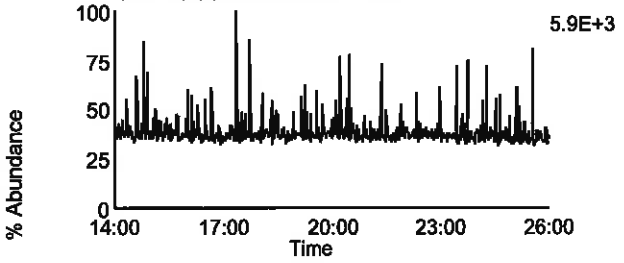
Data File: U130917A_22 G1 C4 - 317.9389
CAL CS3/CPM-7604-279 - SMT



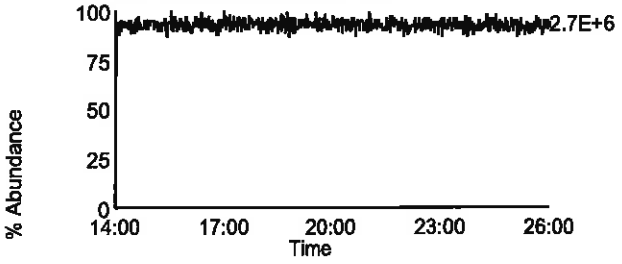
Data File: U130917A_22 G1 C11 - 333.9338
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G1 C14 - 375.8364
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT

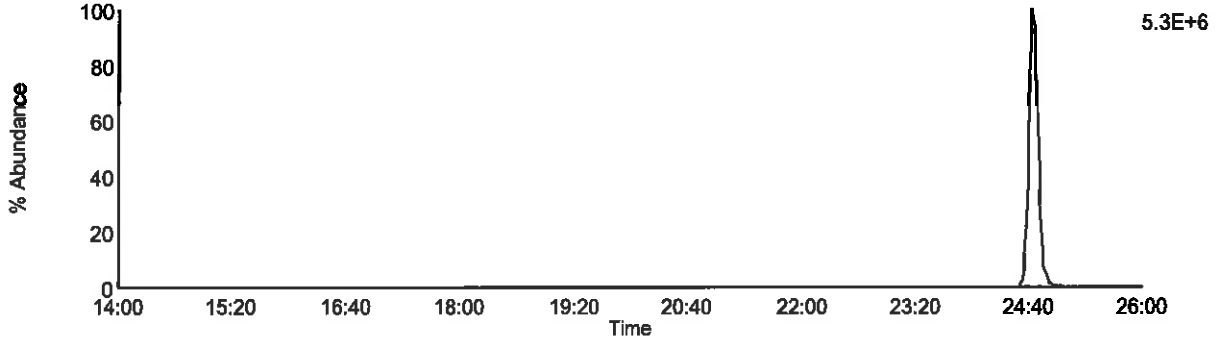


Homologue Group: Penta & Cleanup

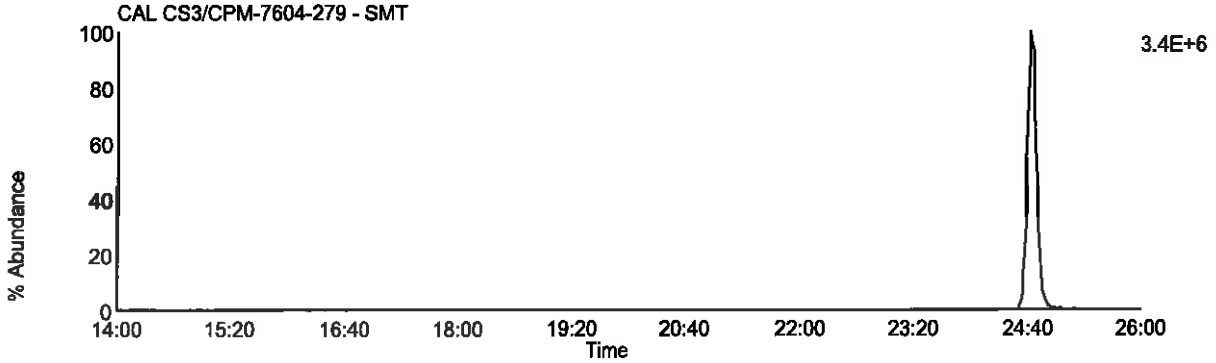
Data File Name: U130917A_22
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

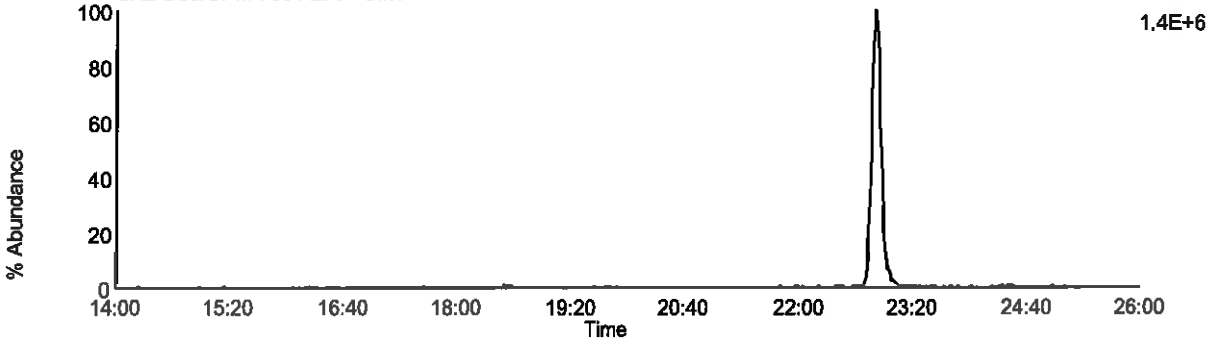
Data File: U130917A_22 G1 C12 - 339.8597
CAL CS3/CPM-7604-279 - SMT



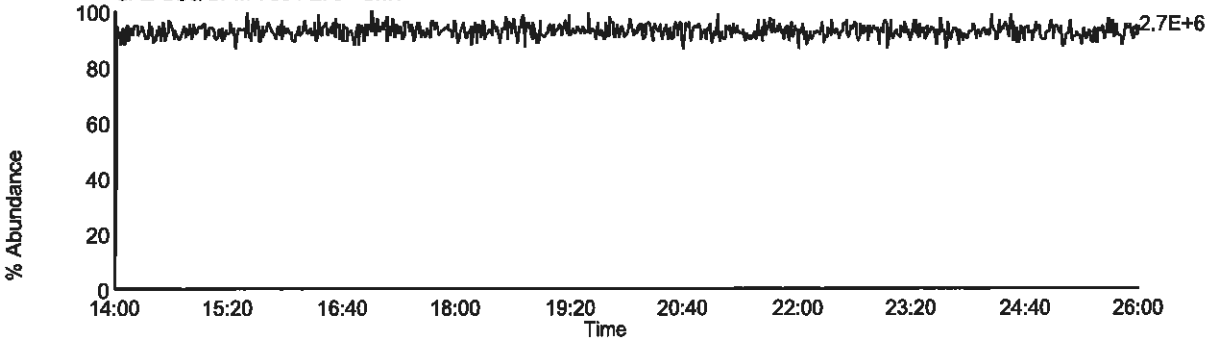
Data File: U130917A_22 G1 C13 - 341.8567
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G1 C9 - 327.8847
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G1 C5 - 318.9792
CAL CS3/CPM-7604-279 - SMT

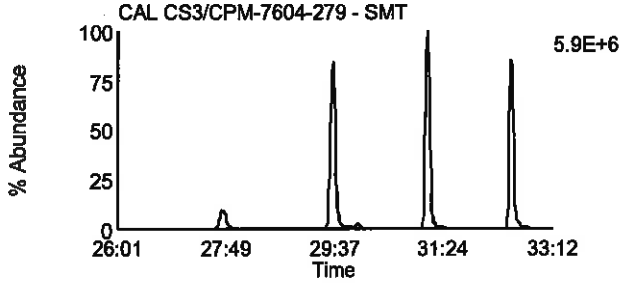


Homologue Group: Pentas

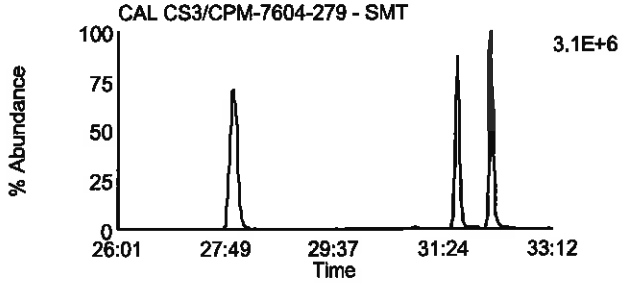
Data File Name: U130917A_22
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

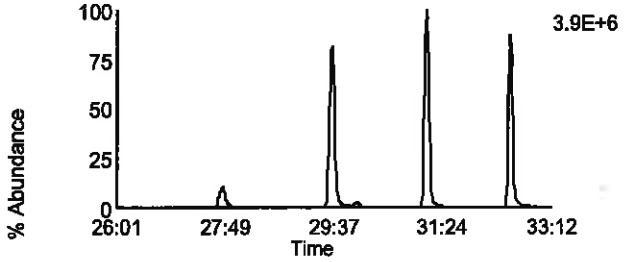
Data File: U130917A_22 G2 C1 - 339.8597
CAL CS3/CPM-7604-279 - SMT



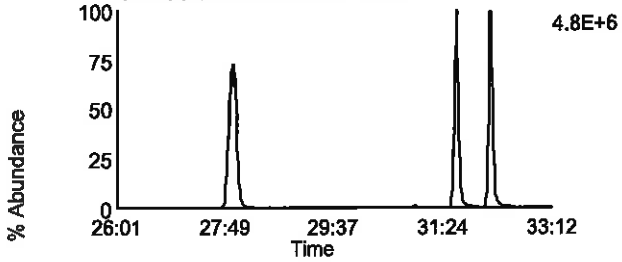
Data File: U130917A_22 G2 C4 - 353.8576
CAL CS3/CPM-7604-279 - SMT



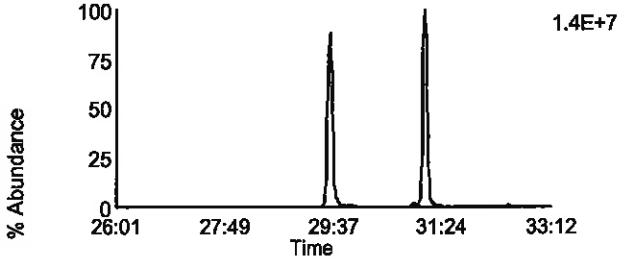
Data File: U130917A_22 G2 C2 - 341.8567
CAL CS3/CPM-7604-279 - SMT



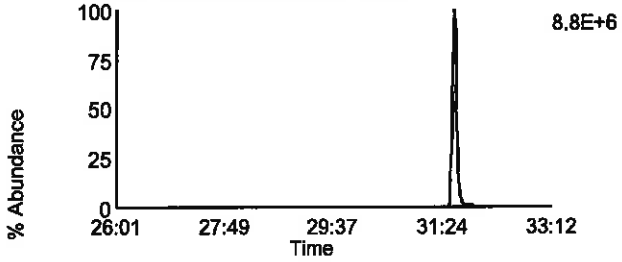
Data File: U130917A_22 G2 C8 - 355.8546
CAL CS3/CPM-7604-279 - SMT



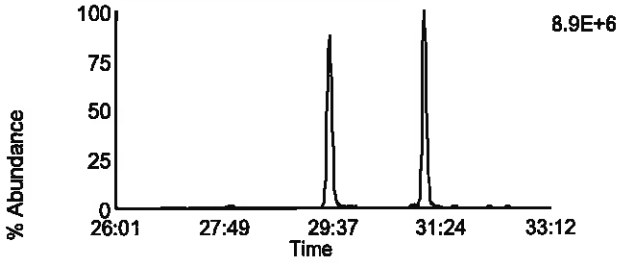
Data File: U130917A_22 G2 C3 - 351.8999
CAL CS3/CPM-7604-279 - SMT



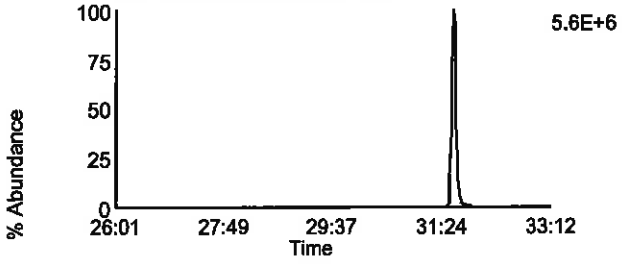
Data File: U130917A_22 G2 C10 - 367.8948
CAL CS3/CPM-7604-279 - SMT



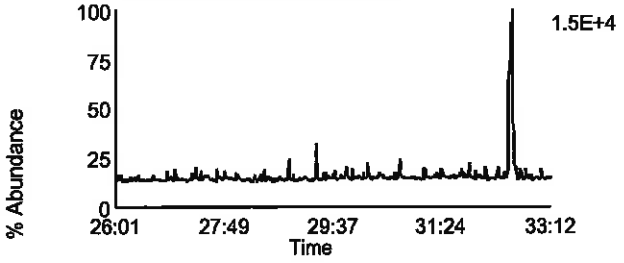
Data File: U130917A_22 G2 C5 - 353.8969
CAL CS3/CPM-7604-279 - SMT



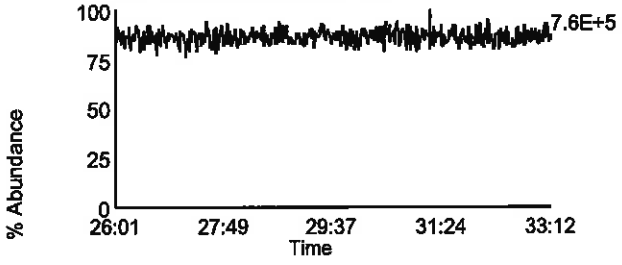
Data File: U130917A_22 G2 C11 - 369.8918
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G2 C12 - 409.7974
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G2 C6 - 354.9792
CAL CS3/CPM-7604-279 - SMT

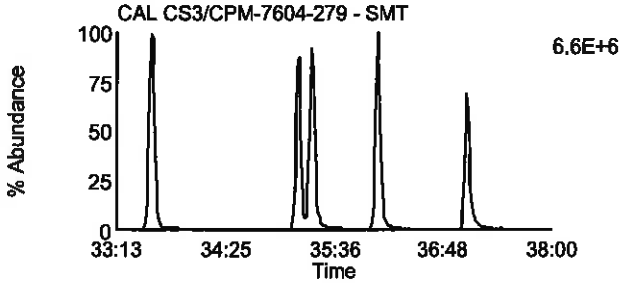


Homologue Group: Hexas

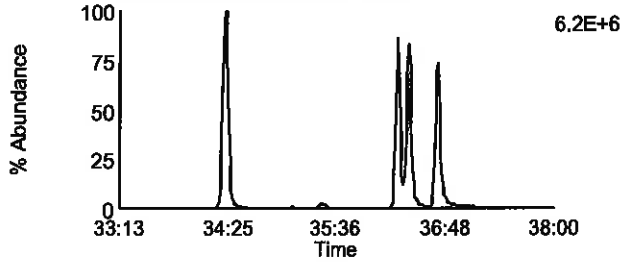
Data File Name: U130917A_22
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

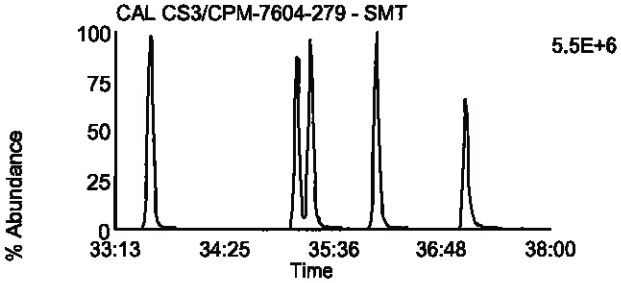
Data File: U130917A_22 G3 C1 - 373.8207
CAL CS3/CPM-7604-279 - SMT



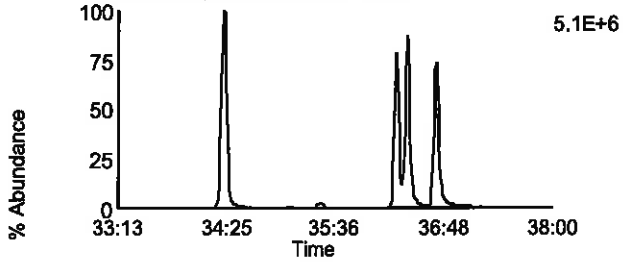
Data File: U130917A_22 G3 C7 - 389.8156
CAL CS3/CPM-7604-279 - SMT



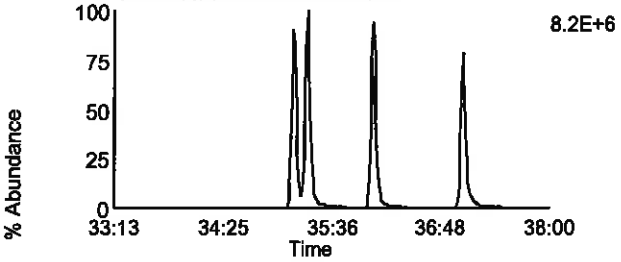
Data File: U130917A_22 G3 C2 - 375.8178
CAL CS3/CPM-7604-279 - SMT



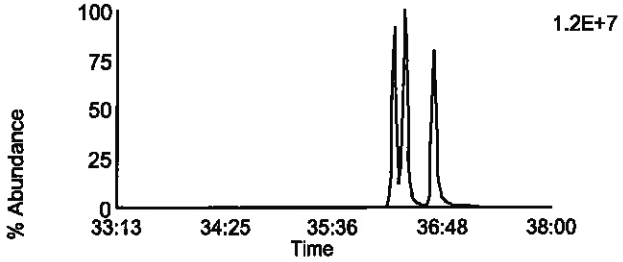
Data File: U130917A_22 G3 C8 - 391.8127
CAL CS3/CPM-7604-279 - SMT



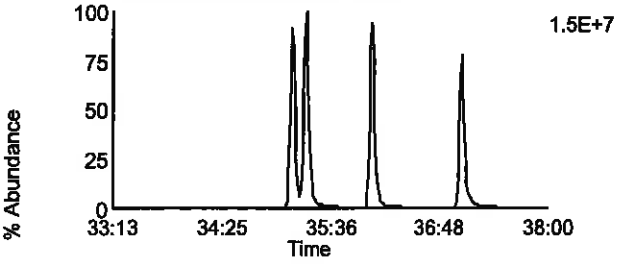
Data File: U130917A_22 G3 C5 - 383.8639
CAL CS3/CPM-7604-279 - SMT



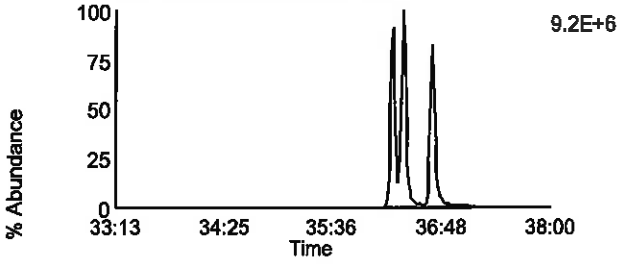
Data File: U130917A_22 G3 C9 - 401.8559
CAL CS3/CPM-7604-279 - SMT



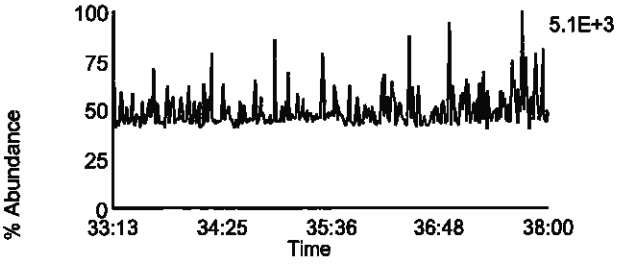
Data File: U130917A_22 G3 C6 - 385.861
CAL CS3/CPM-7604-279 - SMT



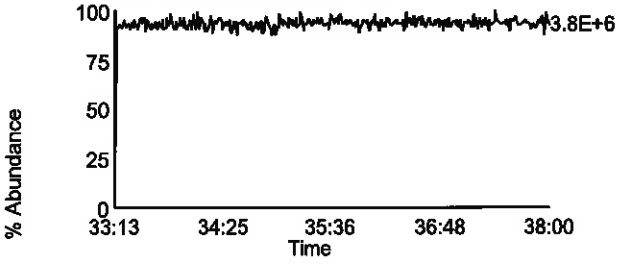
Data File: U130917A_22 G3 C10 - 403.8529
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G3 C11 - 445.7555
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G3 C3 - 380.976
CAL CS3/CPM-7604-279 - SMT

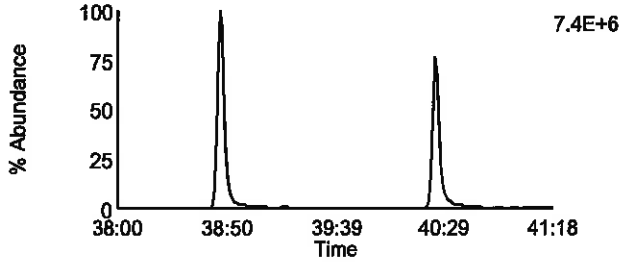


Homologue Group: Heptas

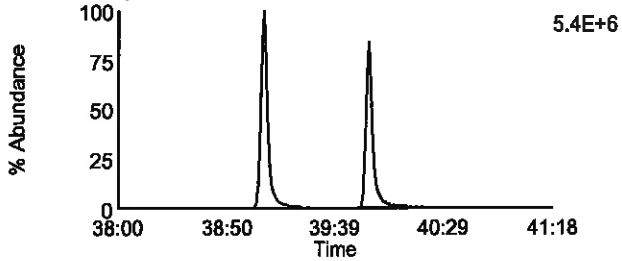
Data File Name: U130917A_22
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

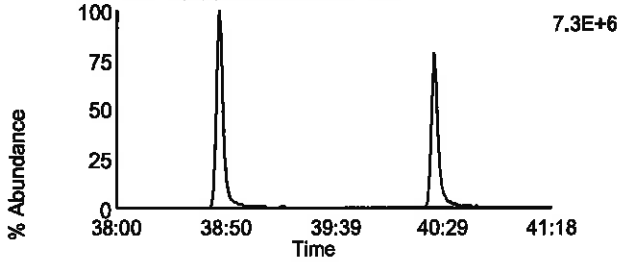
Data File: U130917A_22 G4 C3 - 407.7818
CAL CS3/CPM-7604-279 - SMT



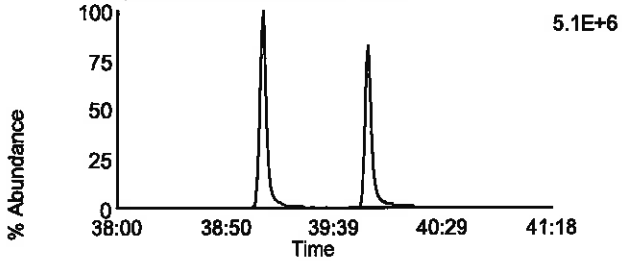
Data File: U130917A_22 G4 C8 - 423.7767
CAL CS3/CPM-7604-279 - SMT



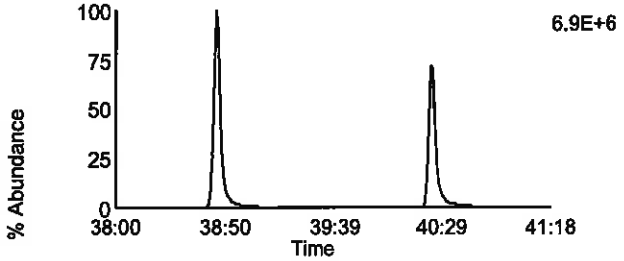
Data File: U130917A_22 G4 C4 - 409.7788
CAL CS3/CPM-7604-279 - SMT



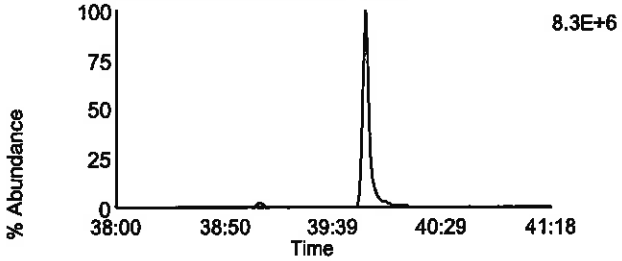
Data File: U130917A_22 G4 C9 - 425.7737
CAL CS3/CPM-7604-279 - SMT



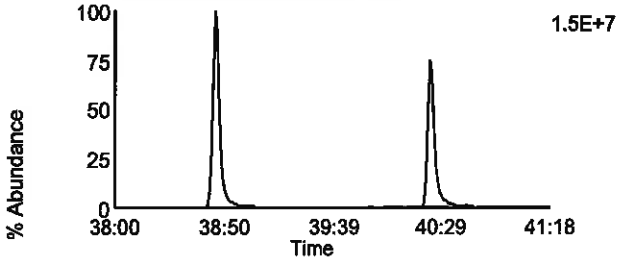
Data File: U130917A_22 G4 C6 - 417.825
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G4 C11 - 435.8169
CAL CS3/CPM-7604-279 - SMT



Data File: U130917A_22 G4 C7 - 419.822
CAL CS3/CPM-7604-279 - SMT



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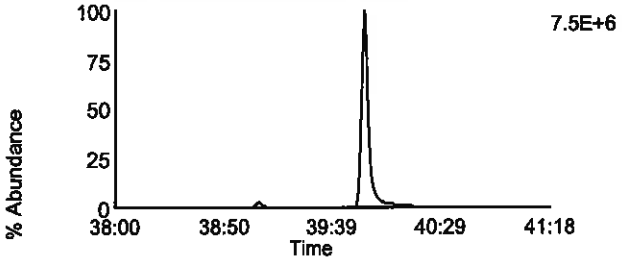

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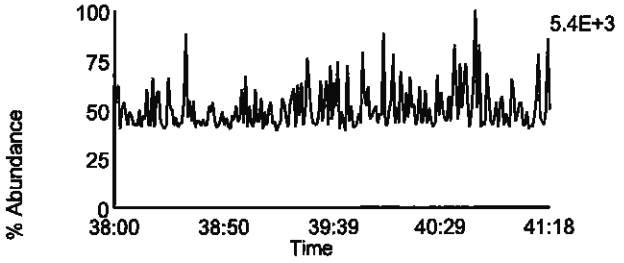

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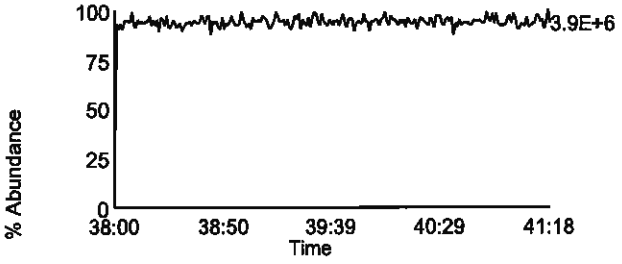
CAL CS3/CPM-7604-279 - SMT

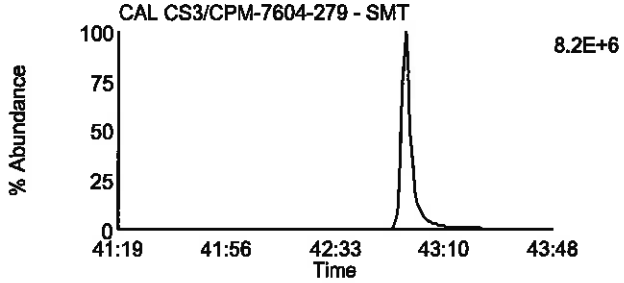


Homologue Group: Octas

Data File Name: U130917A_22
Date Acquired: 12/30/1899
Sample Description: CAL CS3/CPM-7604-279 - SMT

Lab Sample ID: CS3/CPM-7604-279
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

Data File: U130917A_22 G5 C4 - 441.7428
CAL CS3/CPM-7604-279 - SMT



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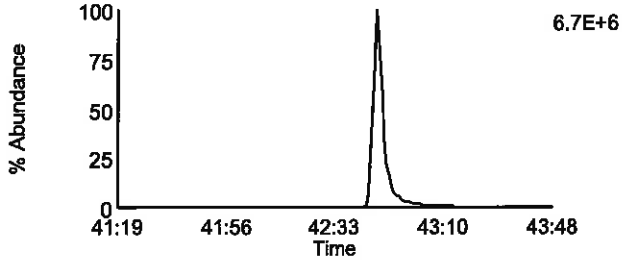

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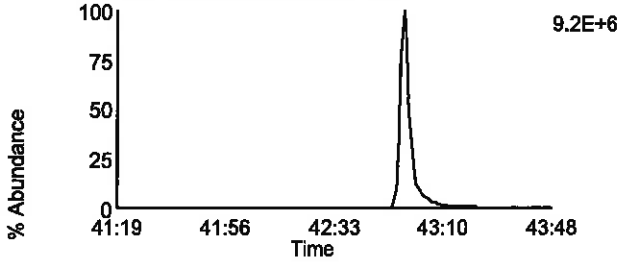

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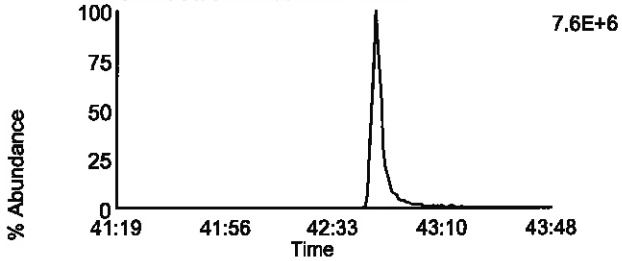

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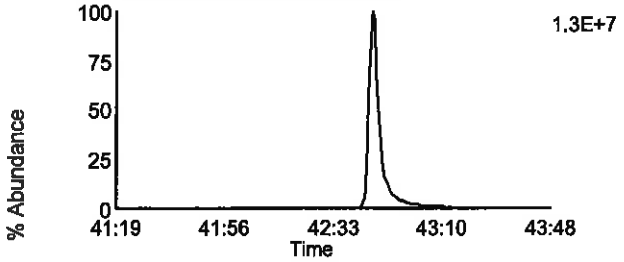
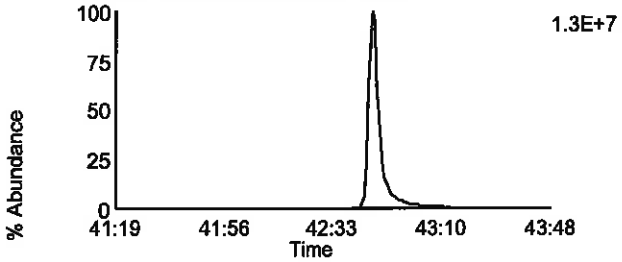


Data File: U130917A_22 G5 C11 - 469.7779
CAL CS3/CPM-7604-279 - SMT



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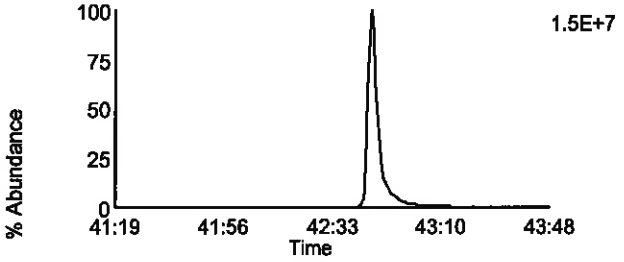

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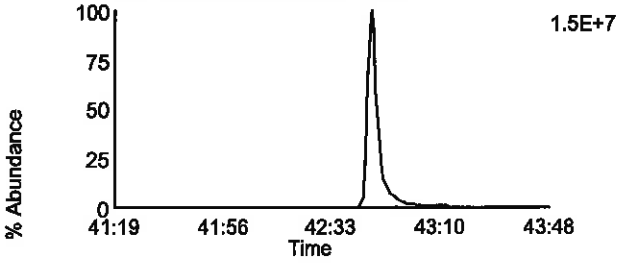

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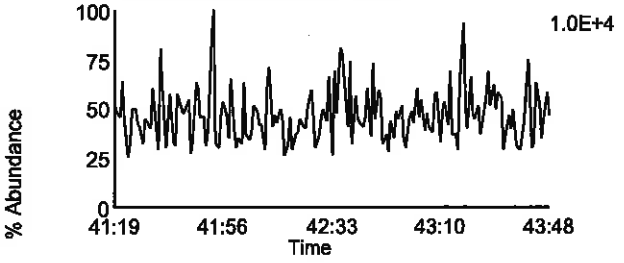
CAL CS3/CPM-7604-279 - SMT



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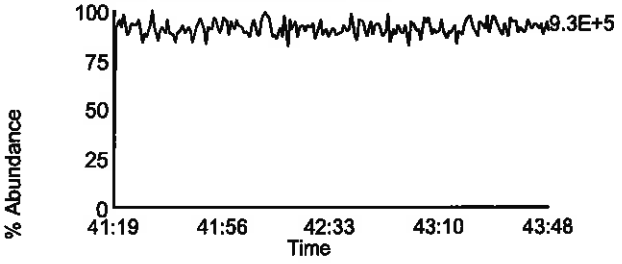
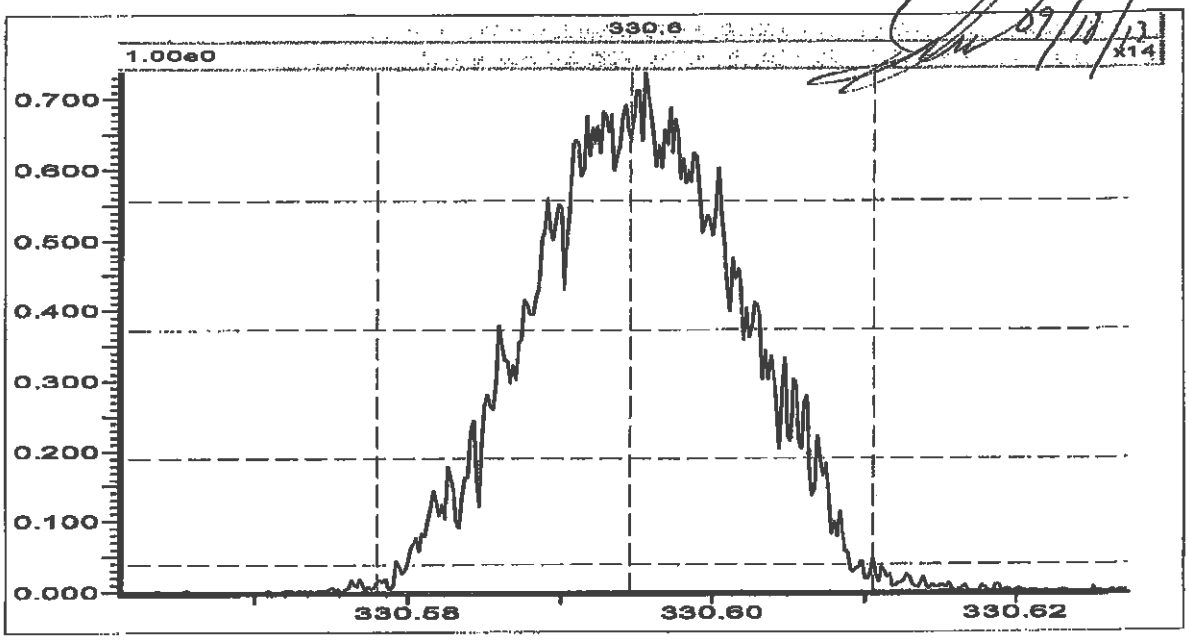
CAL CS3/CPM-7604-279 - SMT



File: C:\MassLynx\Default.pro\Acqudb\M488MW2_10K.ipr

Printed: Wednesday, September 18, 2013 15:55:03 Central Daylight Time



Source (EI+)

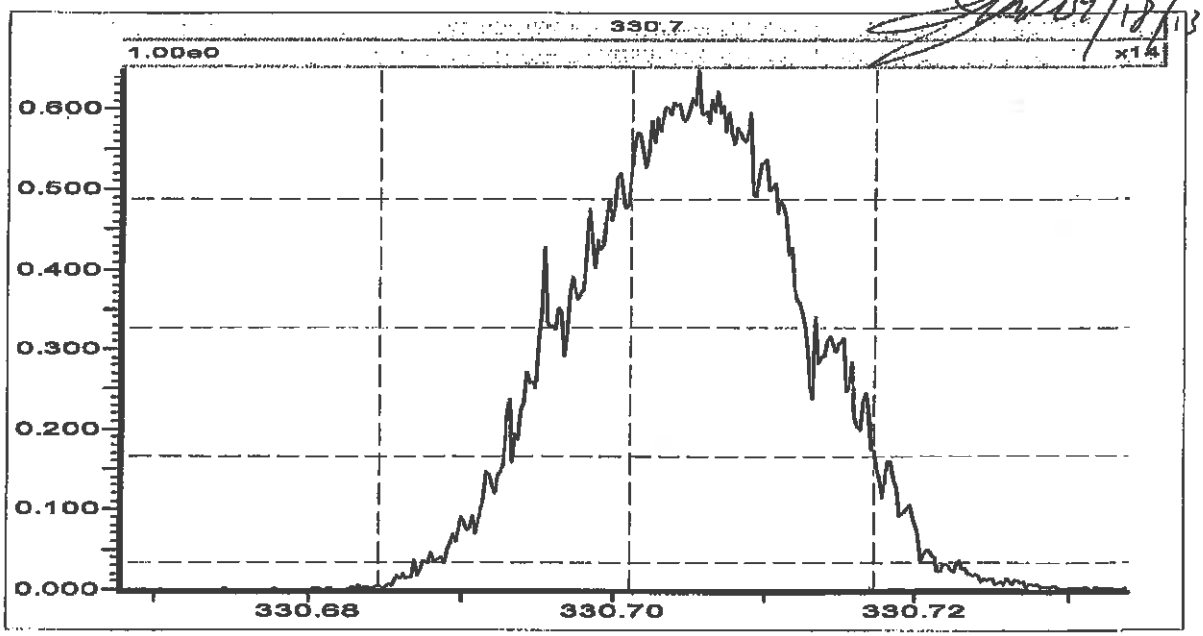
Ion Repeller (V)	-13.66
Focus 1	983
Beam Centre	-25.8
Focus 2	3925
Temperature (C)	280
Elec Energy (eV)	36.0
Trap Current (uA)	500.0
Y Deflect 1	-97.6
Z Deflect 1	87.6
Z Deflect 2	31.3
Z Focus 2	2298
Z Focus 3	0
Z Deflect 3	22.0
Y Focus	3484
Rotate 2	-8.6
Curve 2	13.3
Curve 3	-1.2
Rotate 3	-26.2
Rotate 4	-8.2
V Acc (V)	7989.48
Magnet Mass	330.6
Source Slit	25.66
Collector Slit	15.94
MIKES Slit	100.00
Alpha	60.00
Detector Voltage	350
Ion Energy	-4.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No information

Engineer
No information

File: C:\MassLynx\Default.pro\Acqudb\M488MW1_10K.ipr

Printed: Thursday, September 19, 2013 11:43:46 Central Daylight Time



Source (EI+)

Ion Repeller (V)	-13.66
Focus 1	983
Beam Centre	-25.8
Focus 2	3925
Temperature (C)	280
Elec Energy (eV)	36.0
Trap Current (uA)	500.0
Y Deflect 1	-97.6
Z Deflect 1	87.6
Z Deflect 2	31.3
Z Focus 2	2298
Z Focus 3	0
Z Deflect 3	22.0
Y Focus	3484
Rotate 2	-8.6
Curve 2	13.3
Curve 3	-1.2
Rotate 3	-26.2
Rotate 4	-8.2
V Acc (V)	7986.92
Magnet Mass	330.7
Source Slit	25.66
Collector Slit	15.94
MIKES Slit	100.00
Alpha	60.00
Detector Voltage	350
Ion Energy	-4.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No information

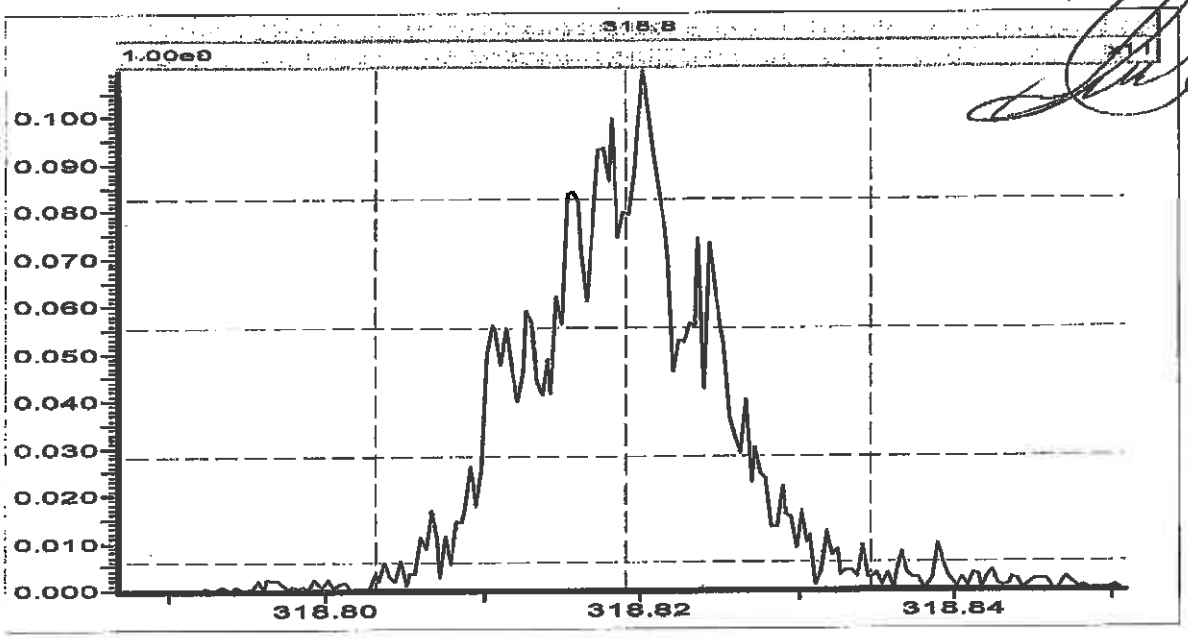
Engineer
No information

File: C:\MassLynx\Default.pro\Acqudb\F10MSHR05.lpr

Printed: Saturday, September 21, 2013 11:50:35 Central Daylight Time

BAC 9/21/13

09/23/13



Source (EI+)

Ion Repeller (V)	-12.29
Focus 1	908
Beam Centre	-22.1
Focus 2	3926
Temperature (C)	280
Elec Energy (eV)	36.0
Trap Current (uA)	500.0
Y Deflect 1	-86.5
Z Deflect 1	81.8
Z Deflect 2	37.4
Z Focus 2	2297
Z Focus 3	0
Z Deflect 3	21.3
Y Focus	3541
Rotate 2	-7.3
Curve 2	14.3
Curve 3	0.0
Rotate 3	-24.2
Rotate 4	-1.2
V Acc (V)	7991.73
Magnet Mass	330.8
Source Slit	26.18
Collector Slit	13.64
MIKES Slit	100.00
Alpha	70.00
Detector Voltage	350
Ion Energy	-4.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No information

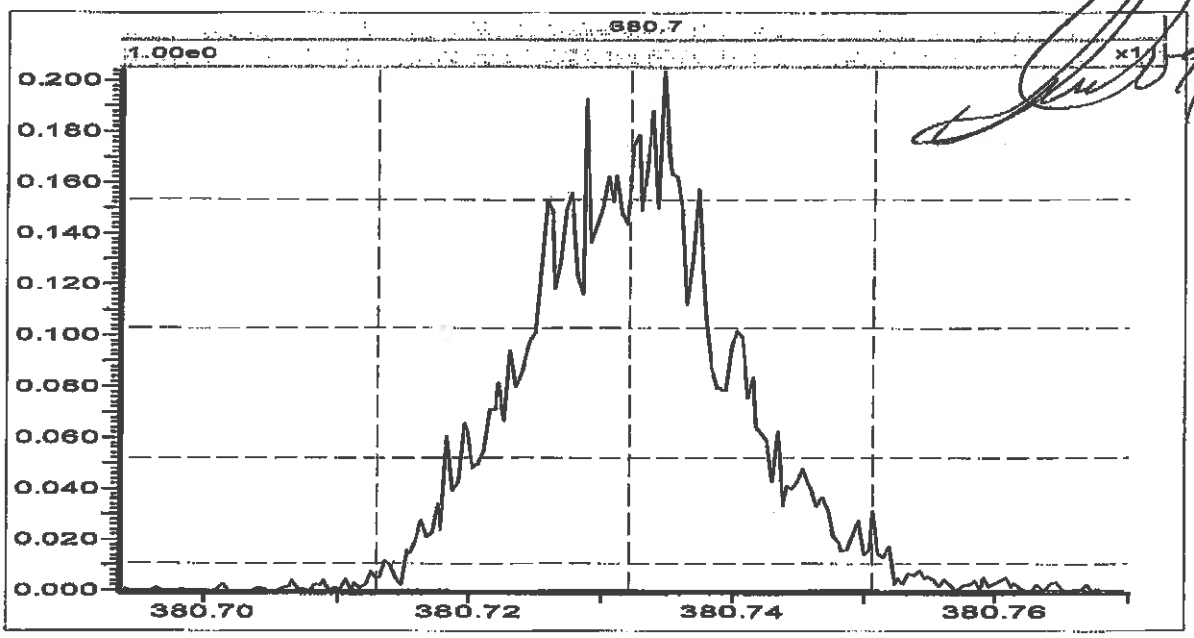
Engineer
No information

File: C:\MassLynx\Default.pro\Acqudb\F10MSHR05.ipr

Printed: Sunday, September 22, 2013 11:44:52 Central Daylight Time

BAL 9/22/13

9/23/13



Source (EI+)

Ion Repeller (V)	-12.29
Focus 1	908
Beam Centre	-22.1
Focus 2	3926
Temperature (C)	280
Elec Energy (eV)	36.0
Trap Current (uA)	500.0
Y Deflect 1	-86.5
Z Deflect 1	81.8
Z Deflect 2	37.4
Z Focus 2	2297
Z Focus 3	0
Z Deflect 3	21.3
Y Focus	3541
Rotate 2	-7.3
Curve 2	14.3
Curve 3	0.0
Rotate 3	-24.2
Rotate 4	-1.2
V Acc (V)	7991.73
Magnet Mass	330.8
Source Slit	26.18
Collector Slit	13.64
MIKES Slit	100.00
Alpha	70.00
Detector Voltage	350
Ion Energy	-4.00
Z4 Restrictor	Off
Vacc Limit	8000

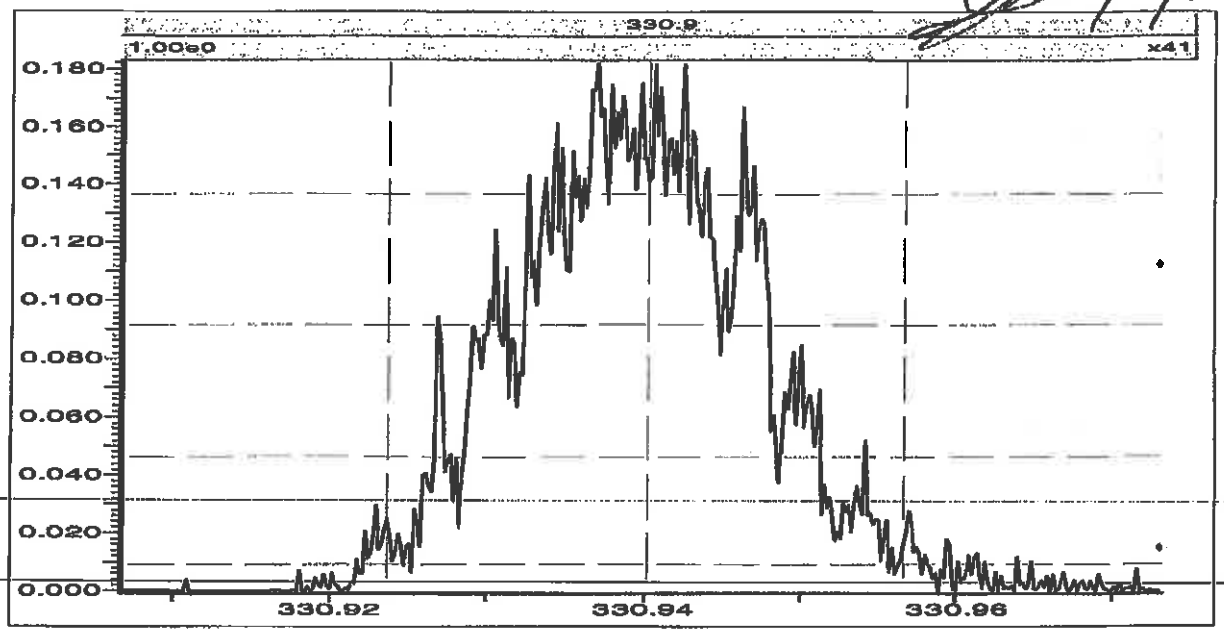
Analyser
No information

Engineer
No information

File: C:\MassLynx\Default.pro\Acqudb\U10MSHR06.IPR

Printed: Monday, July 29, 2013 14:55:25 Central Daylight Time

7/29/13 7/29/13



Source (EI+)

Ion Repeller (V)	-10.87
Focus 1	686
Beam Centre	8.2
Focus 2	3986
Temperature (C)	280
Elec Energy (eV)	34.3
Trap Current (uA)	500.0
Y Deflect 1	46.4
Z Deflect 1	-43.2
Z Deflect 2	-5.0
Z Focus 2	2204
Z Focus 3	0
Z Deflect 3	13.6
Y Focus	4352
Rotate 2	-13.0
Curve 2	14.0
Curve 3	-1.1
Rotate 3	-1.1
Rotate 4	3.5
V Acc (V)	7987.17
Magnet Mass	330.9
Source Slit	23.08
Collector Slit	36.22
MIKES Slit	100.00
Alpha	70.00
Detector Voltage	350
Ion Energy	-7.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No information

Engineer
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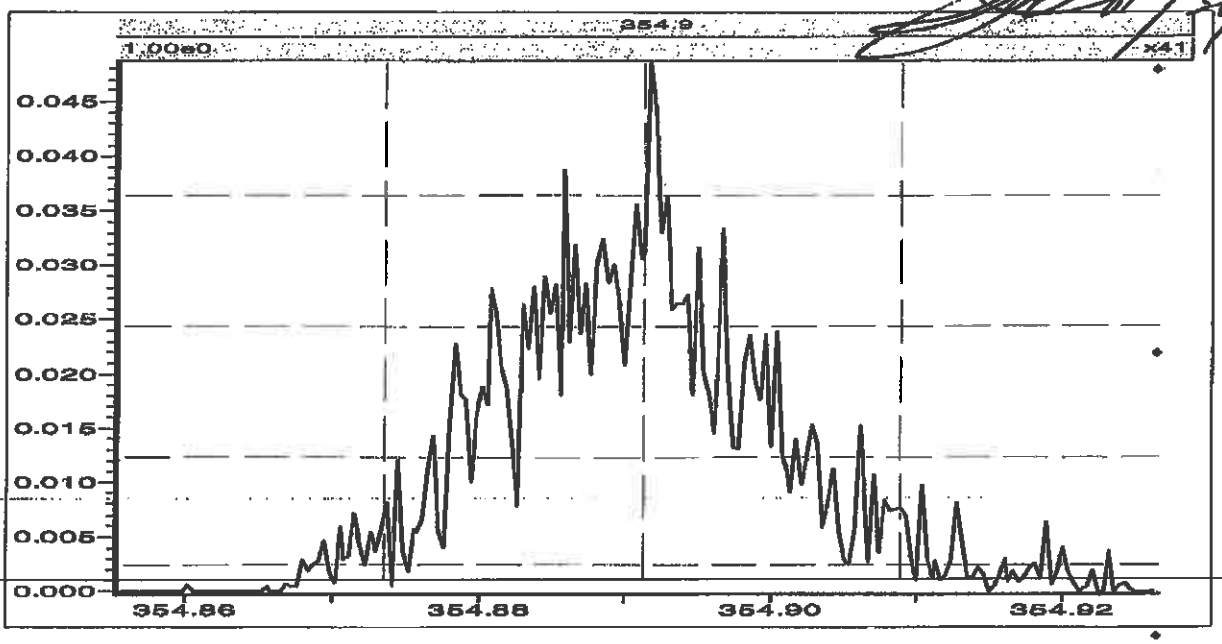


BAL 7/30/13

Source (EI+)

Ion Repeller (V)	-10.87
Focus 1	686
Beam Centre	8.2
Focus 2	3986
Temperature (C)	280
Elec Energy (eV)	34.3
Trap Current (uA)	500.0
Y Deflect 1	46.4
Z Deflect 1	-43.2
Z Deflect 2	-5.0
Z Focus 2	2204
Z Focus 3	0
Z Deflect 3	13.6
Y Focus	4352
Rotate 2	-13.0
Curve 2	14.0
Curve 3	-1.1
Rotate 3	-1.1
Rotate 4	3.5
V Acc (V)	7987.17
Magnet Mass	330.9
Source Slit	23.08
Collector Slit	36.22
MIKES Slit	100.00
Alpha	70.00
Detector Voltage	350
Ion Energy	-7.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No information

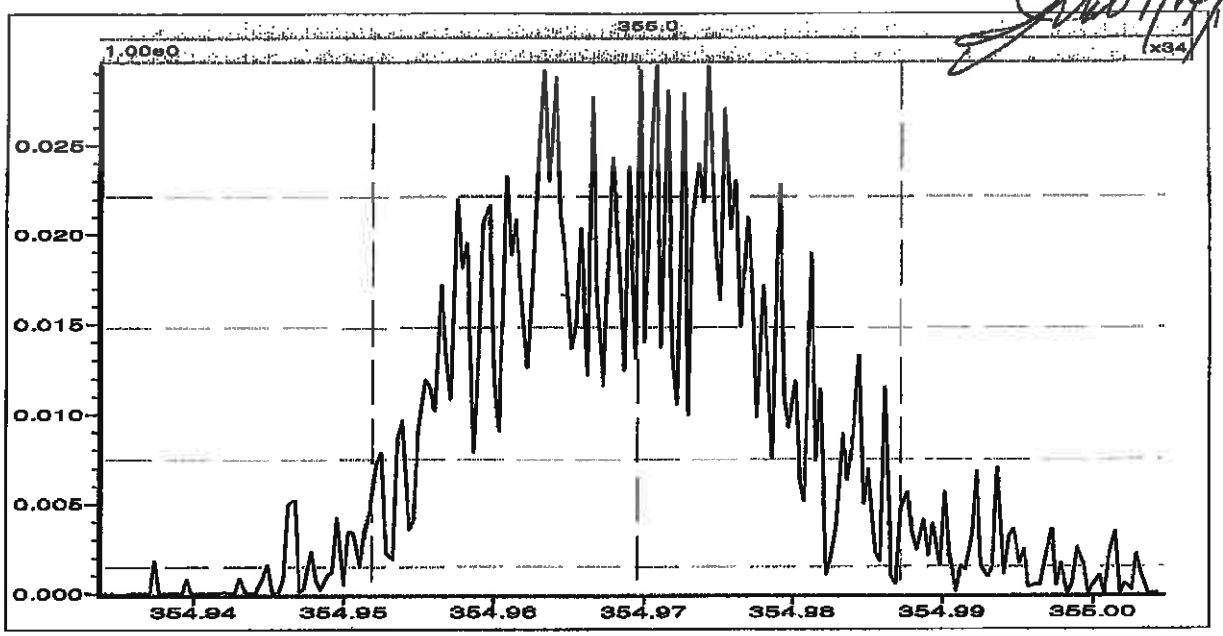
Engineer
No information

File: C:\MassLynx\Default.PRO\ACQUDB\U10MSHR06.IPR

Printed: Tuesday, September 17, 2013 14:32:13 Central Daylight Time

9/17/13

BAL 9/17/13



Source (EI+)

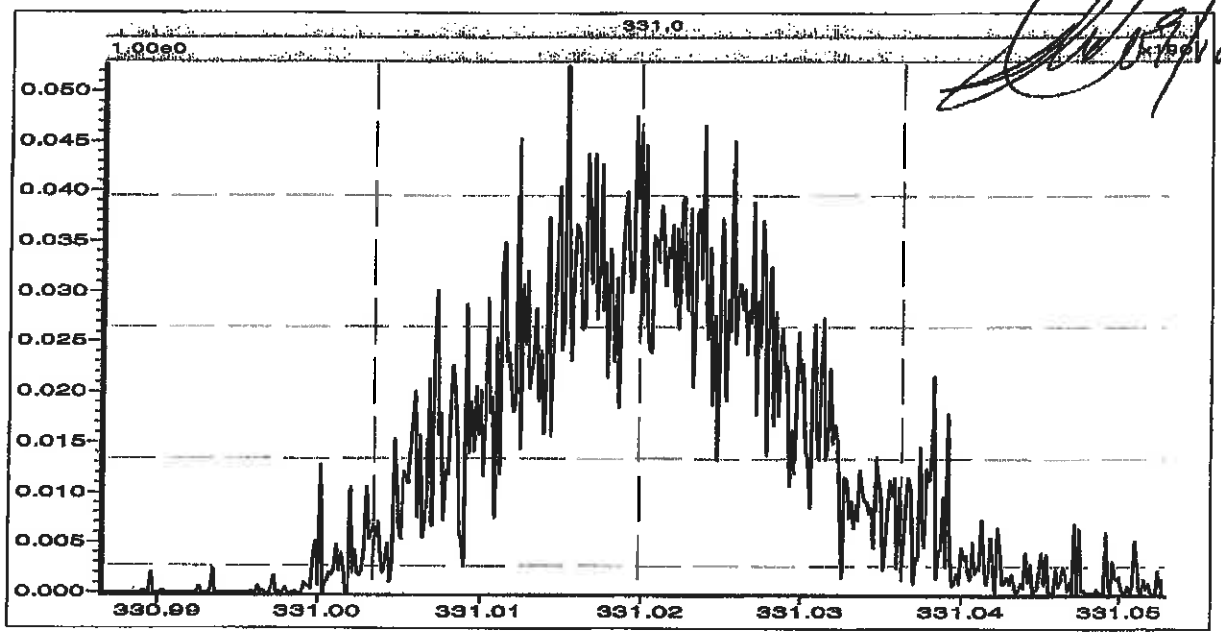
Ion Repeller (V)	-11.12
Focus 1	764
Beam Centre	71.9
Focus 2	3888
Temperature (C)	280
Elec Energy (eV)	35.0
Trap Current (uA)	500.0
Y Deflect 1	-115.1
Z Deflect 1	25.7
Z Deflect 2	-6.1
Z Focus 2	2577
Z Focus 3	0
Z Deflect 3	-27.2
Y Focus	4400
Rotate 2	-12.2
Curve 2	-8.8
Curve 3	1.0
Rotate 3	3.6
Rotate 4	17.0
V Acc (V)	7991.34
Magnet Mass	331.0
Source Slit	19.44
Collector Slit	36.00
MIKES Slit	100.00
Alpha	65.00
Detector Voltage	350
Ion Energy	-5.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No information

Engineer
No information

File: C:\MassLynx\Default.PRO\ACQUDB\U10MSHR06.IPR

Printed: Wednesday, September 18, 2013 14:39:00 Central Daylight Time



Source (EI+)

Ion Repeller (V)	-11.12
Focus 1	764
Beam Centre	71.9
Focus 2	3888
Temperature (C)	280
Elec Energy (eV)	35.0
Trap Current (uA)	500.0
Y Deflect 1	-115.1
Z Deflect 1	25.7
Z Deflect 2	-6.1
Z Focus 2	2577
Z Focus 3	0
Z Deflect 3	-27.2
Y Focus	4400
Rotate 2	-12.2
Curve 2	-8.8
Curve 3	1.0
Rotate 3	3.6
Rotate 4	17.0
V Acc (V)	7990.45
Magnet Mass	331.0
Source Slit	19.44
Collector Slit	36.00
MIKES Slit	100.00
Alpha	65.00
Detector Voltage	350
Ion Energy	-5.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser
No information

Engineer
No information

Appendix F

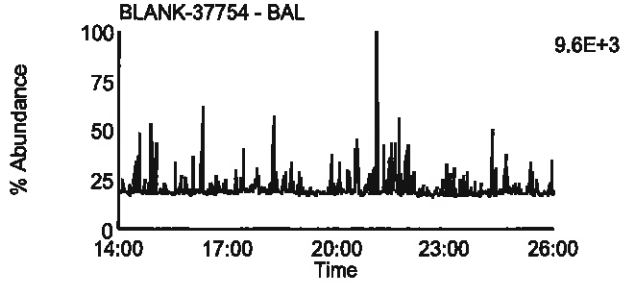
QC Raw Data

Homologue Group: Tetras

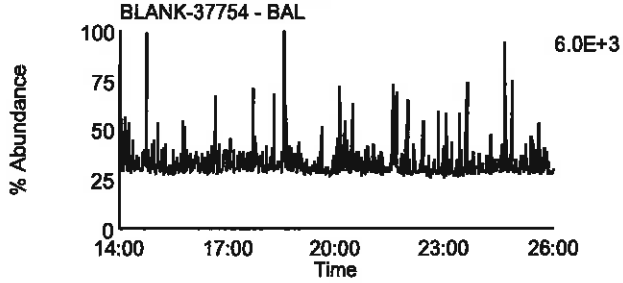
Data File Name: U130917B_05
Date Acquired: 9/18/2013
Sample Description: BLANK-37754 - BAL

Lab Sample ID: BLANK-37754
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U130917B_05 G1 C1 - 303.9016
BLANK-37754 - BAL



Data File: U130917B_05 G1 C7 - 319.8965
BLANK-37754 - BAL



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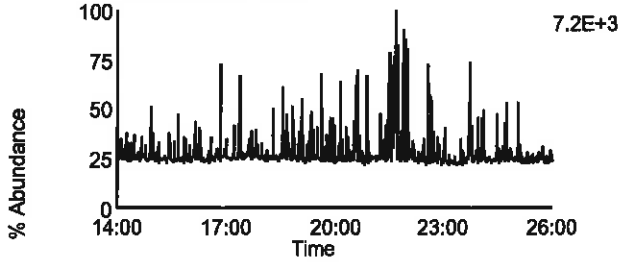
BLANK-37754 - BAL



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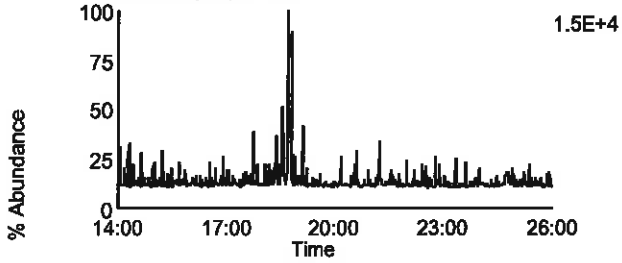
BLANK-37754 - BAL



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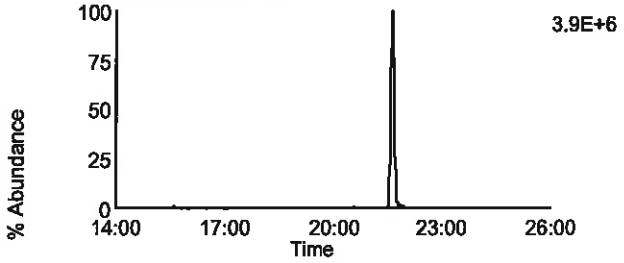
BLANK-37754 - BAL



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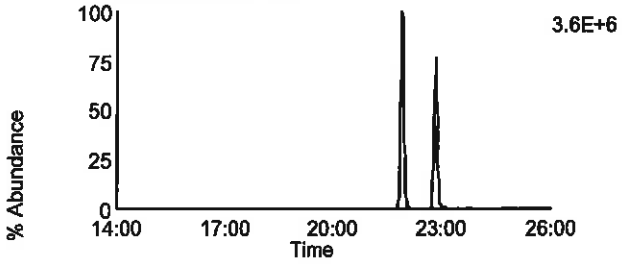
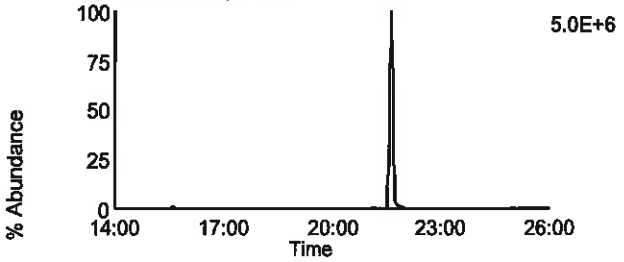
BLANK-37754 - BAL



Data File: U130917B_05 G1 C4 - 317.9389
BLANK-37754 - BAL



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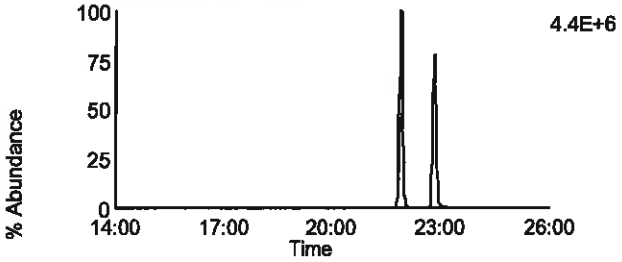
BLANK-37754 - BAL



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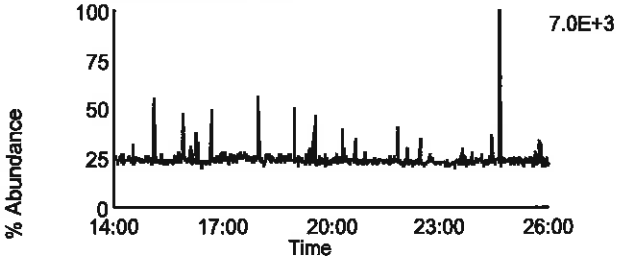
BLANK-37754 - BAL



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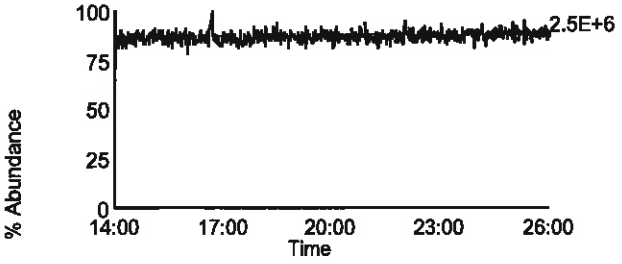
BLANK-37754 - BAL

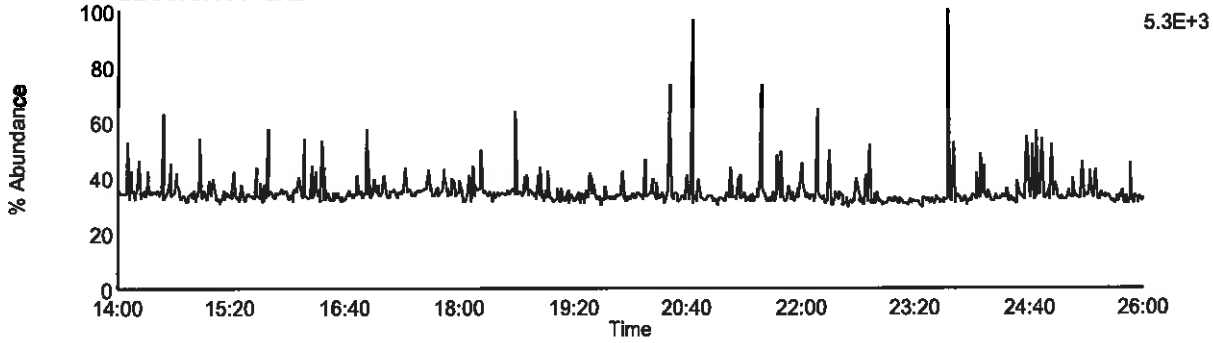


Homologue Group: Penta & Cleanup

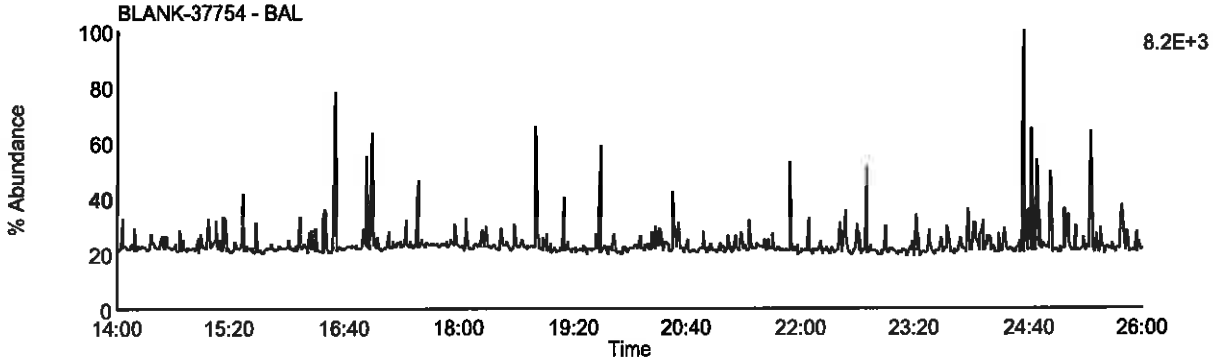
Data File Name: U130917B_05
Date Acquired: 9/18/2013
Sample Description: BLANK-37754 - BAL

Lab Sample ID: BLANK-37754
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U130917B_05 G1 C12 - 339.8597
BLANK-37754 - BAL



Data File: U130917B_05 G1 C13 - 341.8567
BLANK-37754 - BAL



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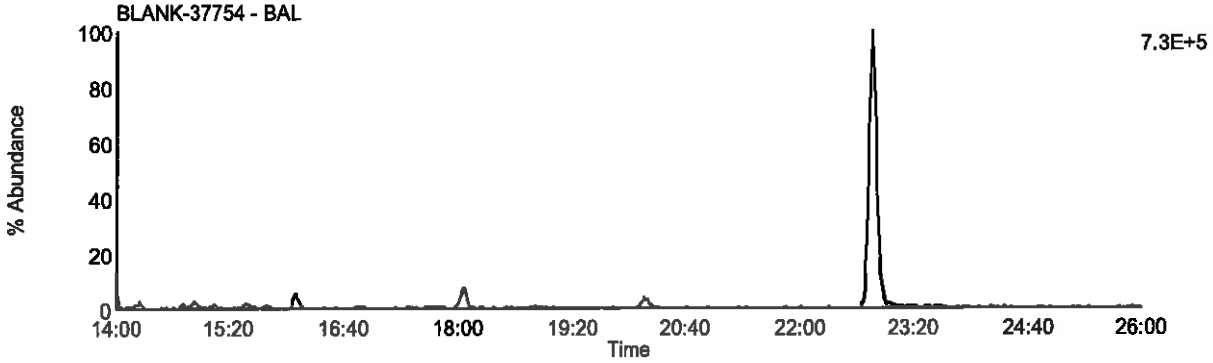
BLANK-37754 - BAL



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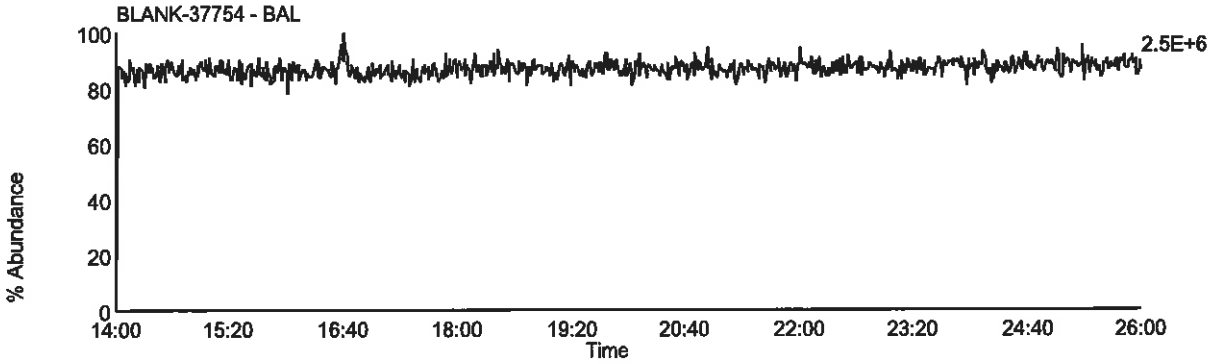
BLANK-37754 - BAL

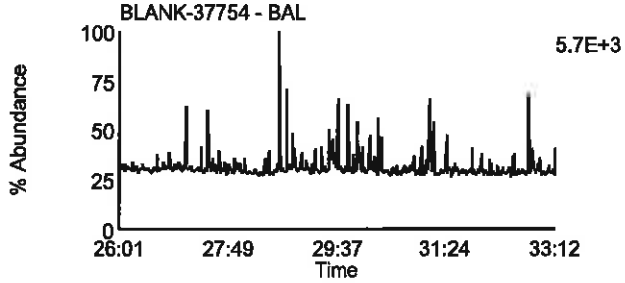


Homologue Group: Pentas

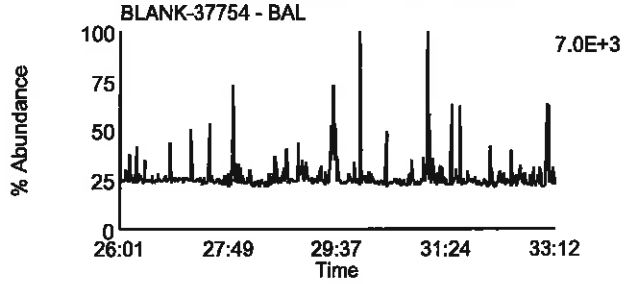
Data File Name: U130917B_05
Date Acquired: 9/18/2013
Sample Description: BLANK-37754 - BAL

Lab Sample ID: BLANK-37754
Client Sample ID:
Instrument: 10MSHR06 (U)

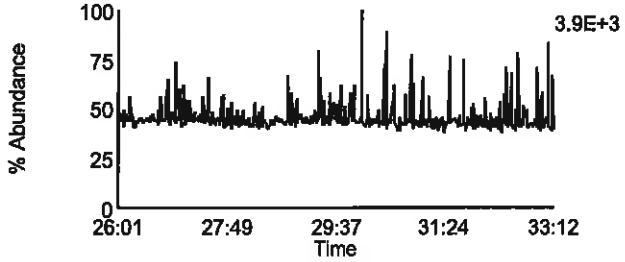
Data File: U130917B_05 G2 C1 - 339.8597
BLANK-37754 - BAL



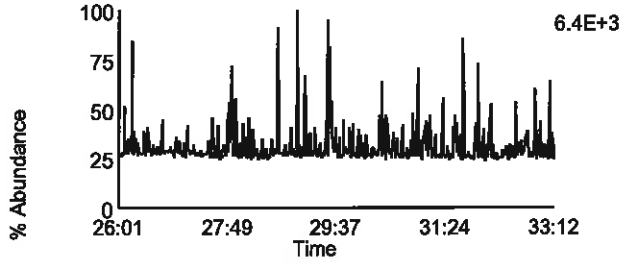
Data File: U130917B_05 G2 C4 - 353.8576
BLANK-37754 - BAL



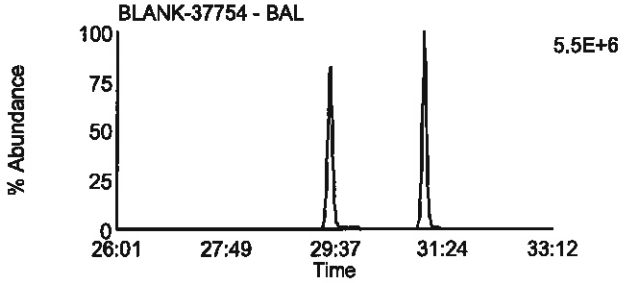
Data File: U130917B_05 G2 C2 - 341.8567
BLANK-37754 - BAL



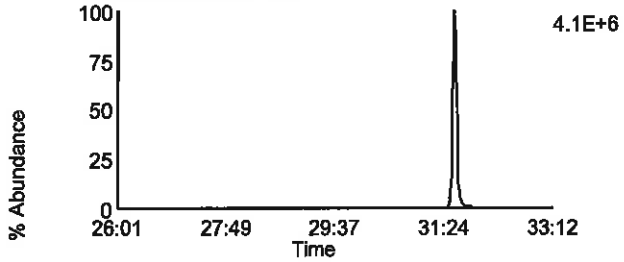
Data File: U130917B_05 G2 C8 - 355.8546
BLANK-37754 - BAL



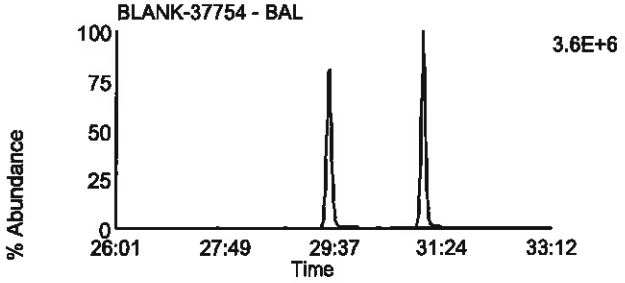
Data File: U130917B_05 G2 C3 - 351.8999
BLANK-37754 - BAL



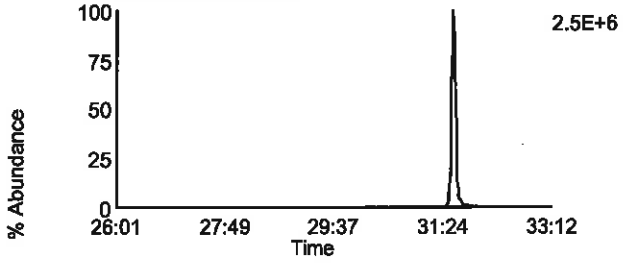
Data File: U130917B_05 G2 C10 - 367.8948
BLANK-37754 - BAL



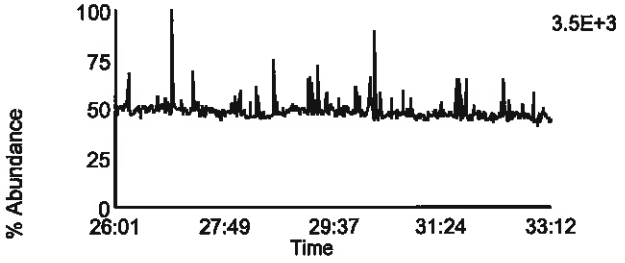
Data File: U130917B_05 G2 C5 - 353.8969
BLANK-37754 - BAL



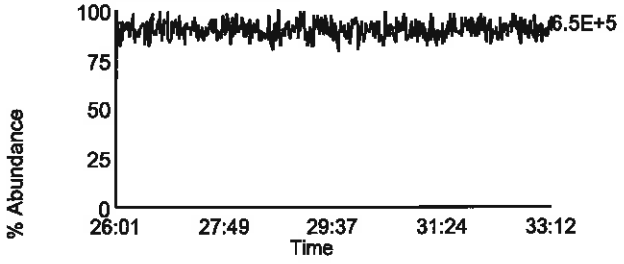
Data File: U130917B_05 G2 C11 - 369.8918
BLANK-37754 - BAL



Data File: U130917B_05 G2 C12 - 409.7974
BLANK-37754 - BAL



Data File: U130917B_05 G2 C6 - 354.9792
BLANK-37754 - BAL

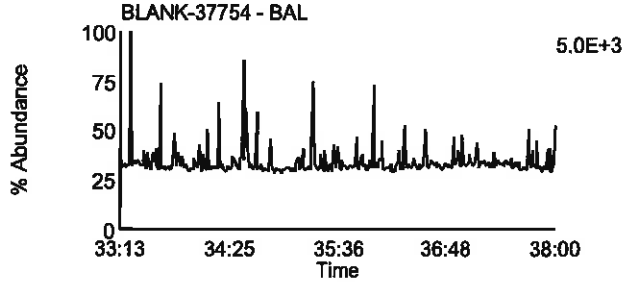


Homologue Group: Hexas

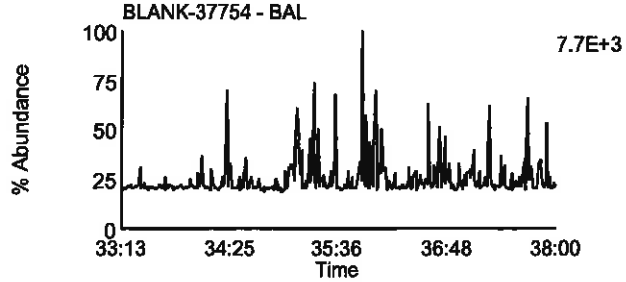
Data File Name: U130917B_05
Date Acquired: 9/18/2013
Sample Description: BLANK-37754 - BAL

Lab Sample ID: BLANK-37754
Client Sample ID:
Instrument: 10MSHR06 (U)

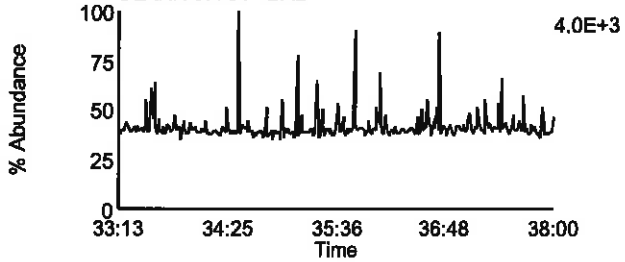
Data File: U130917B_05 G3 C1 - 373.8207
BLANK-37754 - BAL



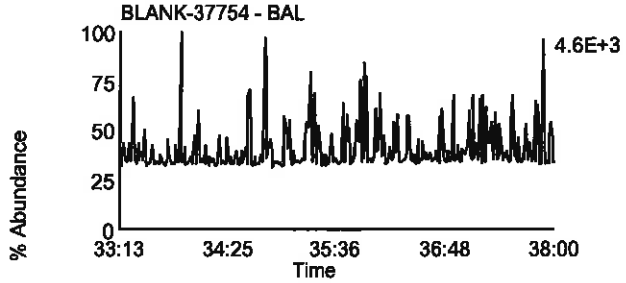
Data File: U130917B_05 G3 C7 - 389.8156
BLANK-37754 - BAL



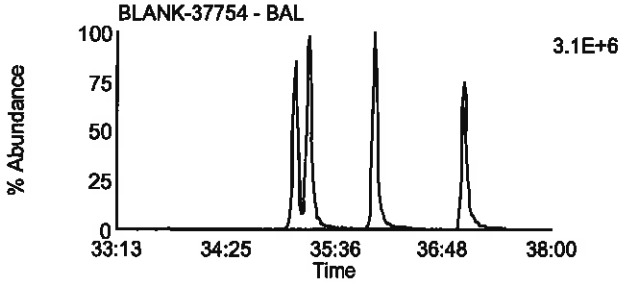
Data File: U130917B_05 G3 C2 - 375.8178
BLANK-37754 - BAL



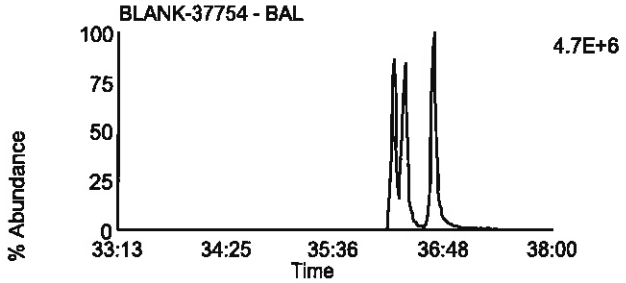
Data File: U130917B_05 G3 C8 - 391.8127
BLANK-37754 - BAL



Data File: U130917B_05 G3 C5 - 383.8639
BLANK-37754 - BAL



Data File: U130917B_05 G3 C9 - 401.8559
BLANK-37754 - BAL



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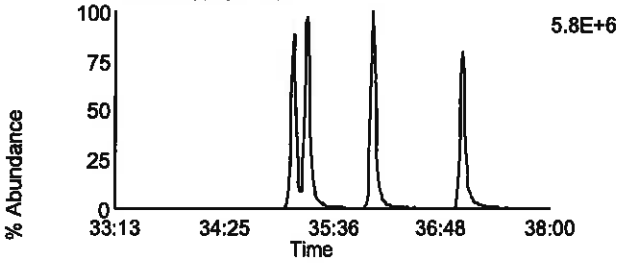
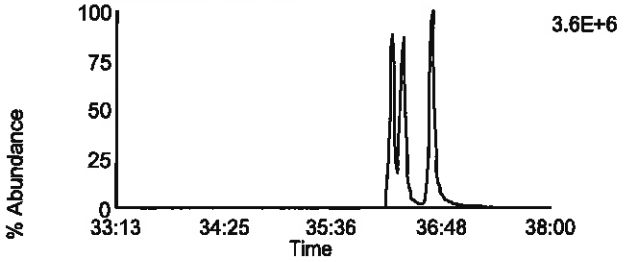
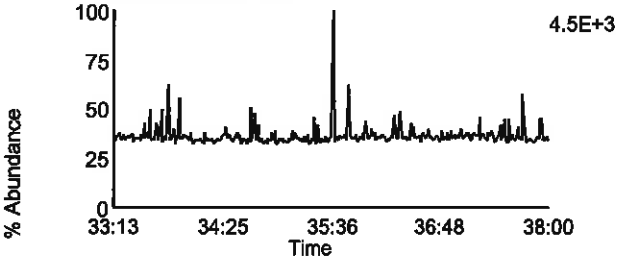
BLANK-37754 - BAL



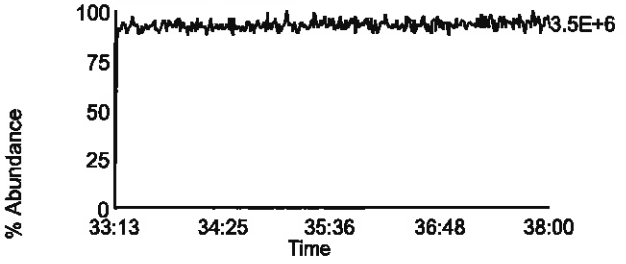
Data File: U130917B_05 G3 C10 - 403.8529
BLANK-37754 - BAL



Data File: U130917B_05 G3 C11 - 445.7555
BLANK-37754 - BAL



Data File: U130917B_05 G3 C3 - 380.976
BLANK-37754 - BAL

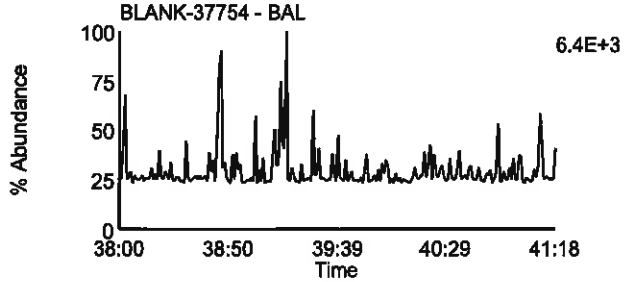


Homologue Group: Heptas

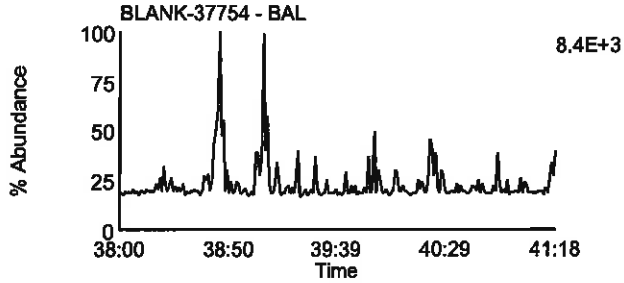
Data File Name: U130917B_05
Date Acquired: 9/18/2013
Sample Description: BLANK-37754 - BAL

Lab Sample ID: BLANK-37754
Client Sample ID:
Instrument: 10MSHR06 (U)

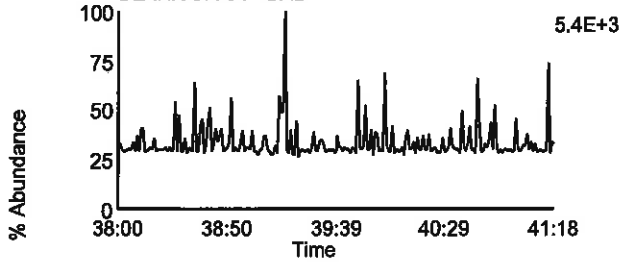
Data File: U130917B_05 G4 C3 - 407.7818
BLANK-37754 - BAL



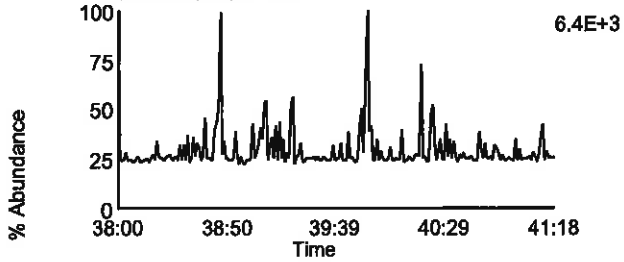
Data File: U130917B_05 G4 C8 - 423.7767
BLANK-37754 - BAL



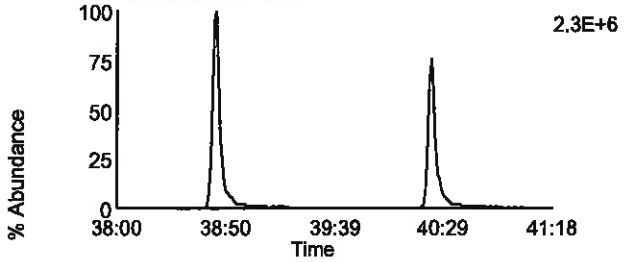
Data File: U130917B_05 G4 C4 - 409.7788
BLANK-37754 - BAL



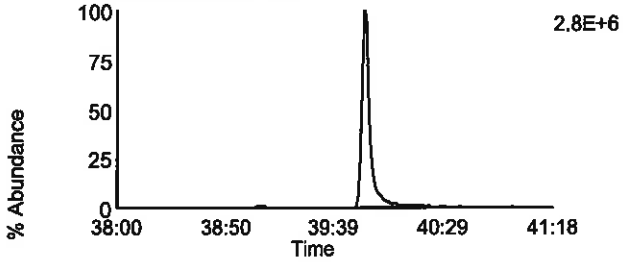
Data File: U130917B_05 G4 C9 - 425.7737
BLANK-37754 - BAL



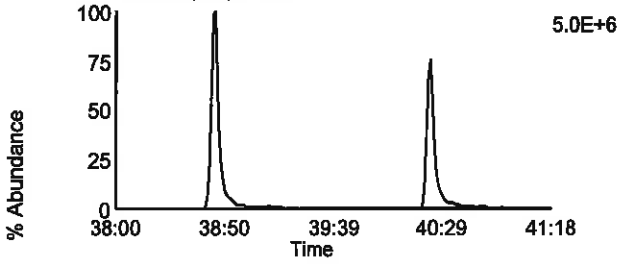
Data File: U130917B_05 G4 C6 - 417.825
BLANK-37754 - BAL



Data File: U130917B_05 G4 C11 - 435.8169
BLANK-37754 - BAL



Data File: U130917B_05 G4 C7 - 419.822
BLANK-37754 - BAL



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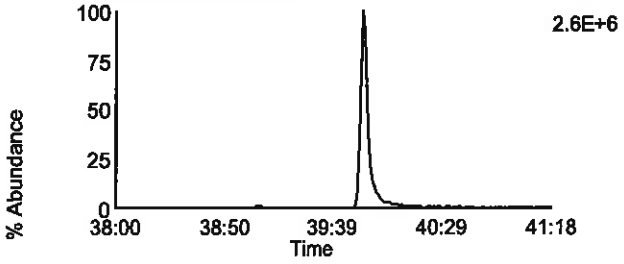
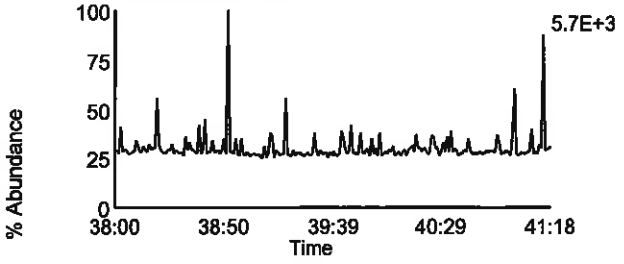
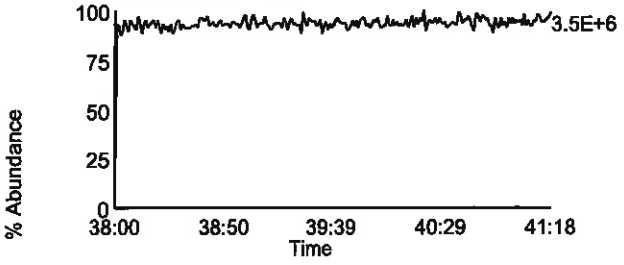
BLANK-37754 - BAL



Data File: U130917B_05 G4 C13 - 479.7165
BLANK-37754 - BAL



Data File: U130917B_05 G4 C1 - 380.976
BLANK-37754 - BAL

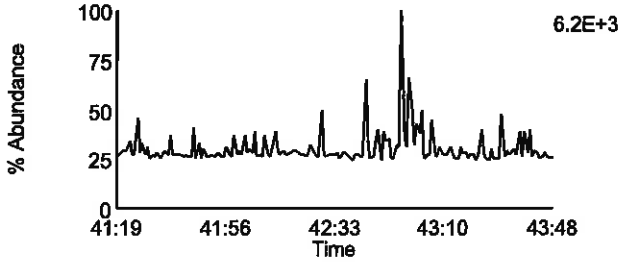


Homologue Group: Octas

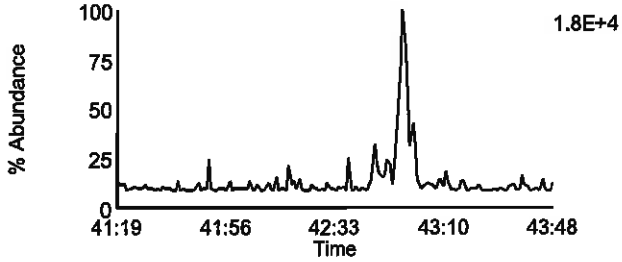
Data File Name: U130917B_05
Date Acquired: 9/18/2013
Sample Description: BLANK-37754 - BAL

Lab Sample ID: BLANK-37754
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U130917B_05 G5 C4 - 441.7428
BLANK-37754 - BAL



Data File: U130917B_05 G5 C8 - 457.7377
BLANK-37754 - BAL



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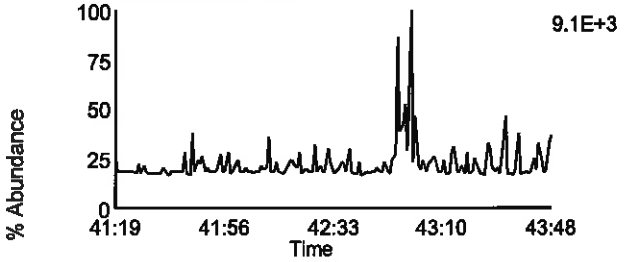
BLANK-37754 - BAL



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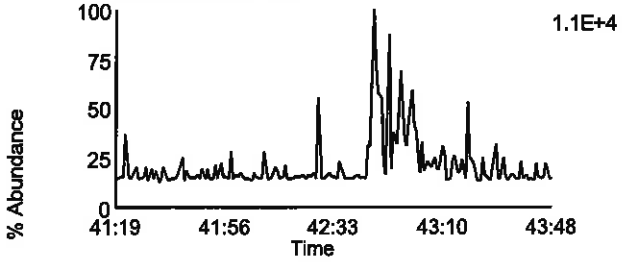
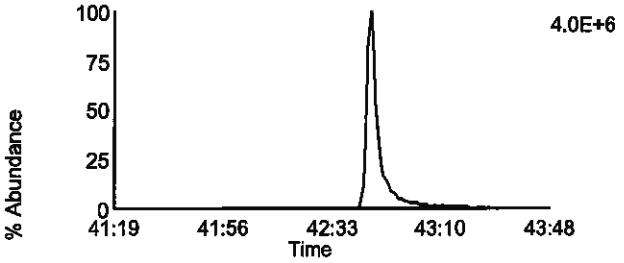
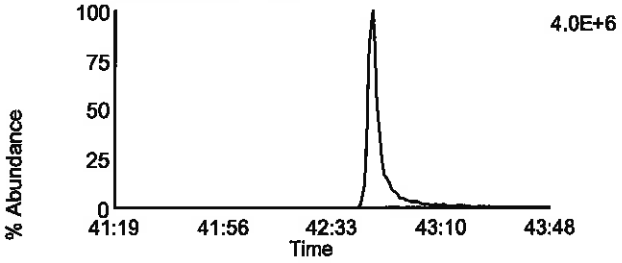
BLANK-37754 - BAL



Data File: U130917B_05 G5 C11 - 469.7779
BLANK-37754 - BAL



Data File: U130917B_05 G5 C11 - 469.7779
BLANK-37754 - BAL



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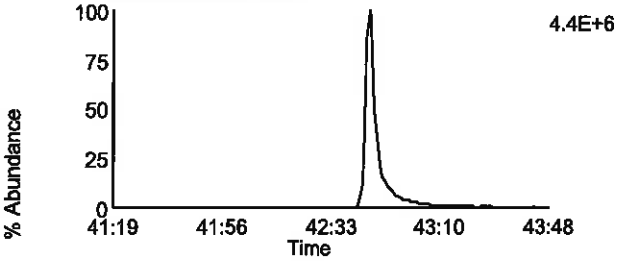
BLANK-37754 - BAL



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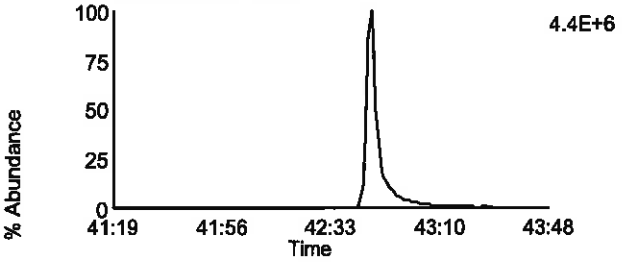
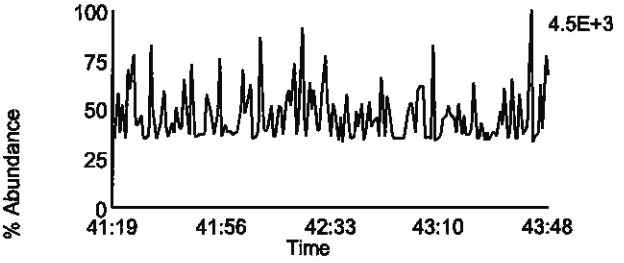
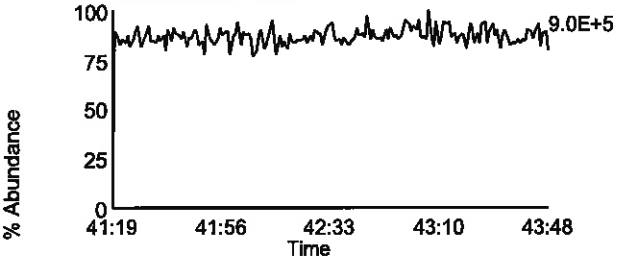
BLANK-37754 - BAL



Data File: U130917B_05 G5 C13 - 513.6775
BLANK-37754 - BAL



Data File: U130917B_05 G5 C2 - 430.9728
BLANK-37754 - BAL

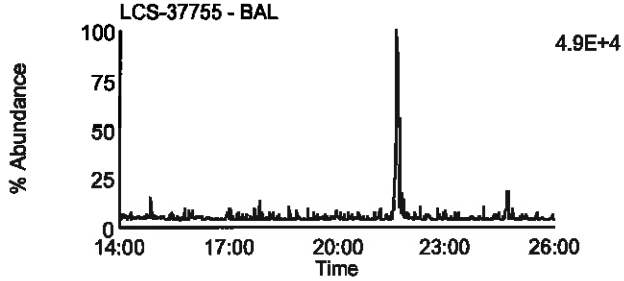


Homologue Group: Tetras

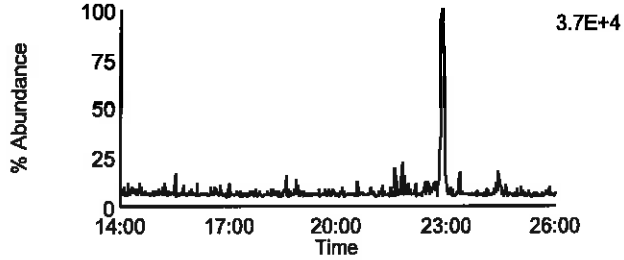
Data File Name: U130917B_01
Date Acquired: 9/18/2013
Sample Description: LCS-37755 - BAL

Lab Sample ID: LCS-37755
Client Sample ID: LCSFS
Instrument: 10MSHR06 (U)

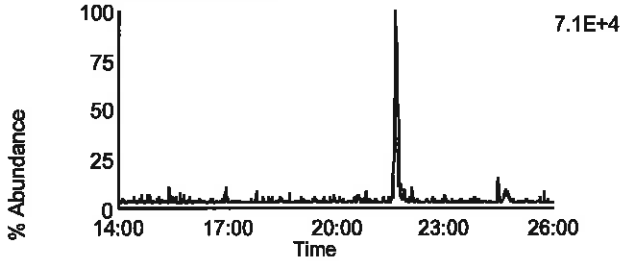
Data File: U130917B_01 G1 C1 - 303.9016
LCS-37755 - BAL



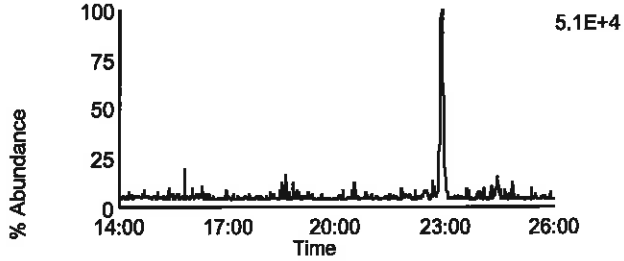
Data File: U130917B_01 G1 C7 - 319.8965
LCS-37755 - BAL



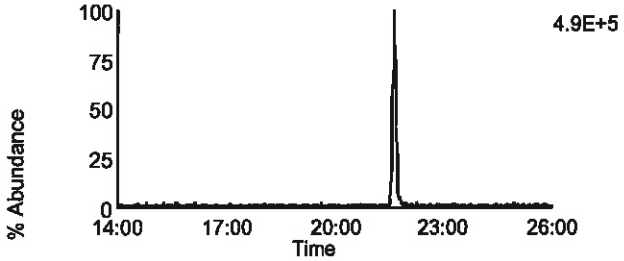
Data File: U130917B_01 G1 C2 - 305.8987
LCS-37755 - BAL



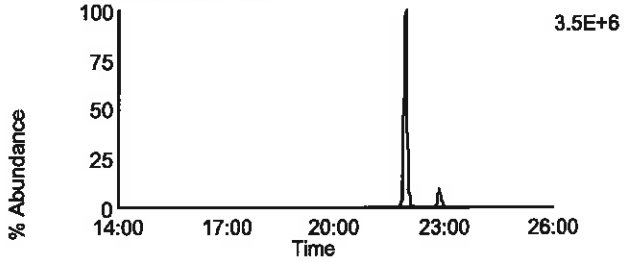
Data File: U130917B_01 G1 C8 - 321.8936
LCS-37755 - BAL



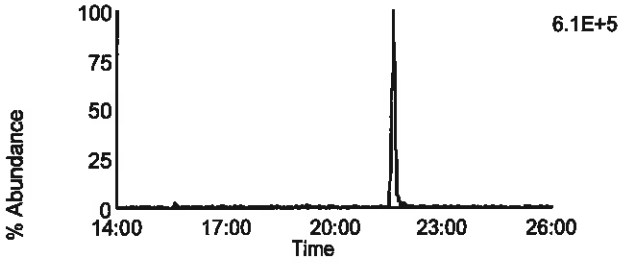
Data File: U130917B_01 G1 C3 - 315.9418
LCS-37755 - BAL



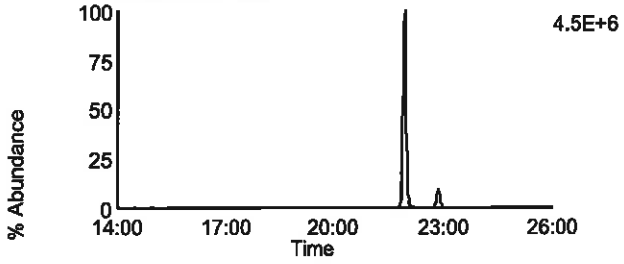
Data File: U130917B_01 G1 C10 - 331.9367
LCS-37755 - BAL



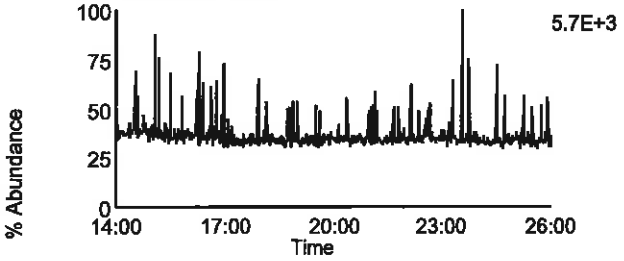
Data File: U130917B_01 G1 C4 - 317.9389
LCS-37755 - BAL



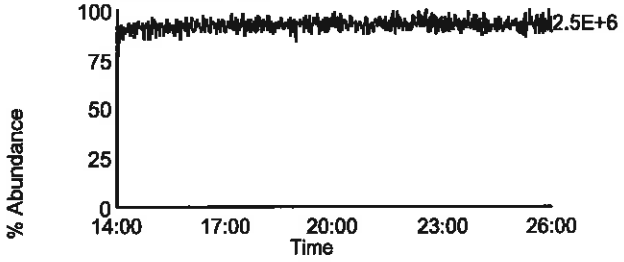
Data File: U130917B_01 G1 C11 - 333.9338
LCS-37755 - BAL



Data File: U130917B_01 G1 C14 - 375.8364
LCS-37755 - BAL

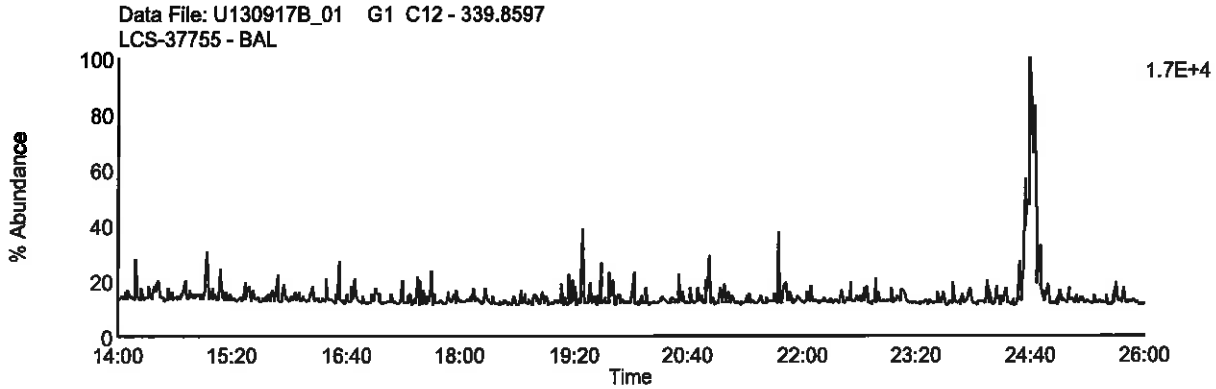


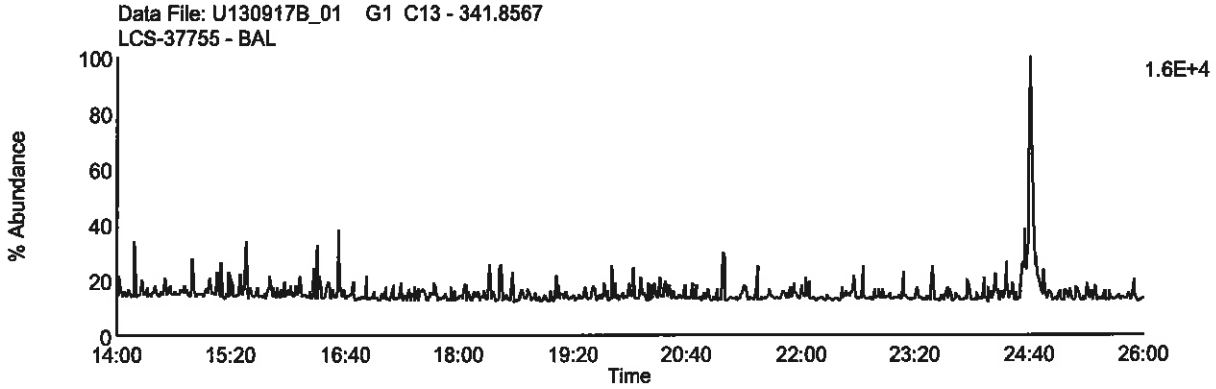
Data File: U130917B_01 G1 C5 - 318.9792
LCS-37755 - BAL

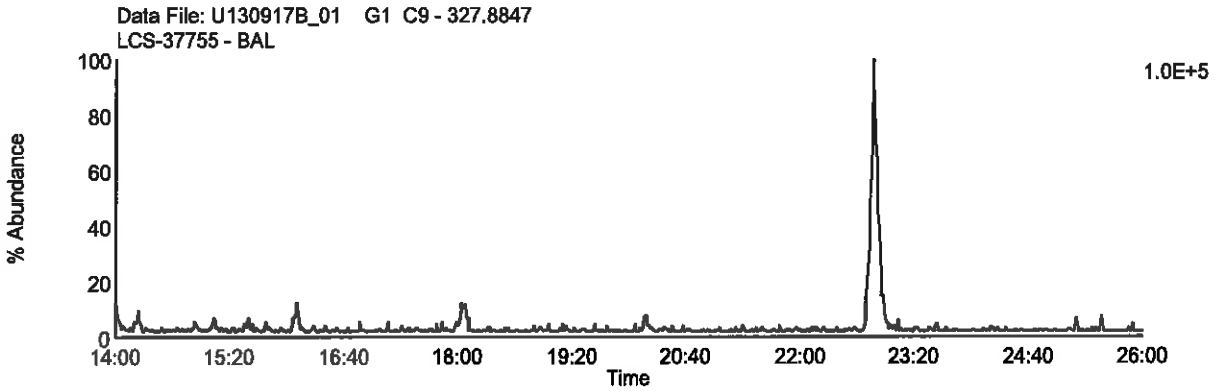


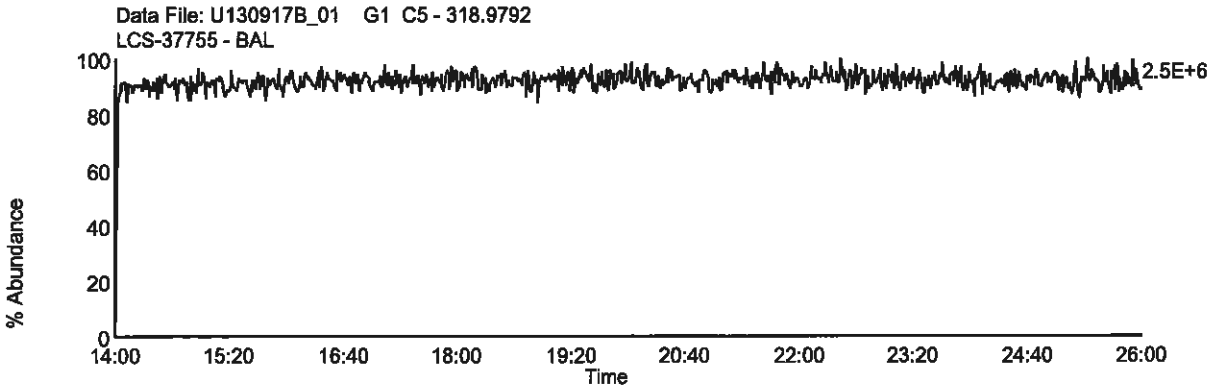
Homologue Group: Penta & Cleanup

Data File Name: U130917B_01	Lab Sample ID: LCS-37755
Date Acquired: 9/18/2013	Client Sample ID: LCSFS
Sample Description: LCS-37755 - BAL	Instrument: 10MSHR06 (U)







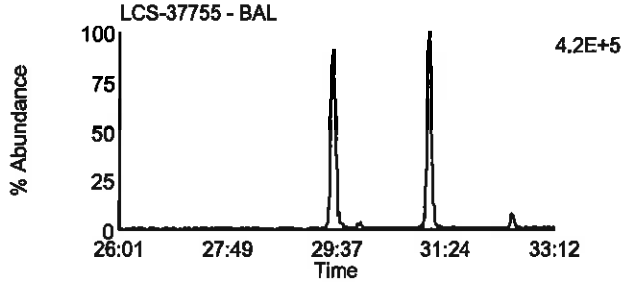


Homologue Group: Pentas

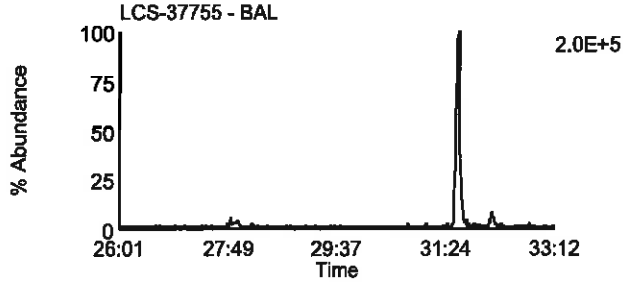
Data File Name: U130917B_01
Date Acquired: 9/18/2013
Sample Description: LCS-37755 - BAL

Lab Sample ID: LCS-37755
Client Sample ID: LCSFS
Instrument: 10MSHR06 (U)

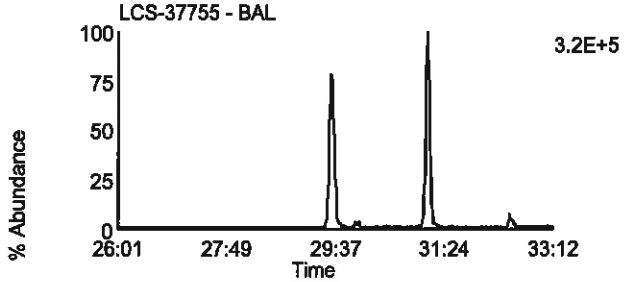
Data File: U130917B_01 G2 C1 - 339.8597
LCS-37755 - BAL



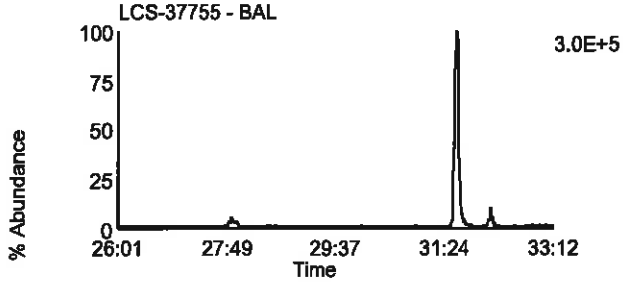
Data File: U130917B_01 G2 C4 - 353.8576
LCS-37755 - BAL



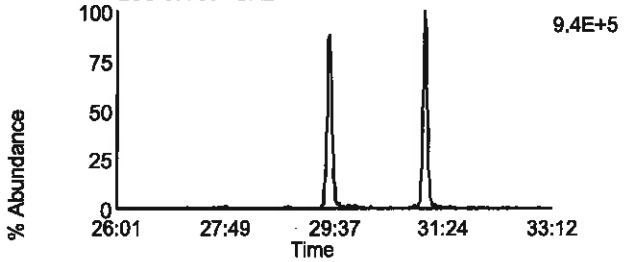
Data File: U130917B_01 G2 C2 - 341.8567
LCS-37755 - BAL



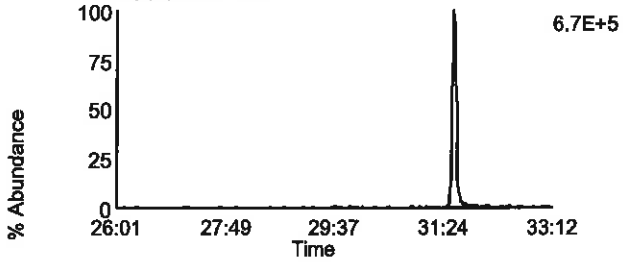
Data File: U130917B_01 G2 C8 - 355.8546
LCS-37755 - BAL



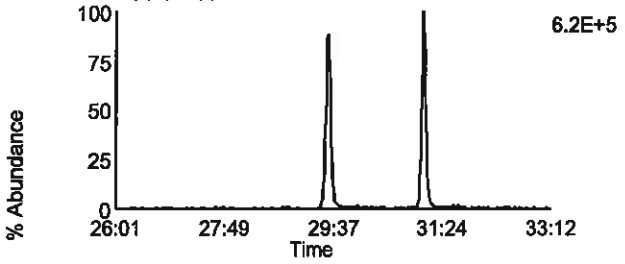
Data File: U130917B_01 G2 C3 - 351.8999
LCS-37755 - BAL



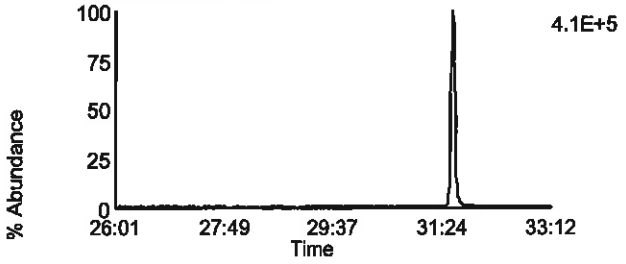
Data File: U130917B_01 G2 C10 - 367.8948
LCS-37755 - BAL



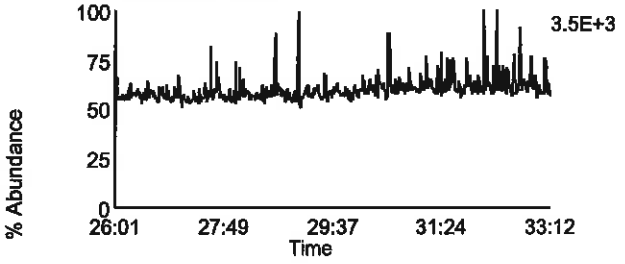
Data File: U130917B_01 G2 C5 - 353.8969
LCS-37755 - BAL



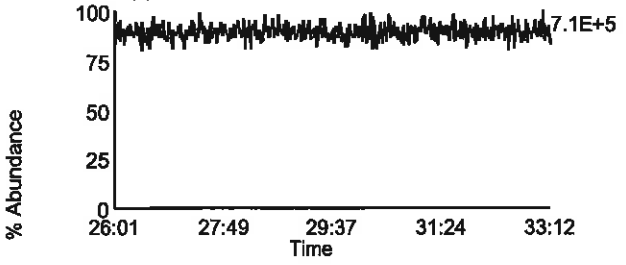
Data File: U130917B_01 G2 C11 - 369.8918
LCS-37755 - BAL



Data File: U130917B_01 G2 C12 - 409.7974
LCS-37755 - BAL



Data File: U130917B_01 G2 C6 - 354.9792
LCS-37755 - BAL

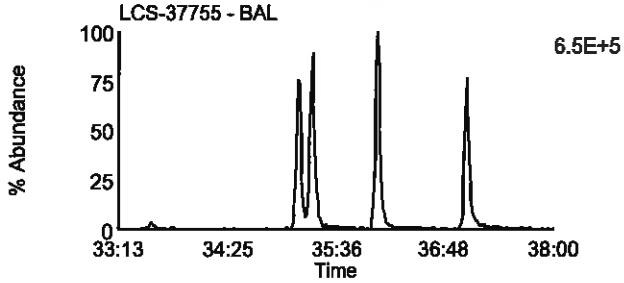


Homologue Group: Hexas

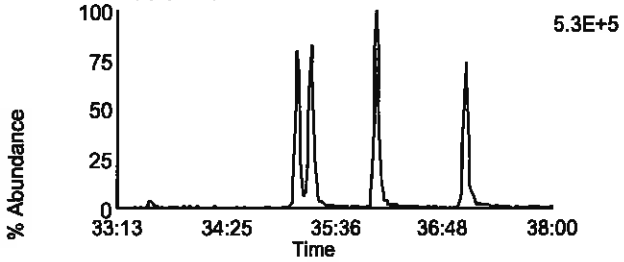
Data File Name: U130917B_01
Date Acquired: 9/18/2013
Sample Description: LCS-37755 - BAL

Lab Sample ID: LCS-37755
Client Sample ID: LCSFS
Instrument: 10MSHR06 (U)

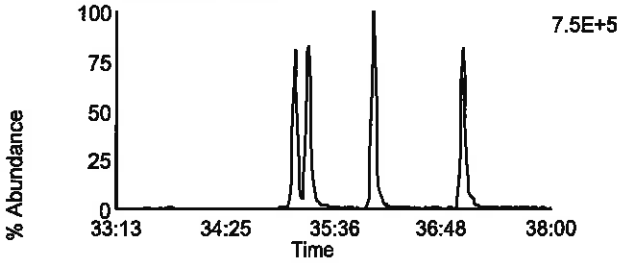
Data File: U130917B_01 G3 C1 - 373.8207
LCS-37755 - BAL



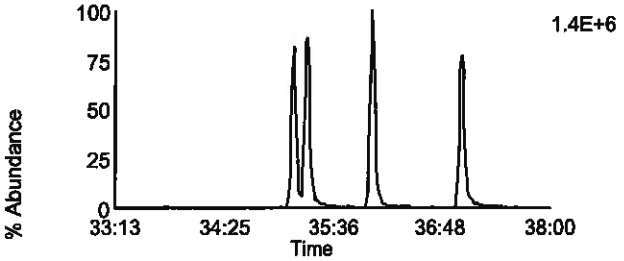
Data File: U130917B_01 G3 C2 - 375.8178
LCS-37755 - BAL



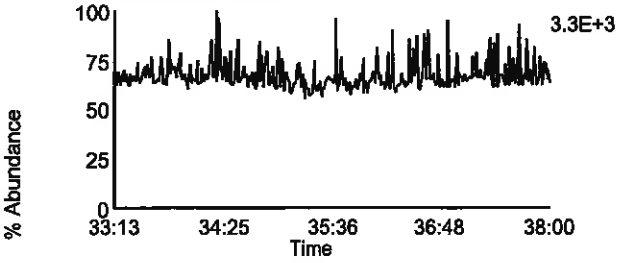
Data File: U130917B_01 G3 C5 - 383.8639
LCS-37755 - BAL



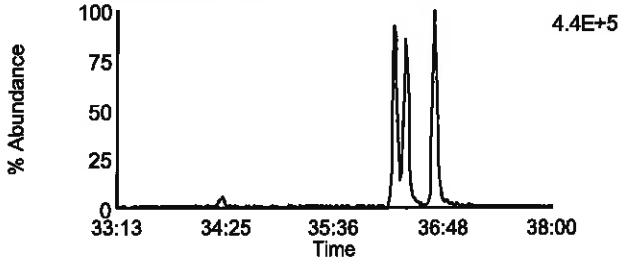
Data File: U130917B_01 G3 C6 - 385.861
LCS-37755 - BAL



Data File: U130917B_01 G3 C11 - 445.7555
LCS-37755 - BAL



Data File: U130917B_01 G3 C7 - 389.8156
LCS-37755 - BAL



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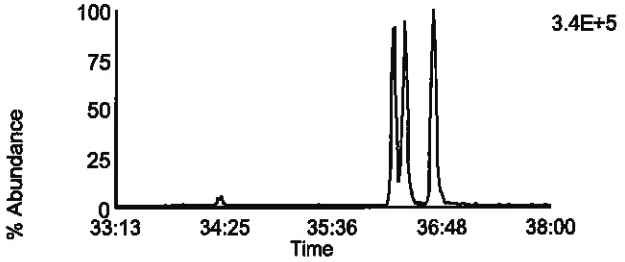
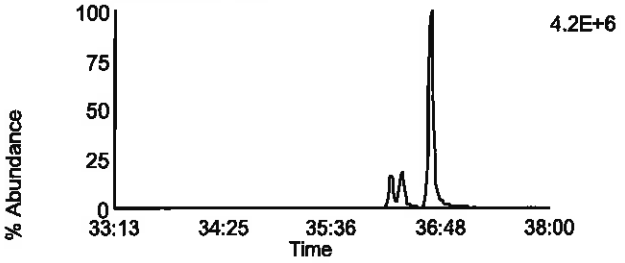
LCS-37755 - BAL



Data File: U130917B_01 G3 C9 - 401.8559
LCS-37755 - BAL



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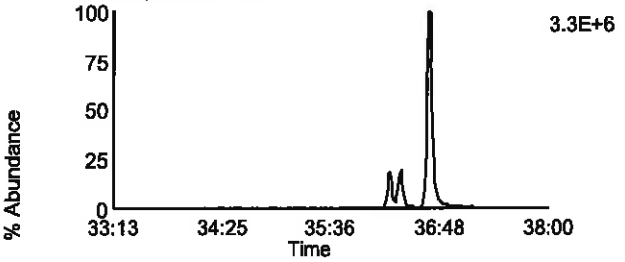
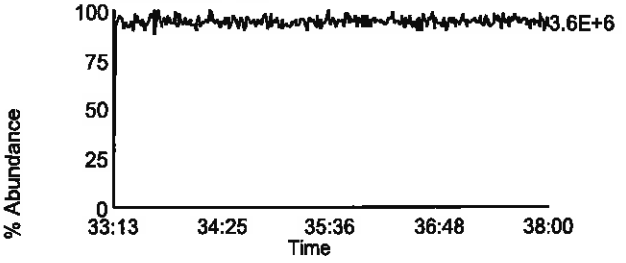
LCS-37755 - BAL



Data File: U130917B_01 G3 C3 - 380.976
LCS-37755 - BAL

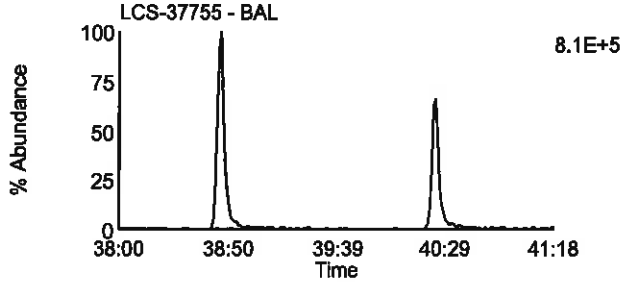


Homologue Group: Heptas

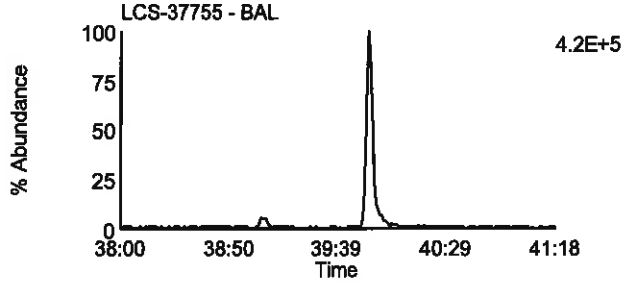
Data File Name: U130917B_01
Date Acquired: 9/18/2013
Sample Description: LCS-37755 - BAL

Lab Sample ID: LCS-37755
Client Sample ID: LCSFS
Instrument: 10MSHR06 (U)

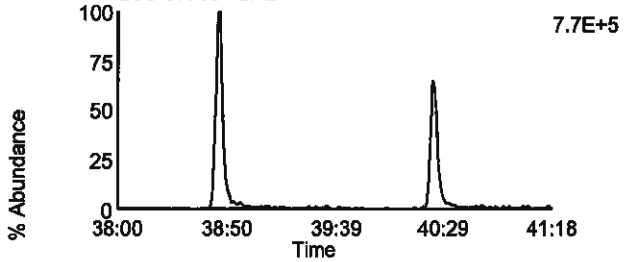
Data File: U130917B_01 G4 C3 - 407.7818
LCS-37755 - BAL



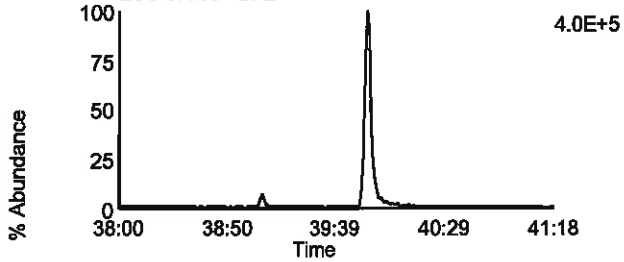
Data File: U130917B_01 G4 C8 - 423.7767
LCS-37755 - BAL



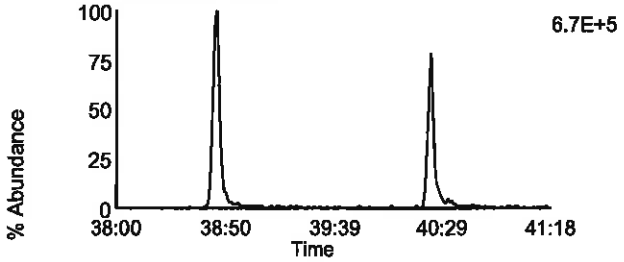
Data File: U130917B_01 G4 C4 - 409.7788
LCS-37755 - BAL



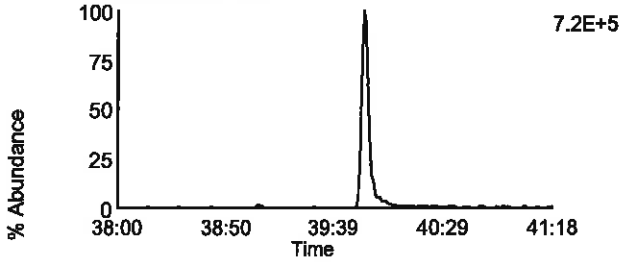
Data File: U130917B_01 G4 C9 - 425.7737
LCS-37755 - BAL



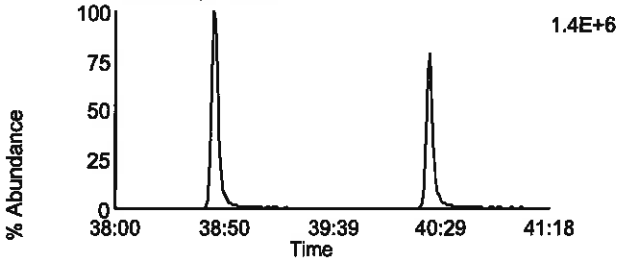
Data File: U130917B_01 G4 C6 - 417.825
LCS-37755 - BAL



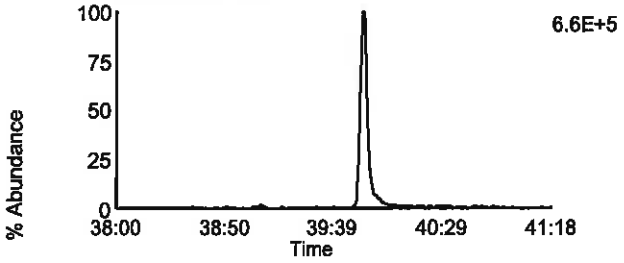
Data File: U130917B_01 G4 C11 - 435.8169
LCS-37755 - BAL



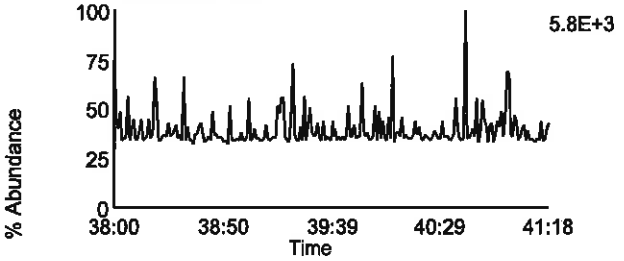
Data File: U130917B_01 G4 C7 - 419.822
LCS-37755 - BAL



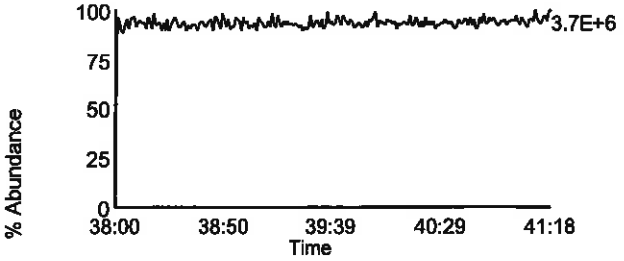
Data File: U130917B_01 G4 C12 - 437.814
LCS-37755 - BAL



Data File: U130917B_01 G4 C13 - 479.7165
LCS-37755 - BAL



Data File: U130917B_01 G4 C1 - 380.976
LCS-37755 - BAL

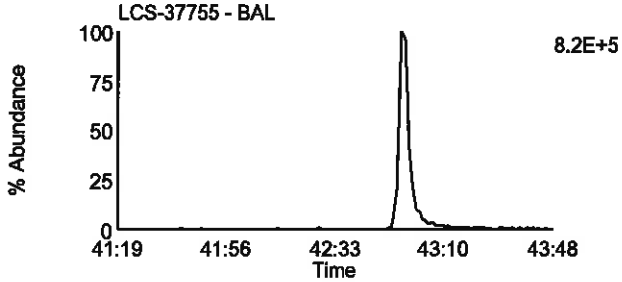


Homologue Group: Octas

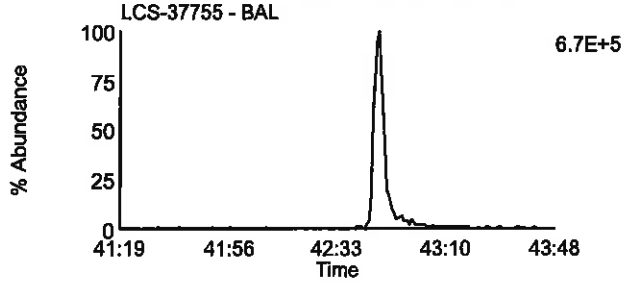
Data File Name: U130917B_01
Date Acquired: 9/18/2013
Sample Description: LCS-37755 - BAL

Lab Sample ID: LCS-37755
Client Sample ID: LCSFS
Instrument: 10MSHR06 (U)

Data File: U130917B_01 G5 C4 - 441.7428
LCS-37755 - BAL



Data File: U130917B_01 G5 C8 - 457.7377
LCS-37755 - BAL



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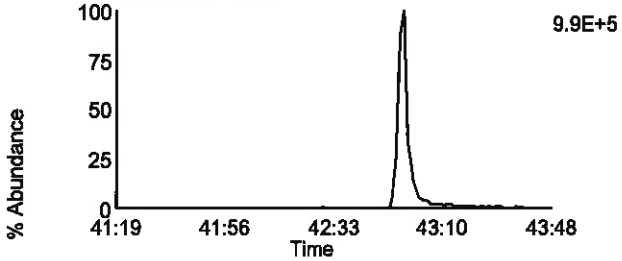
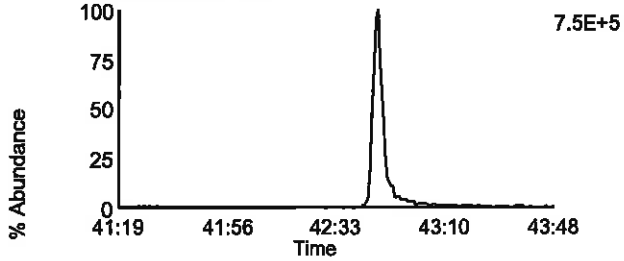
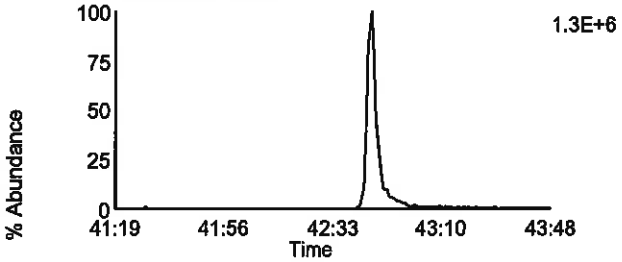
LCS-37755 - BAL



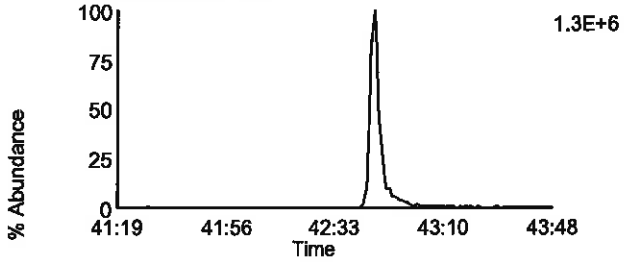
Data File: U130917B_01 G5 C9 - 459.7347
LCS-37755 - BAL



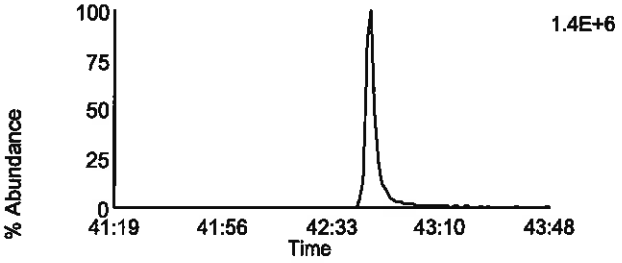
Data File: U130917B_01 G5 C11 - 469.7779
LCS-37755 - BAL



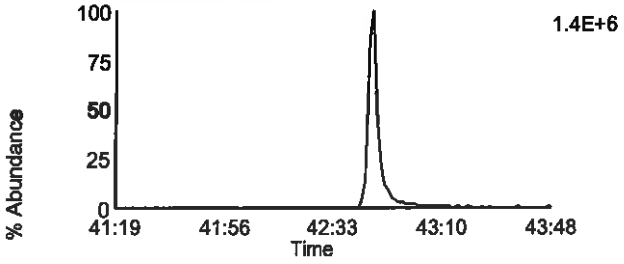
Data File: U130917B_01 G5 C11 - 469.7779
LCS-37755 - BAL



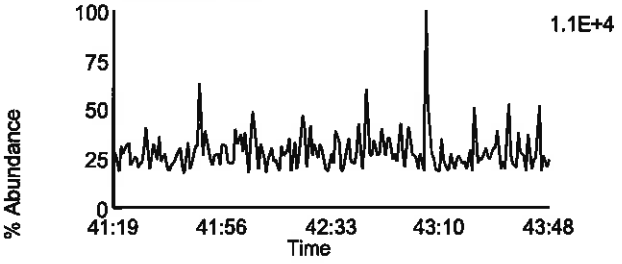
Data File: U130917B_01 G5 C12 - 471.7749
LCS-37755 - BAL



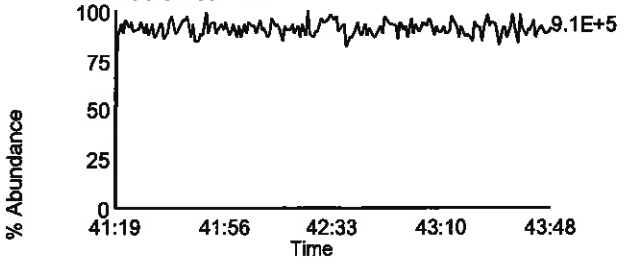
Data File: U130917B_01 G5 C12 - 471.7749
LCS-37755 - BAL



Data File: U130917B_01 G5 C13 - 513.6775
LCS-37755 - BAL



Data File: U130917B_01 G5 C2 - 430.9728
LCS-37755 - BAL

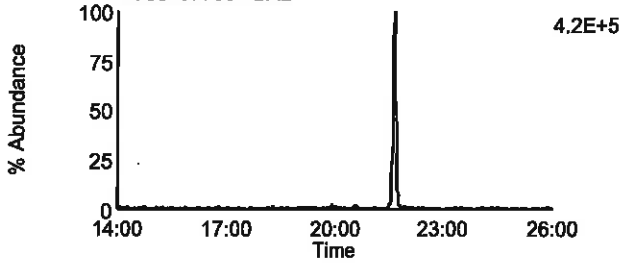


Homologue Group: Tetras

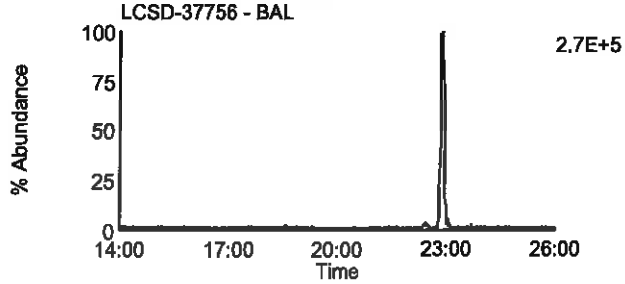
Data File Name: U130917B_02
Date Acquired: 9/18/2013
Sample Description: LCSD-37756 - BAL

Lab Sample ID: LCSD-37756
Client Sample ID: LCSFT
Instrument: 10MSHR06 (U)

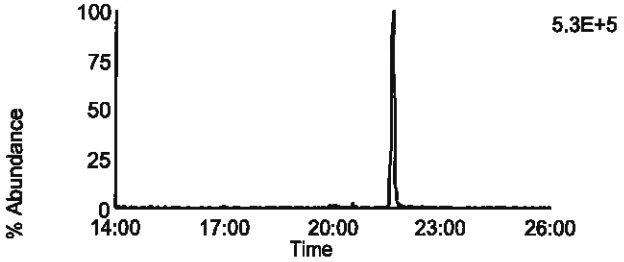
Data File: U130917B_02 G1 C1 - 303.9016
LCSD-37756 - BAL



Data File: U130917B_02 G1 C7 - 319.8965
LCSD-37756 - BAL



Data File: U130917B_02 G1 C2 - 305.8987
LCSD-37756 - BAL



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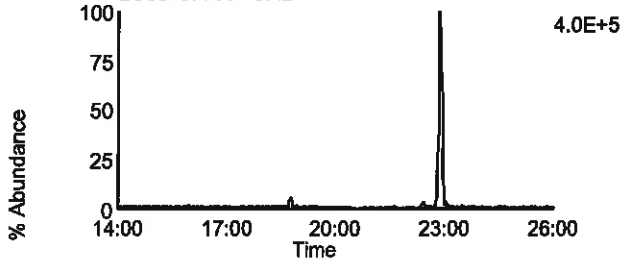
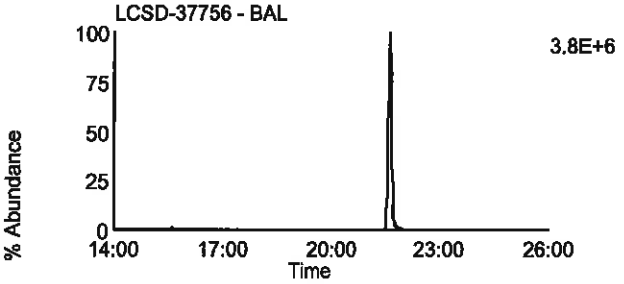
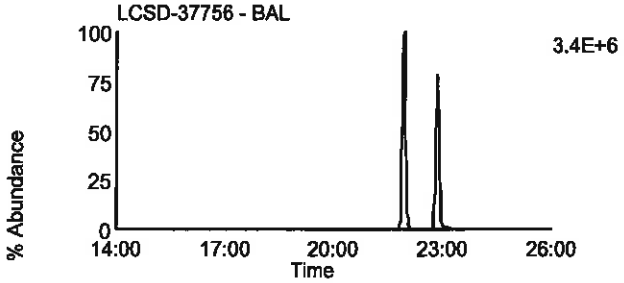
LCSD-37756 - BAL



Data File: U130917B_02 G1 C3 - 315.9418
LCSD-37756 - BAL



Data File: U130917B_02 G1 C10 - 331.9367
LCSD-37756 - BAL



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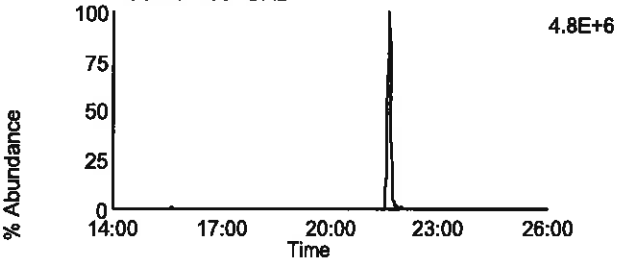
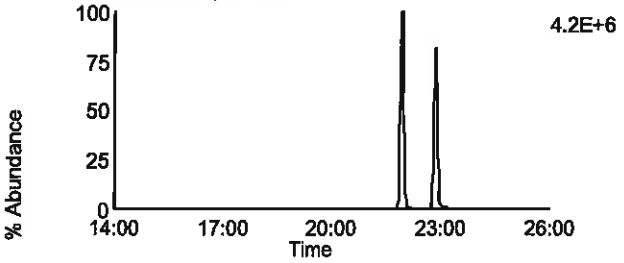
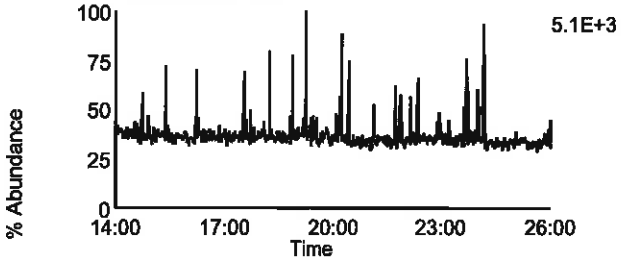
LCSD-37756 - BAL



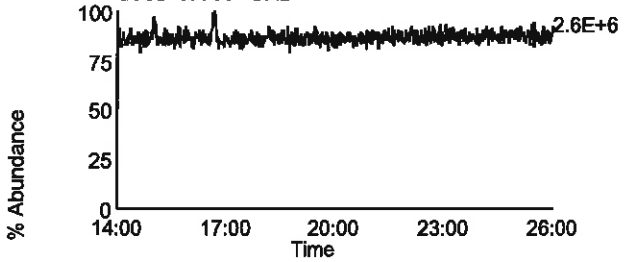
Data File: U130917B_02 G1 C11 - 333.9338
LCSD-37756 - BAL



Data File: U130917B_02 G1 C14 - 375.8364
LCSD-37756 - BAL



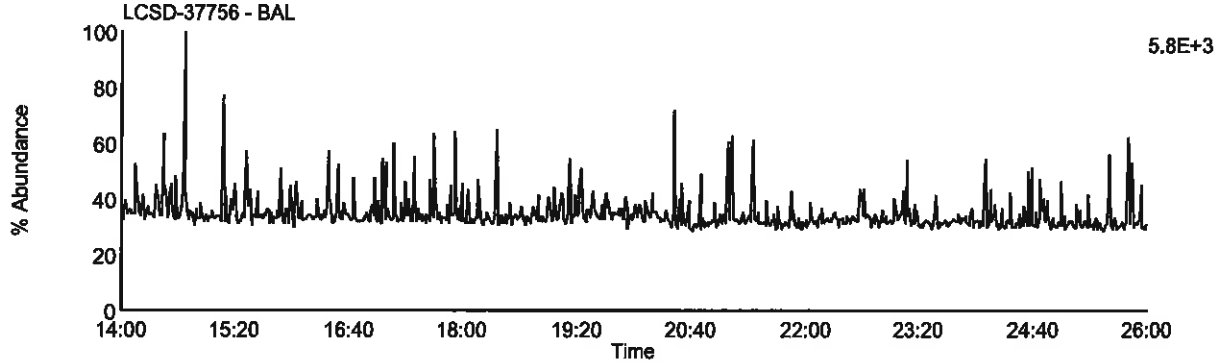
Data File: U130917B_02 G1 C5 - 318.9792
LCSD-37756 - BAL



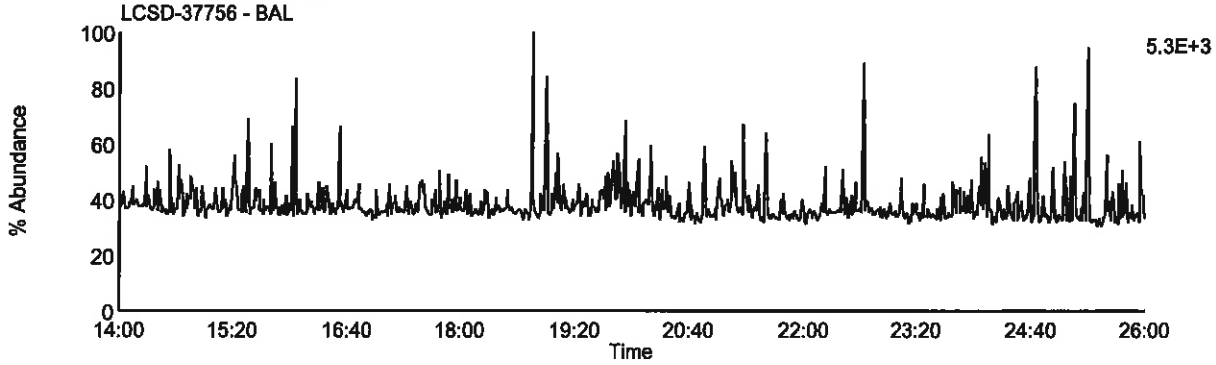
Homologue Group: Penta & Cleanup

Data File Name: U130917B_02	Lab Sample ID: LCSD-37756
Date Acquired: 9/18/2013	Client Sample ID: LCSFT
Sample Description: LCSD-37756 - BAL	Instrument: 10MSHR06 (U)

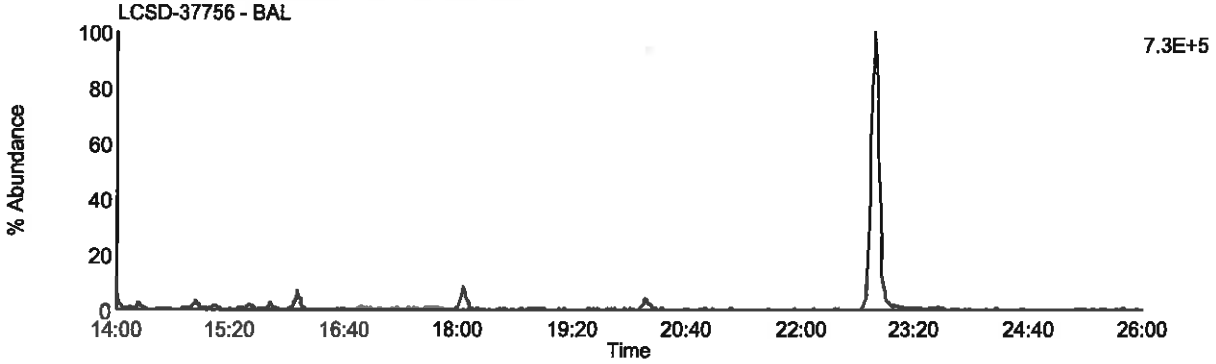
Data File: U130917B_02 G1 C12 - 339.8597
LCSD-37756 - BAL



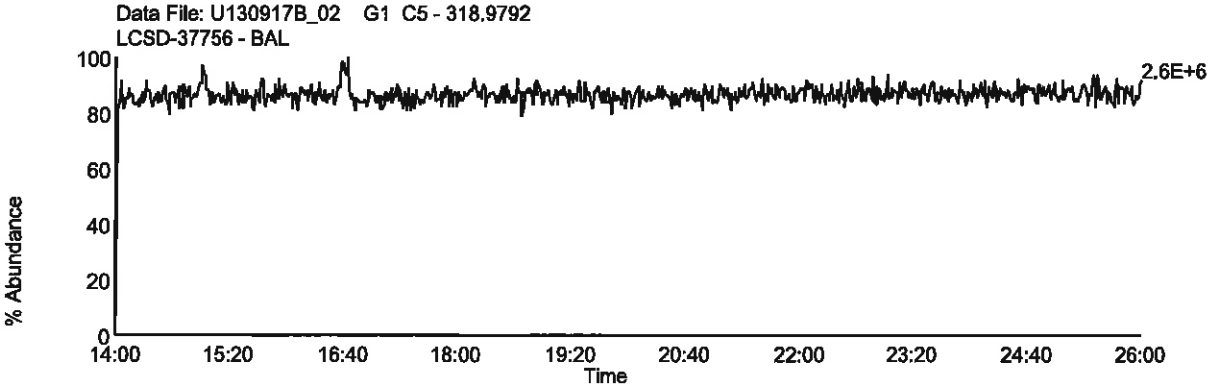
Data File: U130917B_02 G1 C13 - 341.8567
LCSD-37756 - BAL



Data File: U130917B_02 G1 C9 - 327.8847
LCSD-37756 - BAL



Data File: U130917B_02 G1 C5 - 318.9792
LCSD-37756 - BAL

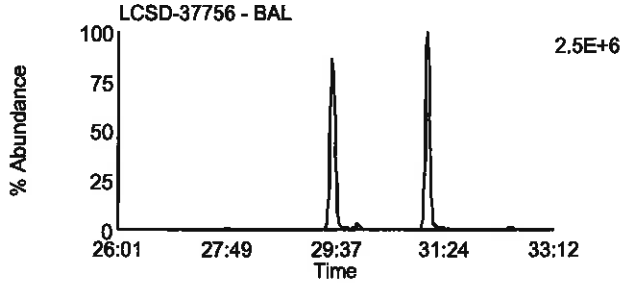


Homologue Group: Pentas

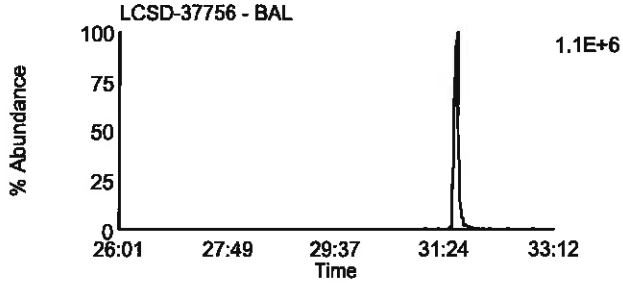
Data File Name: U130917B_02
Date Acquired: 9/18/2013
Sample Description: LCSD-37756 - BAL

Lab Sample ID: LCSD-37756
Client Sample ID: LCSFT
Instrument: 10MSHR06 (U)

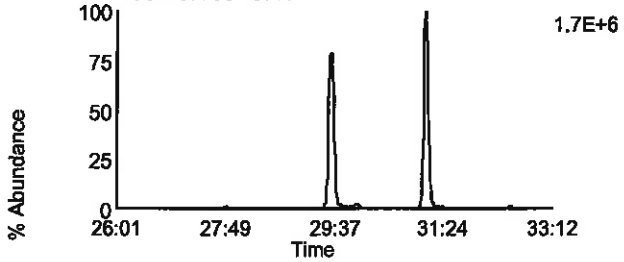
Data File: U130917B_02 G2 C1 - 339.8597
LCSD-37756 - BAL



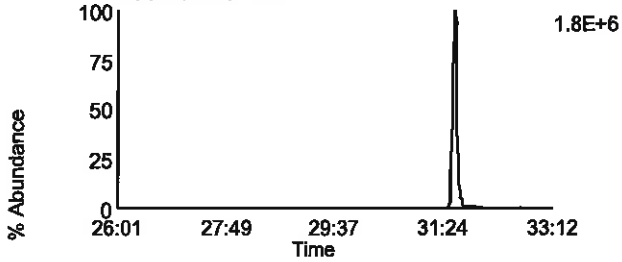
Data File: U130917B_02 G2 C4 - 353.8576
LCSD-37756 - BAL



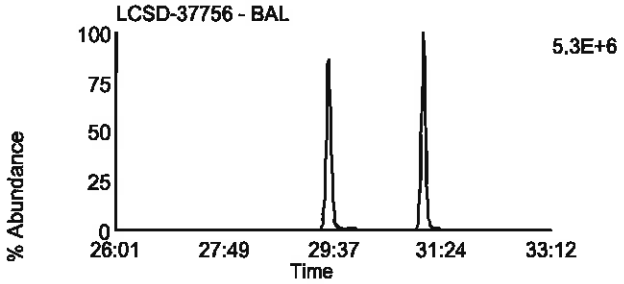
Data File: U130917B_02 G2 C2 - 341.8567
LCSD-37756 - BAL



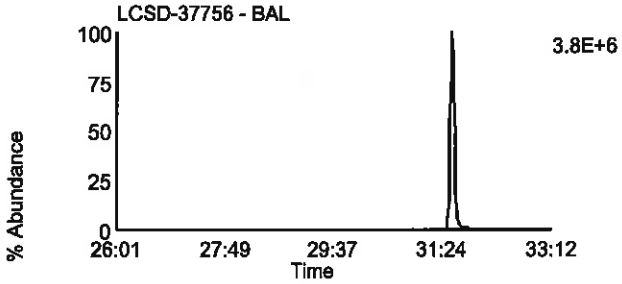
Data File: U130917B_02 G2 C8 - 355.8546
LCSD-37756 - BAL



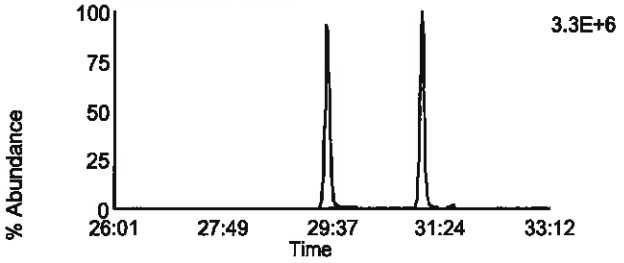
Data File: U130917B_02 G2 C3 - 351.8999
LCSD-37756 - BAL



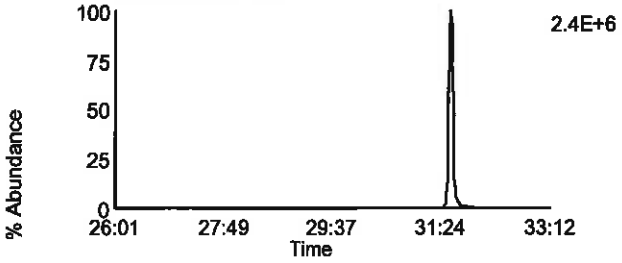
Data File: U130917B_02 G2 C10 - 367.8948
LCSD-37756 - BAL



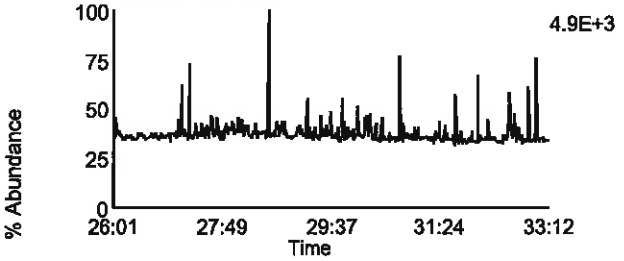
Data File: U130917B_02 G2 C5 - 353.8969
LCSD-37756 - BAL



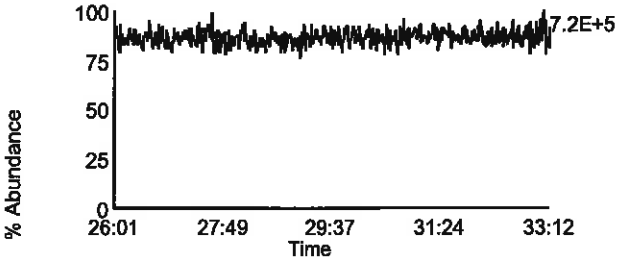
Data File: U130917B_02 G2 C11 - 369.8918
LCSD-37756 - BAL



Data File: U130917B_02 G2 C12 - 409.7974
LCSD-37756 - BAL



Data File: U130917B_02 G2 C6 - 354.9792
LCSD-37756 - BAL

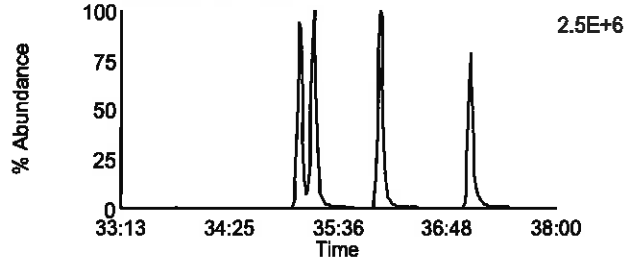


Homologue Group: Hexas

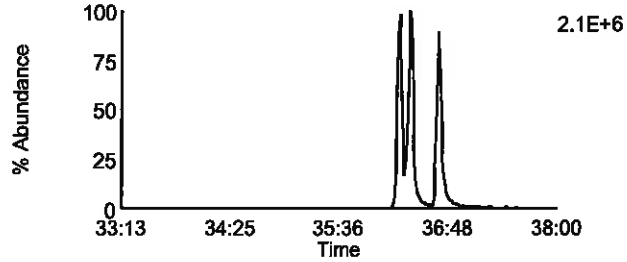
Data File Name: U130917B_02
Date Acquired: 9/18/2013
Sample Description: LCSD-37756 - BAL

Lab Sample ID: LCSD-37756
Client Sample ID: LCSFT
Instrument: 10MSHR06 (U)

Data File: U130917B_02 G3 C1 - 373.8207
LCSD-37756 - BAL



Data File: U130917B_02 G3 C7 - 389.8156
LCSD-37756 - BAL



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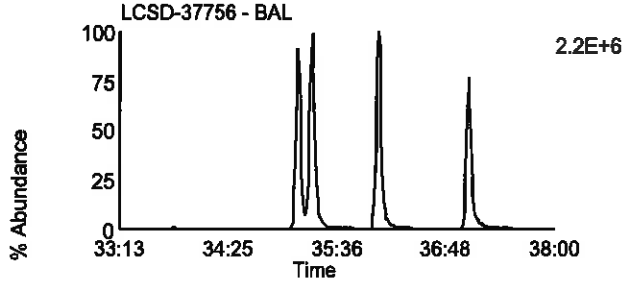
LCSD-37756 - BAL



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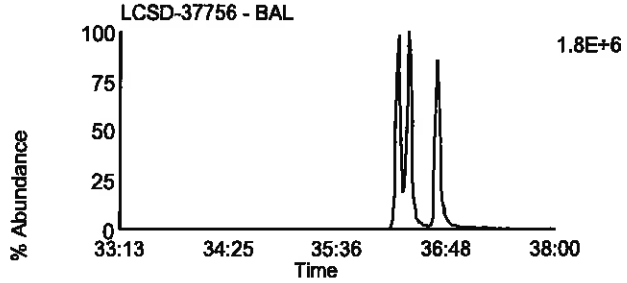
LCSD-37756 - BAL



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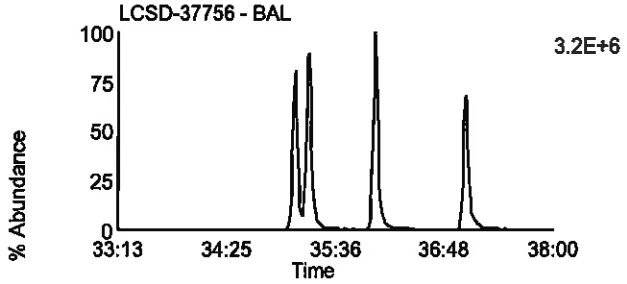
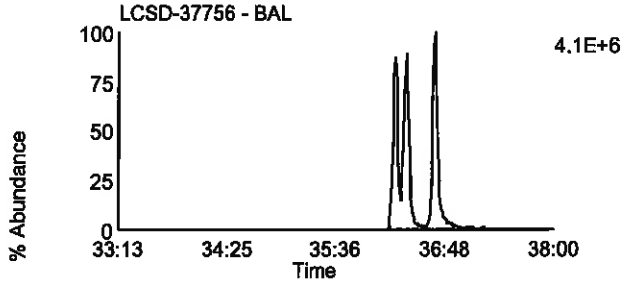
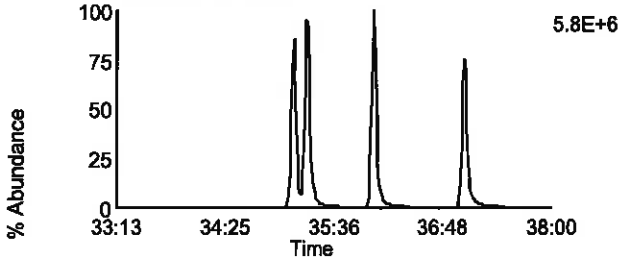
LCSD-37756 - BAL



Data File: U130917B_02 G3 C9 - 401.8559
LCSD-37756 - BAL



Data File: U130917B_02 G3 C6 - 385.861
LCSD-37756 - BAL



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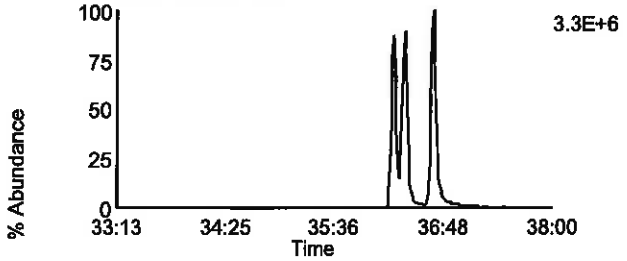
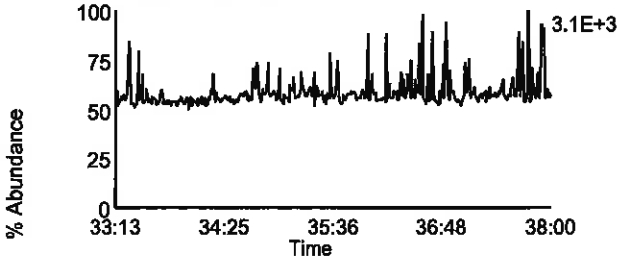
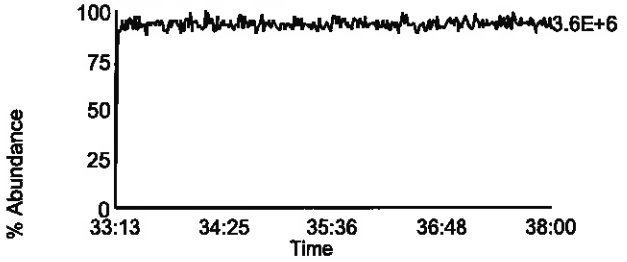
LCSD-37756 - BAL



Data File: U130917B_02 G3 C11 - 445.7555
LCSD-37756 - BAL



Data File: U130917B_02 G3 C3 - 380.976
LCSD-37756 - BAL

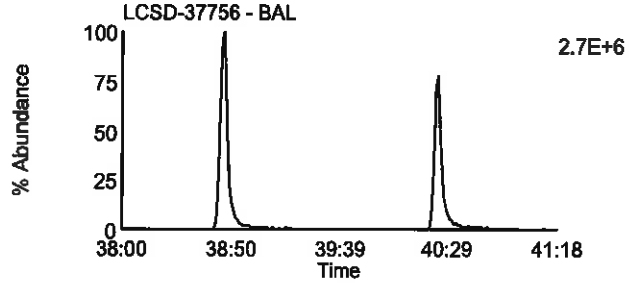


Homologue Group: Heptas

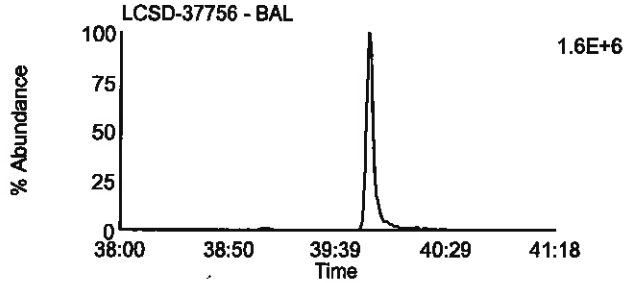
Data File Name: U130917B_02
Date Acquired: 9/18/2013
Sample Description: LCSD-37756 - BAL

Lab Sample ID: LCSD-37756
Client Sample ID: LCSFT
Instrument: 10MSHR06 (U)

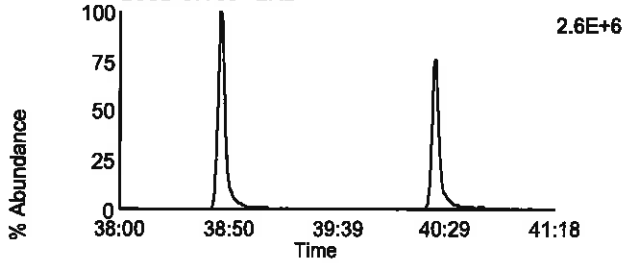
Data File: U130917B_02 G4 C3 - 407.7818
LCSD-37756 - BAL



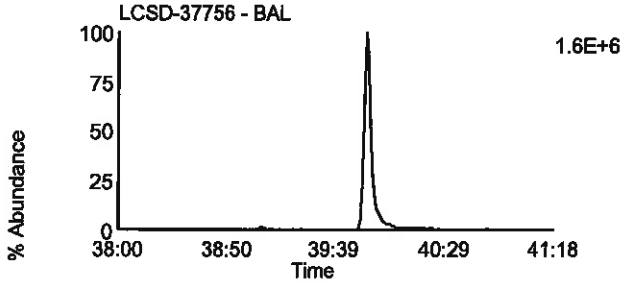
Data File: U130917B_02 G4 C8 - 423.7767
LCSD-37756 - BAL



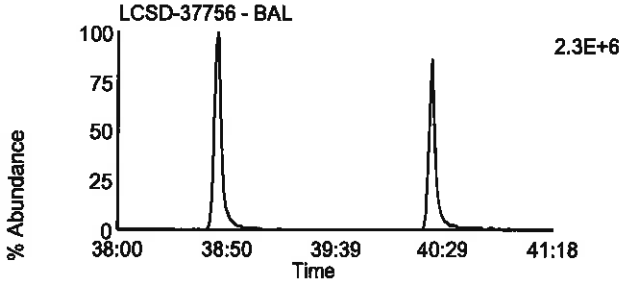
Data File: U130917B_02 G4 C4 - 409.7788
LCSD-37756 - BAL



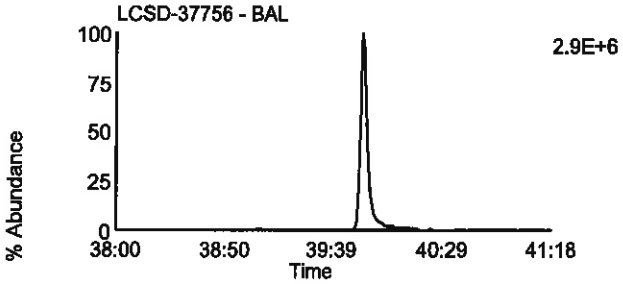
Data File: U130917B_02 G4 C9 - 425.7737
LCSD-37756 - BAL



Data File: U130917B_02 G4 C6 - 417.825
LCSD-37756 - BAL



Data File: U130917B_02 G4 C11 - 435.8169
LCSD-37756 - BAL



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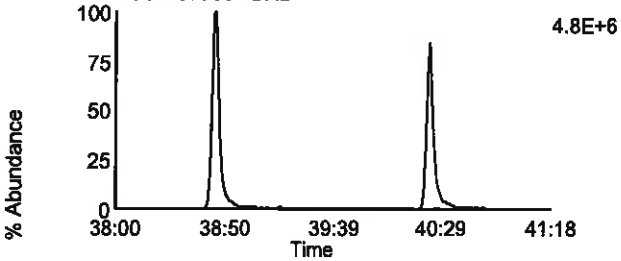
LCSD-37756 - BAL



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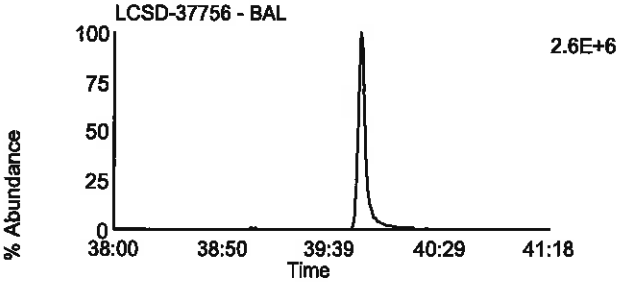
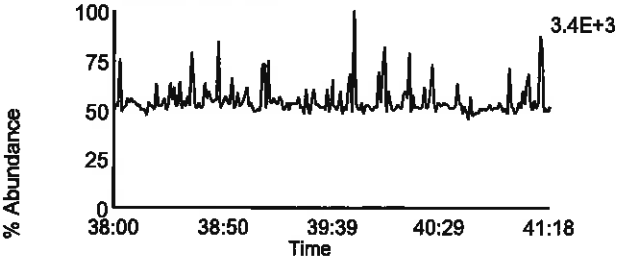
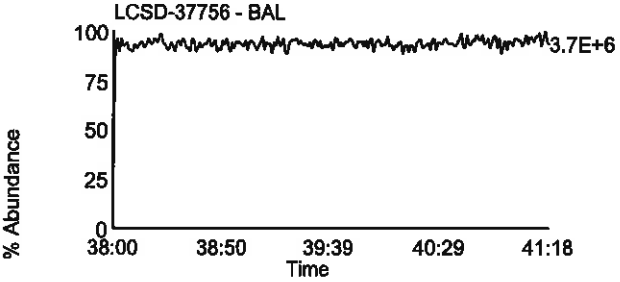
LCSD-37756 - BAL



Data File: U130917B_02 G4 C13 - 479.7165
LCSD-37756 - BAL



Data File: U130917B_02 G4 C1 - 380.976
LCSD-37756 - BAL

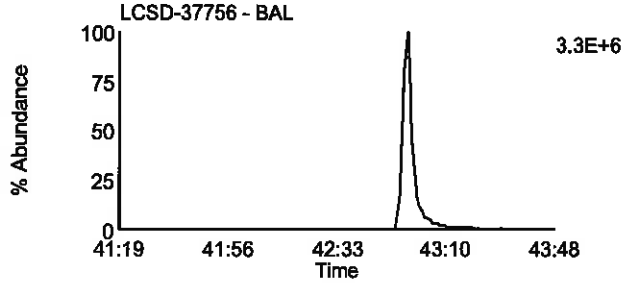


Homologue Group: Octas

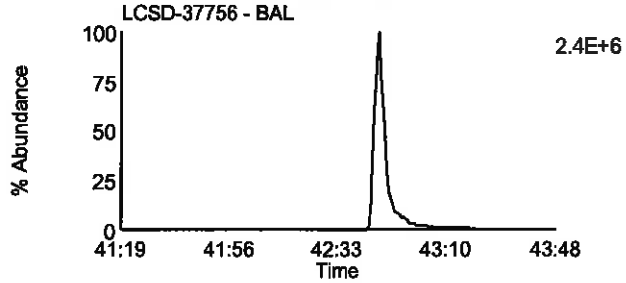
Data File Name: U130917B_02
Date Acquired: 9/18/2013
Sample Description: LCSD-37756 - BAL

Lab Sample ID: LCSD-37756
Client Sample ID: LCSFT
Instrument: 10MSHR06 (U)

Data File: U130917B_02 G5 C4 - 441.7428
LCSD-37756 - BAL



Data File: U130917B_02 G5 C8 - 457.7377
LCSD-37756 - BAL



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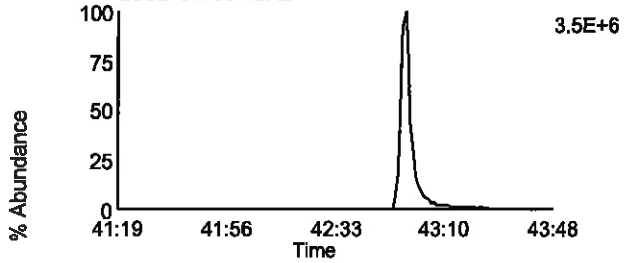
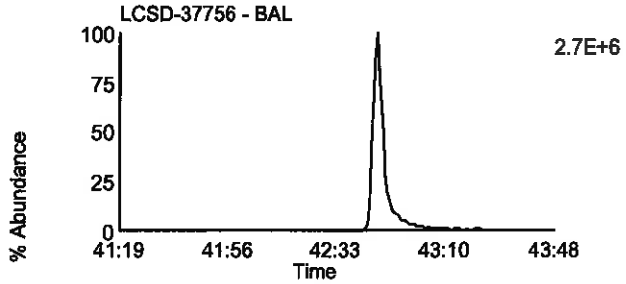
LCSD-37756 - BAL



Data File: U130917B_02 G5 C9 - 459.7347
LCSD-37756 - BAL



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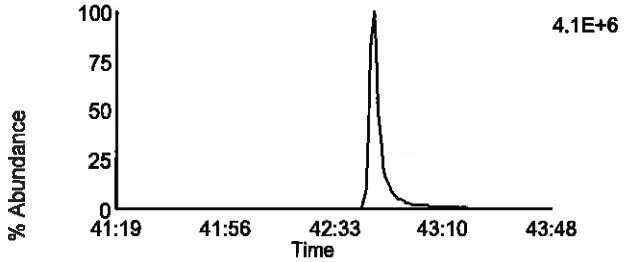
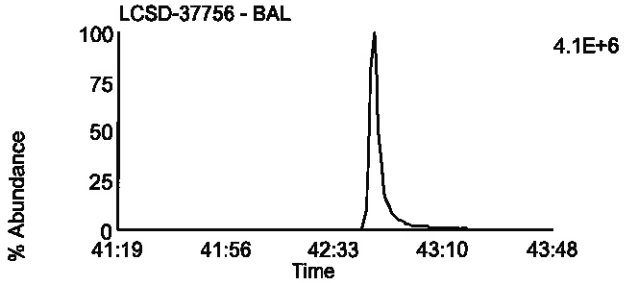
LCSD-37756 - BAL



Data File: U130917B_02 G5 C11 - 469.7779
LCSD-37756 - BAL



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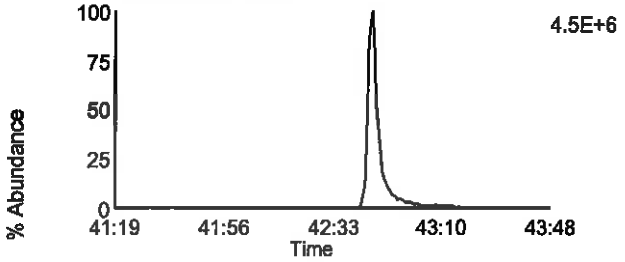
LCSD-37756 - BAL



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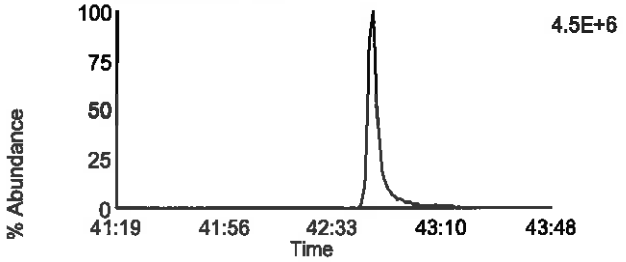
LCSD-37756 - BAL



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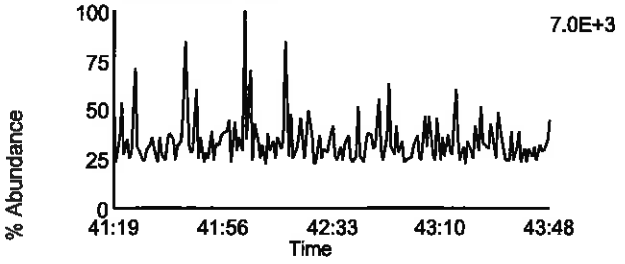
LCSD-37756 - BAL



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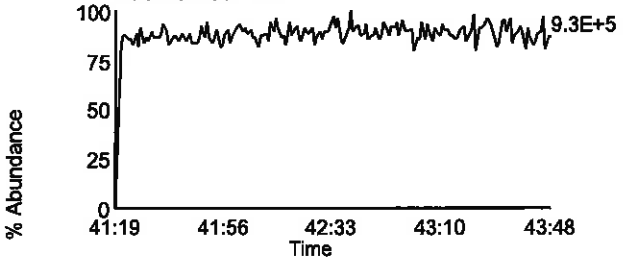
LCSD-37756 - BAL



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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client ID		Injected By	BAL
Lab ID	BLANK-37754	Instrument ID	10MSHR06 (U)
Filename	U130917B_05	GC Column ID	USD227224H
Analyzed	09/18/2013 05:55	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:38	2.55e7	3.23e7	3.89e6	5.01e6	6.174e3	2.841e3	0.79	
2,3,7,8-TCDF	21:38	8.12e3	2.26e4	2.20e3	5.38e3	6.751e2	6.466e2	0.36	I
Other TCDF 1	21:57	8.44e3	1.20e4					0.70	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:54	2.26e7	2.81e7	3.59e6	4.41e6	3.891e3	1.071e3	0.80	
2,3,7,8-TCDD-13C	22:50	1.83e7	2.31e7	2.75e6	3.45e6	4.672e3	2.239e3	0.79	
2,3,7,8-TCDD-37Cl4	22:52	4.78e6		7.28e5		1.069e3	----		
2,3,7,8-TCDD	22:53	ND	ND	ND	ND	5.594e2	8.325e2		

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:32	2.66e7	1.71e7	4.52e6	2.88e6	1.870e4	2.953e3	1.55	
2,3,4,7,8-PeCDF-13C	31:06	2.76e7	1.79e7	5.48e6	3.58e6	5.220e3	1.517e3	1.54	
1,2,3,7,8-PeCDF	29:34	ND	ND	ND	ND	4.308e2	2.833e2		
2,3,4,7,8-PeCDF	31:06	ND	ND	ND	ND	4.194e2	3.504e2		

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:34	1.89e7	1.20e7	4.08e6	2.54e6	7.835e1	1.193e3	1.58	
1,2,3,7,8-PeCDD	31:36	ND	ND	ND	ND	4.589e2	4.346e2		

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:10	1.06e7	2.03e7	2.67e6	5.17e6	2.958e2	6.587e2	0.52	
1,2,3,6,7,8-HxCDF-13C	35:20	1.38e7	2.67e7	3.05e6	5.69e6	4.090e2	3.384e2	0.52	
2,3,4,6,7,8-HxCDF-13C	36:03	1.29e7	2.56e7	3.11e6	5.84e6	4.903e1	4.593e2	0.50	
1,2,3,7,8,9-HxCDF-13C	37:02	1.04e7	2.09e7	2.31e6	4.63e6	1.363e4	5.993e3	0.50	
1,2,3,4,7,8-HxCDF	35:12	ND	ND	ND	ND	3.948e2	3.575e2		
1,2,3,6,7,8-HxCDF	35:21	ND	ND	ND	ND	3.894e2	3.939e2		
2,3,4,6,7,8-HxCDF	36:04	ND	ND	ND	ND	3.894e2	2.704e2		
1,2,3,7,8,9-HxCDF	37:03	ND	ND	ND	ND	3.501e2	3.264e2		

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Client ID		Injected By	BAL
Lab ID	BLANK-37754	Instrument ID	10MSHR06 (U)
Filename	U130917B_05	GC Column ID	USD227224H
Analyzed	09/18/2013 05:55	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:15	1.50e7	1.18e7	4.05e6	3.16e6	4.898e3	4.614e3	1.27	
1,2,3,6,7,8-HxCDD-13C	36:22	1.75e7	1.39e7	3.96e6	3.10e6	2.729e3	6.384e2	1.26	
1,2,3,7,8,9-HxCDD-13C	36:41	2.14e7	1.67e7	4.69e6	3.58e6	4.624e3	3.064e2	1.28	
1,2,3,4,7,8-HxCDD	36:16	ND	ND	ND	ND	8.120e2	5.872e2		
1,2,3,6,7,8-HxCDD	36:23	ND	ND	ND	ND	9.553e2	5.867e2		
1,2,3,7,8,9-HxCDD	36:42	ND	ND	ND	ND	7.089e2	5.439e2		
Other HxCDD 1	35:04	4.01e3	3.59e3					1.12	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:46	9.36e6	2.03e7	2.28e6	4.98e6	7.476e2	8.725e2	0.46	
1,2,3,4,7,8,9-HpCDF-13C	40:24	7.13e6	1.57e7	1.73e6	3.78e6	2.741e3	1.555e3	0.45	
1,2,3,4,6,7,8-HpCDF	38:47	ND	ND	ND	ND	5.901e2	6.309e2		
1,2,3,4,7,8,9-HpCDF	40:25	ND	ND	ND	ND	7.959e2	5.860e2		

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:54	1.16e7	1.07e7	2.75e6	2.61e6	2.791e4	8.735e2	1.09	
1,2,3,4,6,7,8-HpCDD	39:55	4.68e3	1.13e4	2.31e3	4.75e3	8.924e2	5.941e2	0.41	I

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:57	1.22e4	2.39e4	4.53e3	7.38e3	6.013e2	1.036e3	0.51	I

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:47	1.83e7	2.05e7	3.97e6	4.44e6	2.468e2	1.716e2	0.89	
OCDD	42:47	1.69e4	3.52e4	3.58e3	9.29e3	1.347e3	9.039e2	0.48	I

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client ID	LCSFS	Injected By	BAL
Lab ID	LCS-37755	Instrument ID	10MSHR06 (U)
Filename	U130917B_01	GC Column ID	USD227224H
Analyzed	09/18/2013 02:48	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:38	3.25e6	3.88e6	4.87e5	6.10e5	----	----	0.84	
2,3,7,8-TCDF	21:39	2.57e5	3.77e5	4.72e4	6.85e4	----	----	0.68	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:55	2.19e7	2.71e7	3.53e6	4.45e6	----	----	0.81	
2,3,7,8-TCDD-13C	22:50	2.27e6	2.87e6	3.39e5	4.31e5	----	----	0.79	
2,3,7,8-TCDD-37Cl4	22:52	5.81e5		9.89e4		----	----		
2,3,7,8-TCDD	22:53	2.50e5	3.11e5	3.53e4	4.85e4	----	----	0.80	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:32	4.75e6	3.17e6	8.26e5	5.46e5	----	----	1.50	
2,3,4,7,8-PeCDF-13C	31:06	4.64e6	2.96e6	9.35e5	6.18e5	----	----	1.57	
1,2,3,7,8-PeCDF	29:34	2.13e6	1.38e6	3.78e5	2.51e5	----	----	1.54	
2,3,4,7,8-PeCDF	31:07	2.09e6	1.45e6	4.15e5	3.18e5	----	----	1.44	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:34	3.11e6	1.98e6	6.69e5	4.12e5	----	----	1.56	
1,2,3,7,8-PeCDD	31:37	9.33e5	1.51e6	2.01e5	2.99e5	----	----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:10	2.20e6	4.31e6	6.01e5	1.13e6	----	----	0.51	
1,2,3,6,7,8-HxCDF-13C	35:20	2.67e6	5.35e6	6.19e5	1.20e6	----	----	0.50	
2,3,4,6,7,8-HxCDF-13C	36:03	2.84e6	5.42e6	7.50e5	1.38e6	----	----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:02	2.43e6	4.57e6	6.10e5	1.07e6	----	----	0.53	
1,2,3,4,7,8-HxCDF	35:11	1.99e6	1.55e6	4.93e5	4.26e5	----	----	1.29	
1,2,3,6,7,8-HxCDF	35:21	2.20e6	1.87e6	5.82e5	4.39e5	----	----	1.18	
2,3,4,6,7,8-HxCDF	36:04	2.39e6	2.00e6	6.52e5	5.32e5	----	----	1.19	
1,2,3,7,8,9-HxCDF	37:03	1.94e6	1.58e6	5.01e5	3.93e5	----	----	1.23	

REPORT OF LABORATORY ANALYSIS

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Client ID	LCSFS	Injected By	BAL
Lab ID	LCS-37755	Instrument ID	10MSHR06 (U)
Filename	U130917B_01	GC Column ID	USD227224H
Analyzed	09/18/2013 02:48	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:15	2.66e6	2.14e6	6.85e5	6.00e5	-----	-----	1.25	
1,2,3,6,7,8-HxCDD-13C	36:22	3.16e6	2.48e6	7.63e5	6.32e5	-----	-----	1.28	
1,2,3,7,8,9-HxCDD-13C	36:41	1.77e7	1.42e7	4.18e6	3.29e6	-----	-----	1.25	
1,2,3,4,7,8-HxCDD	36:15	1.44e6	1.15e6	4.04e5	3.12e5	-----	-----	1.25	
1,2,3,6,7,8-HxCDD	36:23	1.58e6	1.26e6	3.75e5	3.21e5	-----	-----	1.26	
1,2,3,7,8,9-HxCDD	36:41	1.76e6	1.52e6	4.37e5	3.40e5	-----	-----	1.16	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:46	2.55e6	5.31e6	6.73e5	1.40e6	-----	-----	0.48	
1,2,3,4,7,8,9-HpCDF-13C	40:24	1.70e6	3.96e6	5.31e5	1.10e6	-----	-----	0.43	
1,2,3,4,6,7,8-HpCDF	38:47	2.99e6	2.94e6	8.11e5	7.69e5	-----	-----	1.02	
1,2,3,4,7,8,9-HpCDF	40:25	1.97e6	1.92e6	5.34e5	5.00e5	-----	-----	1.03	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:54	2.90e6	2.61e6	7.20e5	6.57e5	-----	-----	1.11	
1,2,3,4,6,7,8-HpCDD	39:55	1.45e6	1.45e6	4.20e5	3.98e5	-----	-----	1.00	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:57	3.44e6	3.85e6	8.19e5	9.91e5	-----	-----	0.89	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:47	5.05e6	5.45e6	1.27e6	1.37e6	-----	-----	0.93	
OCDD	42:48	2.75e6	3.08e6	6.70e5	7.49e5	-----	-----	0.89	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

Reviewed By _____ Date _____

Client ID	LCSFT	Injected By	BAL
Lab ID	LCSD-37756	Instrument ID	10MSHR06 (U)
Filename	U130917B_02	GC Column ID	USD227224H
Analyzed	09/18/2013 03:34	ICAL ID	U130729

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	21:39	2.54e7	3.18e7	3.84e6	4.77e6	-----	-----	0.80	
2,3,7,8-TCDF	21:40	2.32e6	3.27e6	4.15e5	5.29e5	-----	-----	0.71	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	21:55	2.13e7	2.68e7	3.37e6	4.16e6	-----	-----	0.79	
2,3,7,8-TCDD-13C	22:51	1.83e7	2.29e7	2.65e6	3.40e6	-----	-----	0.80	
2,3,7,8-TCDD-37Cl4	22:53	4.89e6		7.26e5		-----	-----		
2,3,7,8-TCDD	22:54	1.99e6	2.52e6	2.70e5	3.94e5	-----	-----	0.79	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	29:32	2.58e7	1.69e7	4.57e6	3.09e6	-----	-----	1.53	
2,3,4,7,8-PeCDF-13C	31:06	2.63e7	1.70e7	5.27e6	3.30e6	-----	-----	1.55	
1,2,3,7,8-PeCDF	29:33	1.22e7	7.96e6	2.12e6	1.30e6	-----	-----	1.54	
2,3,4,7,8-PeCDF	31:08	1.27e7	8.45e6	2.46e6	1.65e6	-----	-----	1.50	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:34	1.82e7	1.17e7	3.83e6	2.41e6	-----	-----	1.56	
1,2,3,7,8-PeCDD	31:37	5.68e6	9.23e6	1.12e6	1.83e6	-----	-----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:10	9.85e6	1.88e7	2.57e6	4.91e6	-----	-----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:20	1.24e7	2.37e7	2.84e6	5.50e6	-----	-----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:03	1.19e7	2.24e7	3.19e6	5.77e6	-----	-----	0.53	
1,2,3,7,8,9-HxCDF-13C	37:02	9.51e6	1.87e7	2.18e6	4.40e6	-----	-----	0.51	
1,2,3,4,7,8-HxCDF	35:11	9.36e6	7.67e6	2.39e6	1.96e6	-----	-----	1.22	
1,2,3,6,7,8-HxCDF	35:21	1.06e7	8.93e6	2.52e6	2.13e6	-----	-----	1.19	
2,3,4,6,7,8-HxCDF	36:04	1.06e7	8.61e6	2.52e6	2.15e6	-----	-----	1.23	
1,2,3,7,8,9-HxCDF	37:03	8.32e6	6.66e6	1.97e6	1.64e6	-----	-----	1.25	

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Client ID	LCSFT	Injected By	BAL
Lab ID	LCSD-37756	Instrument ID	10MSHR06 (U)
Filename	U130917B_02	GC Column ID	USD227224H
Analyzed	09/18/2013 03:34	ICAL ID	U130729

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:15	1.35e7	1.06e7	3.59e6	2.84e6	----	----	1.28	
1,2,3,6,7,8-HxCDD-13C	36:22	1.56e7	1.25e7	3.67e6	2.91e6	----	----	1.25	
1,2,3,7,8,9-HxCDD-13C	36:41	1.81e7	1.42e7	4.10e6	3.27e6	----	----	1.28	
1,2,3,4,7,8-HxCDD	36:16	7.44e6	6.19e6	2.01e6	1.72e6	----	----	1.20	
1,2,3,6,7,8-HxCDD	36:23	8.83e6	7.02e6	2.05e6	1.75e6	----	----	1.26	
1,2,3,7,8,9-HxCDD	36:42	8.09e6	6.64e6	1.84e6	1.50e6	----	----	1.22	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:46	8.87e6	1.90e7	2.25e6	4.79e6	----	----	0.47	
1,2,3,4,7,8,9-HpCDF-13C	40:24	6.78e6	1.50e7	1.95e6	4.05e6	----	----	0.45	
1,2,3,4,6,7,8-HpCDF	38:47	1.08e7	1.05e7	2.68e6	2.64e6	----	----	1.03	
1,2,3,4,7,8,9-HpCDF	40:25	8.01e6	7.79e6	2.07e6	2.00e6	----	----	1.03	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:54	1.10e7	9.99e6	2.89e6	2.55e6	----	----	1.10	
1,2,3,4,6,7,8-HpCDD	39:55	6.25e6	6.08e6	1.59e6	1.60e6	----	----	1.03	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:57	1.32e7	1.49e7	3.28e6	3.46e6	----	----	0.89	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:47	1.77e7	1.94e7	4.11e6	4.51e6	----	----	0.91	
OCDD	42:48	1.08e7	1.19e7	2.44e6	2.74e6	----	----	0.91	

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APPENDIX H

LABORATORY DATA VALIDATION

LABORATORY DATA CONSULTANTS, INC.

2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Ninyo & Moore
5710 Ruffin Road
San Diego, CA 92123
ATTN: Ms. Lisa Bestard

February 19, 2014

SUBJECT: Clairemont HS, Data Validation

Dear Ms. Bestard,

Enclosed is the final validation report for the fractions listed below. This SDG was received on January 29, 2014. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 31236:

SDG #	Fraction
1302545/1302547/ 1302581	Semivolatiles, Chlorinated Pesticides, Metals, Total Petroleum Hydrocarbons as Extractables

The data validation was performed under EPA Level III guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008
- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, January 2010
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; Update IV, February 2007

Please feel free to contact us if you have any questions.

Sincerely,

Andrew Kong
Operations Manager/ Chemist

L:\Ninyo\School Sites\26469COV.wpd

Attachment 1

Level III

LDC #31236 (Ninyo & Moore-San Diego / Clairmont HS)

Project#105338088

LDC	SDG#	DATE REC'D	(3) DATE DUE	SVOA (8270C-SIM)		Pest (8081A)		Metals (6010B)		Lead (6010B)		STLC Lead (6010B)		Hg (7471A)		TPHE (8015B)																					
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	1302545/1302547/ 1302581	01/29/14	02/20/14	0	11	0	11	0	17	0	21	0	4	0	17	0	11																				
Total	A/AK			0	11	0	11	0	17	0	21	0	4	0	17	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS/MSD, and DUPs

31236ST.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Clairmont HS
Collection Date:	August 20 through August 22, 2013
LDC Report Date:	February 14, 2014
Matrix:	Soil
Parameters:	Semivolatiles
Validation Level:	EPA Level III
Laboratory:	Advanced Technology Laboratories
Sample Delivery Group (SDG):	1302545/1302547/1302581

Sample Identification

T-12-S
T-12-9.5
T-13-4
T-14-21
T-15-14
T-16-9
T-16-12
T-22-1
T-23-3
Dup-2
Dup-1
T-16-12MS
T-16-12MSD
T-23-3MS
T-23-3MSD

Introduction

This data review covers 15 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Semivolatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

Average relative response factors (RRF) for all compounds were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the validation criteria of less than or equal to 20.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
8/27/13	Naphthalene 2-Methylnaphthalene Benzo(a)anthracene	27.0 25.2 20.4	T-22-1 T-23-3 Dup-2 Dup-1 T-23-3MS T-23-3MSD B3H0509	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No semivolatile contaminants were found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples T-22-1 and Dup-1 and samples T-23-3 and Dup-2 were identified as field duplicates. No semivolatiles were detected in any of the samples.

Clairmont HS
Semivolatiles - Data Qualification Summary - SDG 1302545/1302547/1302581

SDG	Sample	Compound	Flag	A or P	Reason
1302545/ 1302547/ 1302581	T-22-1 T-23-3 Dup-2 Dup-1	Naphthalene 2-Methylnaphthalene Benzo(a)anthracene	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)

Clairmont HS
Semivolatiles - Laboratory Blank Data Qualification Summary - SDG 1302545/1302547/1302581

No Sample Data Qualified in this SDG

Clairmont HS
Semivolatiles - Field Blank Data Qualification Summary - SDG 1302545/1302547/1302581

No Sample Data Qualified in this SDG

LDC #: 31236A2b **VALIDATION COMPLETENESS WORKSHEET** Date: 2/12/14
SDG #: 1302545/1302547/1302581 Level III Page: 1 of 1
Laboratory: Advanced Technology Laboratories Reviewer: FJ
2nd Reviewer: A

METHOD: GC/MS Semivolatiles(EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 8/20 – 8/22/13
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	% RSD ≤ 15/30
IV.	Continuing calibration/ICV	SW	ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/RL/LOQ/LODs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	ND	D = 8 + 11 9 + 10
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

SOIL

1	T-12-S	11	Dup-1	21	B3I0021	31	
2	~~T-13-S~~ T-12-9.5	12	T-16-12MS	22	B3H0509	32	
3	T-13-4	13	T-16-12MSD	23		33	
4	T-14-21	14	T-23-3MS	24		34	
5	T-15-14	15	T-23-3MSD	25		35	
6	T-16-9	16		26		36	
7	T-16-12	17		27		37	
8	T-22-1	18		28		38	
9	T-23-3	19		29		39	
10	Dup-2	20		30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	T. 4-Chloroaniline	MM. 4-Chlorophenyl-phenyl ether	FFF. Di-n-octylphthalate	YYY. 2,3,5-Trimethylnaphthalene
B. Bis (2-chloroethyl) ether	U. Hexachlorobutadiene	NN. Fluorene	GGG. Benzo(b)fluoranthene	ZZZ. Perylene
C. 2-Chlorophenol	V. 4-Chloro-3-methylphenol	OO. 4-Nitroaniline	HHH. Benzo(k)fluoranthene	AAAA. Dibenzothiophene
D. 1,3-Dichlorobenzene	W. 2-Methylnaphthalene	PP. 4,6-Dinitro-2-methylphenol	III. Benzo(a)pyrene	BBBB. Benzo(a)fluoranthene
E. 1,4-Dichlorobenzene	X. Hexachlorocyclopentadiene	QQ. N-Nitrosodiphenylamine	JJJ. Indeno(1,2,3-cd)pyrene	CCCC. Benzo(b)fluorene
F. 1,2-Dichlorobenzene	Y. 2,4,6-Trichlorophenol	RR. 4-Bromophenyl-phenylether	KKK. Dibenz(a,h)anthracene	DDDD. cis/trans-Decalin
G. 2-Methylphenol	Z. 2,4,5-Trichlorophenol	SS. Hexachlorobenzene	LLL. Benzo(g,h,i)perylene	EEEE. Biphenyl
H. 2,2'-Oxybis(1-chloropropane)	AA. 2-Chloronaphthalene	TT. Pentachlorophenol	MMM. Bis(2-Chloroisopropyl)ether	FFFF. Retene
I. 4-Methylphenol	BB. 2-Nitroaniline	UU. Phenanthrene	NNN. Aniline	GGGG. C30-Hopane
J. N-Nitroso-di-n-propylamine	CC. Dimethylphthalate	VV. Anthracene	OOO. N-Nitrosodimethylamine	HHHH. 1-Methylphenanthrene
K. Hexachloroethane	DD. Acenaphthylene	WW. Carbazole	PPP. Benzoic Acid	IIII. 1,4-Dioxane
L. Nitrobenzene	EE. 2,6-Dinitrotoluene	XX. Di-n-butylphthalate	QQQ. Benzyl alcohol	JJJJ. Acetophenone
M. Isophorone	FF. 3-Nitroaniline	YY. Fluoranthene	RRR. Pyridine	KKKK. Atrazine
N. 2-Nitrophenol	GG. Acenaphthene	ZZ. Pyrene	SSS. Benzidine	LLLL. Benzaldehyde
O. 2,4-Dimethylphenol	HH. 2,4-Dinitrophenol	AAA. Butylbenzylphthalate	TTT. 1-Methylnaphthalene	MMMM. Caprolactam
P. Bis(2-chloroethoxy)methane	II. 4-Nitrophenol	BBB. 3,3'-Dichlorobenzidine	UUU.Benzo(b)thiophene	NNNN.
Q. 2,4-Dichlorophenol	JJ. Dibenzofuran	CCC. Benzo(a)anthracene	VVV.Benzonaphthothiophene	OOOO.
R. 1,2,4-Trichlorobenzene	KK. 2,4-Dinitrotoluene	DDD. Chrysene	WWW.Benzo(e)pyrene	PPPP.
S. Naphthalene	LL. Diethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	XXX. 2,6-Dimethylnaphthalene	QQQQ.

LDC #: 31236A2b

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270C)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a continuing calibration standard analyzed at least once every 12 hours of sample analysis for each instrument?
Y N N/A Were percent differences (%D) and relative response factors (RRF) within method criteria for all CCC's and SPCC's ?
Y N N/A Were all %D and RRFs within the validation criteria of ≤20 %D and ≥0.05 RRF ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤20.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	8/27/13	CCV-MS13	S	27.0		8→11, 14, 15	J / UJ / A
			W	25.2		B3H0509	↓
			CCC	20.4		↓	↓

CONCAL.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Clairemont HS
Collection Date:	August 20 through August 22, 2013
LDC Report Date:	February 18, 2014
Matrix:	Soil
Parameters:	Chlorinated Pesticides
Validation Level:	EPA Level III
Laboratory:	Advanced Technology Laboratories
Sample Delivery Group (SDG):	1302545/1302547/1302581

Sample Identification

T-12-S
T-12-9.5
T-13-4
T-14-21
T-15-14
T-16-9
T-16-12
T-22-1
T-23-3
Dup-2
Dup-1
T-16-12MS
T-16-12MSD
T-23-3MS
T-23-3MSD

Introduction

This data review covers 15 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8081A for Chlorinated Pesticides.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

III. Initial Calibration

Initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
9/4/13	CCV	STX-CLP1	4,4'-DDT	23.5	T-12-S T-12-9.5 T-13-4 T-14-21 T-15-14 T-16-9 T-16-12 T-16-12MS T-16-12MSD B3I0018	J (all detects) UJ (all non-detects)	A

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
7/30/13	ICV	STX-CLP1	Endrin	27.8	All samples in SDG 1302545/1302547/ 1302581	J (all detects) UJ (all non-detects)	A

Date	Standard	Column	Compound	%D	Associated Samples	Flag	A or P
7/30/13	ICV	STX-CLP1	Endrin	27.8	All samples in SDG 1302545/1302547/ 1302581	J (all detects) UJ (all non-detects)	A
7/30/13	ICV	STX-CLP2	Endrin	23.2	All samples in SDG 1302545/1302547/ 1302581	J (all detects) UJ (all non-detects)	A

The individual 4,4'-DDT and Endrin breakdowns (%BD) were less than or equal to 15.0%.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide contaminants were found in the method blanks.

No field blanks were identified in this SDG.

VIa. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VIb. Internal Standards

All internal standard areas were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

XI. GPC Calibration

GPC cleanup was not required and therefore not performed in this SDG.

XII. Target Compound Identification

Raw data were not reviewed for this SDG.

XIII. Compound Quantitation

Raw data were not reviewed for this SDG.

XIV. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XV. Field Duplicates

Samples T-22-1 and Dup-1 and samples T-23-3 and Dup-2 were identified as field duplicates. No chlorinated pesticides were detected in any of the samples.

Clairemont HS
Chlorinated Pesticides - Data Qualification Summary - SDG 1302545/1302547/1302581

SDG	Sample	Compound	Flag	A or P	Reason
1302545/ 1302547/ 1302581	T-12-S T-12-9.5 T-13-4 T-14-21 T-15-14 T-16-9 T-16-12	4,4'-DDT	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D)
1302545/ 1302547/ 1302581	T-12-S T-12-9.5 T-13-4 T-14-21 T-15-14 T-16-9 T-16-12 T-22-1 T-23-3 Dup-2 Dup-1	Endrin	J (all detects) UJ (all non-detects)	A	Continuing calibration (ICV %D)

Clairemont HS
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG 1302545/1302547/1302581

No Sample Data Qualified in this SDG

Clairemont HS
Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG 1302545/1302547/1302581

No Sample Data Qualified in this SDG

LDC #: 31236A3a

VALIDATION COMPLETENESS WORKSHEET

Date: 2/12/14

SDG #: 1302545/1302547/1302581

Level III

Page: 1 of 1

Laboratory: Advanced Technology Laboratories

Reviewer: F7

2nd Reviewer: A

METHOD: GC Chlorinated Pesticides (EPA SW 846 Method 8081A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 8/20 – 8/22/13
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	A	% RSD ≤ 20
IV.	Continuing calibration/ICV	SW	% ICV/CCV ≤ 20
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS
IX.	Regional quality assurance and quality control	N	
Xa.	Florisil cartridge check	N	
Xb.	GPC Calibration	N	
XI.	Target compound identification	N	
XII.	Compound quantitation and reported CRQLs	N	
XIII.	Overall assessment of data	A	Acceptable IS
XIV.	Field duplicates	ND	D = 8, 11 9, 10
XV.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

SOIL

1 1	T-12-S	11 2	Dup-1	21 1	B3I0018	31	
2 1	~~T-13-S~~ T-12-9.5	12 1	T-16-12MS	22 2	B3H0528	32	
3 1	T-13-4	13 1	T-16-12MSD	23		33	
4 1	T-14-21	14 2	T-23-3MS	24		34	
5 1	T-15-14	15 2	T-23-3MSD	25		35	
6 1	T-16-9	16		26		36	
7 1	T-16-12	17		27		37	
8 2	T-22-1	18		28		38	
9 2	T-23-3	19		29		39	
10 2	Dup-2	20		30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticide/PCBs (EPA SW 846 Method 8081/8082)

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG. Chlordane
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH. Chlordane (Technical)
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II. Aroclor 1262
D. gamma-BHC	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ. Aroclor 1268
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. 2,4'-DDD	KK. Oxychlordane
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. 2,4'-DDE	LL. trans-Nonachlor
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE. 2,4'-DDT	MM. cis-Nonachlor
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF. Hexachlorobenzene	NN.

Notes:_____

LDC #: 31236A3a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: FT
2nd Reviewer: [illegible]

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
What type of continuing calibration calculation was performed? ___%D or ___%R

Y N N/A Were continuing calibration standards analyzed at the required frequencies?
Y N N/A Did the continuing calibration standards meet the %D / %R validation criteria of ≤20.0% / 80-120%?
Level IV Only
Y N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?

#	Date	Standard ID	Detector/ Column	Compound	%D (Limit ≤ 20.0)	RT (limit)	Associated Samples	Qualifications
	7/30/13	ICV	STX-CLP1	K	27.8	( )	All	J/UJ/Δ
			STX-CLP2	K	23.2	( )	↓	↓
						( )		
						( )		
						( )		
						( )		
	9/4/13	CCV	STX-CLP1	θ	23.5	( )	1→7, 12, 13	J/UJ/Δ
						( )	B3I0018	
						( )		
						( )		
						( )		
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Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Clairemont HS

Collection Date: August 20 through August 22, 2013

LDC Report Date: February 3, 2014

Matrix: Soil

Parameters: Metals

Validation Level: EPA Level III

Laboratory: Advanced Technology Laboratories

Sample Delivery Group (SDG): 1302545/1302547/1302581

Sample Identification

T-12-S	T-18-3	T-15-14(DI STLC)
T-12-2	T-18-5.5	T-16-9(DI STLC)
T-12-9.5	T-19-1	T-12-SMS
T-13-S	T-19-3.5	T-12-SMSD
T-13-2	T-19-7	T-16-9(DI STLC)MS
T-13-4	T-20-1	T-16-9(DI STLC)MSD
T-14-0.5	T-20-3.5	T-16-9(DI STLC)DUP
T-14-5.5	T-20-6.5	T-17-1.5MS
T-14-21	T-21-1	T-17-1.5MSD
T-15-4	T-21-2	T-23-3MS
T-15-14	T-22-1	T-23-3MSD
T-15-2	T-22-4.5	
T-16-S	T-22-7	
T-16-2	T-23-1	
T-16-9	T-23-3	
T-16-12	T-23-8	
T-17-0.5	Dup-2	
T-17-1.5	Dup-1	
T-17-5	T-12-9.5(DI STLC)	
T-18-0.5	T-14-21(DI STLC)	

Samples appended with DI STLC underwent DI water STLC extraction

Introduction

This data review covers 51 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010B and 7471A for Metals. The metals analyzed were Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium, and Zinc.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review (January 2010).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

The initial and continuing calibrations were performed at the required frequency.

The calibration standards criteria were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No metal contaminants were found in the initial, continuing and preparation blanks.

No field blanks were identified in this SDG.

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
T-12-SMS/MSD (T-12-S T-12-2 T-12-9.5 T-13-S T-13-2 T-13-4 T-14-0.5 T-14-5.5 T-14-21 T-15-4 T-15-14 T-15-2 T-16-S T-16-2 T-16-9 T-16-12)	Lead	138 (51-106)	23.7 (51-106)	48.5 (≤20)	J (all detects) R (all non-detects)	A

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
T-12-SMS/MSD (T-12-S T-13-2 T-14-0.5 T-14-21 T-15-14 T-15-2 T-16-9 T-16-12)	Antimony Zinc	268 (21-109) 670 (24-130)	- -	107 (≤20) 104 (≤20)	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A
T-12-SMS/MSD (T-12-S T-13-2 T-14-0.5 T-14-21 T-15-14 T-15-2 T-16-9 T-16-12)	Barium	-8.37 (40-130)	-2.22 (40-130)	-	J (all detects) R (all non-detects)	A
T-12-SMS/MSD (T-12-S T-13-2 T-14-0.5 T-14-21 T-15-14 T-15-2 T-16-9 T-16-12)	Copper	125 (51-122)	-	-	J (all detects)	A

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

IX. Sample Result Verification

Raw data were not reviewed for this SDG.

X. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XI. Field Duplicates

Samples T-22-1 and Dup-1 and samples T-23-3 and Dup-2 were identified as field duplicates. No metals were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD
	T-22-1	Dup-1	
Arsenic	2.0	1.9	5
Barium	26	54	70
Chromium	12	11	9
Cobalt	2.2	2.2	0
Copper	7.7	7.3	5
Lead	7.0	6.0	15
Nickel	3.2	3.0	6
Vanadium	23	21	9
Zinc	26	25	4

Analyte	Concentration (mg/Kg)		RPD
	T-23-3	Dup-2	
Arsenic	1.4	1.6	13
Barium	17	14	19
Chromium	9.6	8.7	10
Cobalt	1.4	1.4	0
Copper	5.0	4.1	20
Lead	4.3	1.6	92
Nickel	2.5	2.5	0
Vanadium	22	22	0

Analyte	Concentration (mg/Kg)		RPD
	T-23-3	Dup-2	
Zinc	15	14	7

Clairemont HS
Metals - Data Qualification Summary - SDG 1302545/1302547/1302581

SDG	Sample	Analyte	Flag	A or P	Reason
1302545/ 1302547/ 1302581	T-12-S T-12-2 T-12-9.5 T-13-S T-13-2 T-13-4 T-14-0.5 T-14-5.5 T-14-21 T-15-4 T-15-14 T-15-2 T-16-S T-16-2 T-16-9 T-16-12	Lead	J (all detects) R (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD)
1302545/ 1302547/ 1302581	T-12-S T-13-2 T-14-0.5 T-14-21 T-15-14 T-15-2 T-16-9 T-16-12	Antimony Zinc	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)(RPD)
1302545/ 1302547/ 1302581	T-12-S T-13-2 T-14-0.5 T-14-21 T-15-14 T-15-2 T-16-9 T-16-12	Barium	J (all detects) R (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R)
1302545/ 1302547/ 1302581	T-12-S T-13-2 T-14-0.5 T-14-21 T-15-14 T-15-2 T-16-9 T-16-12	Copper	J (all detects)	A	Matrix spike/Matrix spike duplicate (%R)

Clairemont HS
Metals - Laboratory Blank Data Qualification Summary - SDG 1302545/1302547/1302581

No Sample Data Qualified in this SDG

Clairemont HS
Metals - Field Blank Data Qualification Summary - SDG 1302545/1302547/1302581

No Sample Data Qualified in this SDG

LDC #: 31236A4 **VALIDATION COMPLETENESS WORKSHEET** Date: 1/30/14

SDG #: 1302545/1302547/1302581 Level III Page: 1 of 2

Laboratory: Advanced Technology Laboratories Reviewer:

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/7471A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 8/20/13 – 8/22/13
II.	Calibration	A	
III.	Blanks	A SW	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	~~SW~~ SW	
VI.	Duplicate Sample Analysis	A	
VII.	Laboratory Control Samples (LCS)	A	LCS
VIII.	ICP Serial Dilution	N	Not performed
IX.	Sample Result Verification	N	
X.	Overall Assessment of Data	A	
XI.	Field Duplicates	SW	(31, 38) (35, 37)
XII.	Field Blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil

1	T-12-S	11	T-15-14	21	T-18-3	31	T-22-1
2	T-12-2	12	T-15-2	22	T-18-5.5	32	T-22-4.5
3	T-12-9.5	13	T-16-S	23	T-19-1	33	T-22-7
4	T-13-S	14	T-16-2	24	T-19-3.5	34	T-23-1
5	T-13-2	15	T-16-9	25	T-19-7	35	T-23-3
6	T-13-4	16	T-16-12	26	T-20-1	36	T-23-8
7	T-14-0.5	17	T-17-0.5	27	T-20-3.5	37	Dup-2
8	T-14-5.5	18	T-17-1.5	28	T-20-6.5	38	Dup-1
9	T-14-21	19	T-17-5	29	T-21-1	39	T-12-9.5(DI STLC)
10	T-15-4	20	T-18-0.5	30	T-21-2	40	T-14-21(DI STLC)

Notes: DI STLC underwent DI water STLC extraction

MP Letter B3H050, a non-client sample for MS/MSD.

HG B3H0447

LDC #: 31236A4 **VALIDATION COMPLETENESS WORKSHEET** Date: 1/30/09

SDG #: 1302545/1302547/1302581 Level III Page: 2 of

Laboratory: Advanced Technology Laboratories Reviewer:

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/7471A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times		Sampling dates:
II.	Calibration		
III.	Blanks		
IV.	ICP Interference Check Sample (ICS) Analysis		
V.	Matrix Spike Analysis		
VI.	Duplicate Sample Analysis		See page 1
VII.	Laboratory Control Samples (LCS)		
VIII.	ICP Serial Dilution		
IX.	Sample Result Verification	N	
X.	Overall Assessment of Data		
XI.	Field Duplicates		
XII.	Field Blanks		

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

41	T-15-14(DI STLC)	51	T-23-3MSD	61	MB	71	
42	T-16-9(DI STLC)	52		62		72	
43	T-12-SMS	53		63		73	
44	T-12-SMSD	54		64		74	
45	T-16-9(DI STLC)MS	55		65		75	
46	T-16-9(DI STLC)MSD	56		66		76	
47	T-16-9(DI STLC)DUP	57		67		77	
48	T-17-1.5MS	58		68		78	
49	T-17-1.5MSD	59		69		79	
50	T-23-3MS	60		70		80	

Notes: DI STLC underwent DI water STLC extraction

LDC #: 31336A4

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1,5,7,9,11,12,15,16,18,20,23,29,31,35,37,38	Soil	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
2,3,4,6,8,10,13,14,17,19,21,22,24,25,28,30,32-34,36,39-42	Soil	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
50,5		
2 43,44	Soil	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
45-47	Soil	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
48,49		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN-, ___

Comments: Mercury by CVAA if performed

LDC #: 31236A4

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: Trace metals (EPA SW 846 Method 6010B/7471A)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y N N/A Were matrix spike percent recoveries (%R) within the lab control limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N/A Were all duplicate sample relative percent differences (RPD) within the control limits of 20?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	MS/MSD ID	Matrix	Analyte	MS %Recovery	MSD %Recovery	RPD (<20)	Associated Samples	Qualifications
1	43/44	Soil	Pb	138 (51-106)	23.7 (51-106)	48.5	1-16	J/R/A
			Sb	268 (21-109)		107	1,5,7,9,11,12,15,16	J/UJ/A
			Ba	-8.37 (40-130)	-2.22 (40-130)			J/R/A
			Cu	125 (51-122)				J det/A
			Zn	670 (24-130)		104		J/UJ/A

Comments: ~~52-55: Pb >4X, No qual for %R, text~~

LDC#: 31236A4

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Metals (EPA Method 6010B/7471A)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (mg/Kg)		RPD	
	31	38		
Arsenic	2.0	1.9	5	
Barium	26	54	70	
Chromium	12	11	9	
Cobalt	2.2	2.2	0	
Copper	7.7	7.3	5	
Lead	7.0	6.0	15	
Nickel	3.2	3.0	6	
Vanadium	23	21	9	
Zinc	26	25	4	

Analyte	Concentration (mg/Kg)		RPD	
	35	37		
Arsenic	1.4	1.6	13	
Barium	17	14	19	
Chromium	9.6	8.7	10	
Cobalt	1.4	1.4	0	
Copper	5.0	4.1	20	
Lead	4.3	1.6	92	
Nickel	2.5	2.5	0	
Vanadium	22	22	0	

LDC#: 31236A4

VALIDATION FINDINGS WORKSHEET

Field Duplicates

Reviewer:
2nd Reviewer: A

METHOD: Metals (EPA Method 6010B/7471A)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (mg/Kg)		RPD	
	35	37		
Zinc	15	14	7	

V:\FIELD DUPLICATES\FD_inorganic\31236A4.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Clairmont HS
Collection Date:	August 20 through August 22, 2013
LDC Report Date:	February 13, 2014
Matrix:	Soil
Parameters:	Total Petroleum Hydrocarbons as Extractables
Validation Level:	EPA Level III
Laboratory:	Advanced Technology Laboratories
Sample Delivery Group (SDG):	1302545/1302547/1302581

Sample Identification

T-12-S
T-12-9.5
T-13-4
T-14-21
T-15-14
T-16-9
T-16-12
T-22-1
T-23-3
Dup-2
Dup-1
T-16-12MS
T-16-12MSD
Dup-1MS
Dup-1MSD

Introduction

This data review covers 15 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015B for Total Petroleum Hydrocarbons (TPH) as Extractables.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (June 2008).

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

NJ Presumptive evidence of presence of the compound at an estimated quantity.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

Initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

III. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 20.0% for all compounds.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as extractable contaminants were found in the method blanks.

No field blanks were identified in this SDG.

V. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Target Compound Identification

Raw data were not reviewed for this SDG.

IX. Compound Quantitation

Raw data were not reviewed for this SDG.

X. System Performance

Raw data were not reviewed for this SDG.

XI. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XII. Field Duplicates

Samples T-22-1 and Dup-1 and samples T-23-3 and Dup-2 were identified as field duplicates. No total petroleum hydrocarbons as extractables were detected in any of the samples.

Clairmont HS
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 1302545/1302547/1302581

No Sample Data Qualified in this SDG

Clairmont HS
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 1302545/1302547/1302581

No Sample Data Qualified in this SDG

Clairmont HS
Total Petroleum Hydrocarbons as Extractables - Field Blank Data Qualification Summary - SDG 1302545/1302547/1302581

No Sample Data Qualified in this SDG

LDC #: 31236A8 **VALIDATION COMPLETENESS WORKSHEET** Date: 2/12/14

SDG #: 1302545/1302547/1302581 Level III Page: 1 of 1

Laboratory: Advanced Technology Laboratories Reviewer: FQ

2nd Reviewer: [illegible]

METHOD: GC TPH as Extractables (EPA SW 846 Method 8015B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 8/20 - 8/22/13
IIa.	Initial calibration	A	r^2
IIb.	Calibration verification/ICV	A	ICV/CCV ≤ 20
III.	Blanks	A	
IVa.	Surrogate recovery	A	
IVb.	Matrix spike/Matrix spike duplicates	A	
IVc.	Laboratory control samples	A	LCS
V.	Target compound identification	N	
VI.	Compound Quantitation and CRQLs	N	
VII.	System Performance	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	ND	D - 8, 11 9, 10
X.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

SOIL

1 1	T-12-S	11 2	Dup-1	21 1	B3I0015	31	
2 1	T-12-9.5	12 1	T-16-12MS	22 2	B3H0499	32	
3 1	T-13-4	13 1	T-16-12MSD	23		33	
4 1	T-14-21	14	Dup-1MS	24		34	
5 1	T-15-14	15	Dup-1MSD	25		35	
6 1	T-16-9	16		26		36	
7 1	T-16-12	17		27		37	
8 2	T-22-1	18		28		38	
9 2	T-23-3	19		29		39	
10 2	Dup-2	20		30		40	

Notes:

APPENDIX I

HUMAN HEALTH SCREENING EVALUATION

Table I-1 - Metals, Organochlorine Pesticides, Polynuclear Aromatic Hydrocarbons, and Dioxins Evaluation - Top 10 Feet

Sample ID	Date Sampled	Depth (feet bgs)	Covered Hardscape/ 2 Feet Clean Fill	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Molybde (mg/kg)	Nickel (mg/kg)	Silver (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)	4,4'-DDD (ug/kg)	4,4'-DDE (ug/kg)	4,4'-DDT (ug/kg)	Phenanthrene** (ug/kg)	Acenapthylene** (ug/kg)	Dioxin (ng/kg)
Background Concentration/Screening Level				<2.0	12*	139	4*	12.4	4.5	23	80*	<0.10	<1.0	6.6	<1.0	27.7	144.7	ND	ND	ND	ND	ND	ND
OT-6	9/1/2011	6.0	YES	19 J	44.0	780	11 J	43.0	10	370 J	3,700 J	1.0	2.8	41	<1.0	21	2,500	<2.0	<2.0	<2.0	ND UJ	ND UJ	ND
OT-7.5	9/1/2011	7.5	YES	--	--	--	--	--	--	--	1,100 J	--	--	--	--	--	--	--	--	--	--	--	--
OT-9	9/1/2011	9.0	YES	15 J	28.0	800	16 J	47.0	9.3	650 J	1,800 J	0.74	6.5	65	<1.0	21	2,400	<2.0	<2.0	<2.0	ND UJ	ND UJ	--
OT-9.5	9/1/2011	9.5	YES	--	--	--	--	--	--	--	1,400	--	--	--	--	--	--	--	--	--	ND	ND	--
T-1-2	9/1/2011	2.0	YES	<2.0	2.3	56 J	<1.0	9.7	3.6	23	27	<0.10	<1.0	5.1	<1.0	28	63	--	--	--	ND	ND	--
T-2-1	9/1/2011	1.0	YES	16	44.0	1,500 J	15.0	71	12	8,500	1,300	0.62	4.6	44	<1.0	18	4,600	11	740	940	0.128J	ND UJ	--
T-2-4	9/1/2011	4.0	YES	--	--	--	--	--	--	--	1,700	--	--	--	--	--	--	<2.0	<2.0	<2.0	ND	15	--
T-2-7	9/1/2011	7.0	YES	23	27.0	1,100 J	9.0	56	39	690	2,600	15	5.2	86	<1.0	17	4,100	<2.0	<2.0	<2.0	ND UJ	ND UJ	--
T-2-8.5	9/1/2011	8.5	YES	--	--	--	--	--	--	--	17	--	--	--	--	--	--	--	--	--	--	--	--
T-2-9.5	9/1/2011	9.5	YES	--	--	--	--	--	--	--	11	--	--	--	--	--	--	--	--	--	--	--	--
T-3-1	9/1/2011	1.0	YES	6.0	8.3	120 J	3.3	13	2.3	190	700	<0.10	<1.0	20	<1.0	7.2	320	<2.0	<2.0	<2.0	ND UJ	ND UJ	--
T-3-5	9/1/2011	5.0	YES	--	--	--	--	--	--	--	1,500	--	--	--	--	--	--	<2.0	<2.0	<2.0	ND	ND	--
T-3-7.5	9/1/2011	7.5	YES	--	--	--	--	--	--	--	53	--	--	--	--	--	--	--	--	--	--	--	--
T-4-0.5	9/1/2011	0.5	YES	--	--	--	--	--	--	--	410	--	--	--	--	--	--	--	--	--	--	--	--
T-4-1	9/1/2011	1.0	YES	<2.0	1.6	67 J	<1.0	9.3	2.2	5.5	17	<0.10	<1.0	3.1	<1.0	19	25	<2.0	<2.0	<2.0	ND UJ	ND UJ	--
T-4-2.75	9/1/2011	2.75	YES	<2.0	1.4	83 J	<1.0	8.7	3.6	5.6	8.8	<0.10	<1.0	3.0	<1.0	19	28	--	--	--	--	--	--
T-5-1.5	9/1/2011	1.5	YES	<2.0	1.2	29 J	<1.0	7.1	3.3	15	17	<0.10	<1.0	2.8	<1.0	19	43	<2.0	<2.0	<2.0	ND UJ	ND UJ	--
T-5-3.0	9/1/2011	3.0	YES	--	--	--	--	--	--	--	4.9	--	--	--	--	--	--	--	--	--	--	--	--
T-6-0.75	9/1/2011	0.8	YES	<2.0	4.7	91 J	<1.0	12	3.9	38	88	<0.10	<1.0	6.7	<1.0	29	190	<2.0	<2.0	<2.0	ND	ND	--
T-6-2.0	9/1/2011	2.0	YES	--	--	--	--	--	--	--	7.3	--	--	--	--	--	--	--	--	--	--	--	--
T-7-1.0	9/1/2011	1.0	YES	--	--	--	--	--	--	--	2.3	--	--	--	--	--	--	--	--	--	--	--	--
T-7-3	9/1/2011	3.0	YES	<2.0	1.2	21 J	<1.0	9.8	1.6	4.3	2.4	<0.10	<1.0	2.2	<1.0	21	13	--	--	--	--	--	--
T-7-5.5	9/1/2011	5.5	YES	--	--	--	--	--	--	--	4.8	--	--	--	--	--	--	--	--	--	ND	ND	--
T-8-0.5	9/1/2011	0.5	YES	<2.0 UJ	1.8	77	<1.0 UJ	9.6	2.5	32 J	59 J	<0.10	<1.0	5.7	<1.0	19	130	--	--	--	ND	ND	--
T-8-1.0	9/1/2011	1.0	YES	--	--	--	--	--	--	--	5.0	--	--	--	--	--	--	--	--	--	--	--	--
T-9-0.75	9/1/2011	0.8	YES	--	--	--	--	--	--	--	5.0 J	--	--	--	--	--	--	--	--	--	--	--	--
T-9-4	9/1/2011	4.0	YES	<2.0 UJ	5.7	36	<1.0 UJ	8.7	3.0	8.5 J	17 J	<0.10	<1.0	4.0	<1.0	38	26	--	--	--	--	--	--
T-9-5	9/1/2011	5.0	YES	--	--	--	--	--	--	--	20 J	--	--	--	--	--	--	<2.0	<2.0	<2.0	ND	ND	--
T-10-1	9/1/2011	1.0	YES	<2.0 UJ	1.7	38	<1.0 UJ	12	3.3	14 J	4.4 J	<0.10	<1.0 UJ	4.5	<1.0 UJ	17	27	--	--	--	--	--	--
T-10-3	9/1/2011	3.0	YES	--	--	--	--	--	--	--	6.0 J	--	--	--	--	--	--	--	--	--	ND	ND	--
T-11-3	9/1/2011	3.0	YES	--	--	--	--	--	--	--	13 J	--	--	--	--	--	--	--	--	--	--	--	--
T-11-7	9/1/2011	7.0	YES	14 J	24.0	1100	19 J	64	9.0	1,000 J	10,000 J	0.43	6.2	54	<1.0	26	3,500	<2.0	9.4	6.2	ND UJ	ND UJ	ND
T-11-7.5	9/1/2011	7.5	YES	--	--	--	--	--	--	--	2,500 J	--	--	--	--	--	--	--	--	--	--	--	--
T-12-S	8/20/2013	0.0	NO	3.9 J	6.0	220 J	2.1	12	3.6	81 J	190 J	<0.10	2.7	11	<1.0	20	330 J	<2.0	<2.0	<2.0 UJ	ND	ND	--
T-12-2	8/20/2013	2.0	NO	--	--	--	--	--	--	--	14 J	--	--	--	--	--	--	--	--	--	--	--	--
T-12-9.5	8/20/2013	9.5	NO	--	--	--	--	--	--	--	3,500 J	--	--	--	--	--	--	<2.0	<2.0	<2.0 UJ	ND	ND	14
T-13-S	8/20/2013	0.0	YES	--	--	--	--	--	--	--	9.1 J	--	--	--	--	--	--	--	--	--	--	--	--
T-13-2	8/20/2013	2.0	YES	<2.0 UJ	7.0	28 J	<1.0	7.0	2.0	8.8 J	8.9 J	<0.10	<1.0	4.2	<1.0	21	28 J	--	--	--	--	--	--
T-13-4	8/20/2013	4.0	YES	--	--	--	--	--	--	--	1,100 J	--	--	--	--	--	--	<2.0	8.1	<2.0 UJ	--	--	--
T-14-0.5	8/20/2013	0.5	YES	<2.0 UJ	3.2	36 J	<1.0	9.6	2.3	5.9 J	6.3 J	<0.10	<1.0	3.0	<1.0	26	17 J	--	--	--	--	--	--
T-14-5.5	8/20/2013	5.5	YES	--	--	--	--	--	--	--	5.5 J	--	--	--	--	--	--	--	--	--	--	--	--
T-15-2	8/21/2013	2.0	YES	<2.0 UJ	1.8	42 J	<1.0	6.9	2.4	9.9 J	12 J	<0.10	<1.0	3.0	<1.0	16	42 J	--	--	--	--	--	--
T-15-4	8/21/2013	4.0	YES	--	--	--	--	--	--	--	19 J	--	--	--	--	--	--	--	--	--	--	--	--
T-16-S	8/21/2013	0.0	YES	--	--	--	--	--	--	--	11 J	--	--	--	--	--	--	--	--	--	--	--	--
T-16-2	8/21/2013	2.0	YES	--	--	--	--	--	--	--	7.7 J	--	--	--	--	--	--	--	--	--	--	--	--
T-16-9	8/21/2013	9.0	YES	9.3 J	41.0	350 J	2.4	32	6.1	600 J	1,300 J	<0.10	6.0	39	2.6	6.2	940 J	<2.0	<2.0	<2.0 UJ	ND	ND	--
T-19-1	8/22/2013	1.0	YES	<2.0	1.2	2	<1.0	11.0	2.5	5	2.4	<0.10	<1.0	3.2	<1.0	16	19	--	--	--	--	--	--
T-19-3.5	8/22/2013	3.5	YES	--	--	--	--	--	--	--	3.2	--	--	--	--	--	--	--	--	--	--	--	--
T-19-7	8/22/2013	7.0	YES	--	--	--	--	--	--	--	2.3	--	--	--	--	--	--	--	--	--	--	--	--
T-20-1	8/22/2013	1.0	YES	--	--	--	--	--	--	--	2.3	--	--	--	--	--	--	--	--	--	--	--	--
T-20-3.5	8/22/2013	3.5	YES	<2.0	1.3	28	<1.0	8.1	1.7	5.6	2.2	<0.10	<1.0	2.8	<1.0	16	14	--	--	--	--	--	--
T-20-6.5	8/22/2013	6.5	YES	--	--	--	--	--	--	--	5.3	--	--	--	--	--	--	--	--	--	--	--	--
T-21-1	8/22/2013	1.0	YES	<2.0	2.7	45	<1.0	8.0	2.4	7.0	8.1	<0.10	<1.0	3.1	<1.0	22	20	--	--	--	--	--	--
T-21-2	8/22/2013	2.0	YES	--	--	--	--	--	--	--	5.4	--	--	--	--	--	--	--	--	--	--	--	--
T-22-1	8/22/2013	1.0	YES	<2.0	2.0	26.0	<1.0	12	2	7.7	7.0	<0.10	<1.0	3.2	<1.0	23	26	<2.0	<2.0	<2.0 UJ	ND UJ†	ND UJ†	--
T-22-4.5	8/22/2013	4.5	YES	--	--	--	--	--	--	--	1.4	--	--	--	--	--	--	--	--	--	--	--	--
T-22-7	8/22/2013	7.0	YES	--	--	--	--	--	--	--	6.2	--	--	--	--	--	--	--	--	--	--	--	--
T-23-1	8/22/2013	1.0	YES	--	--	--	--	--	--	--	32	--	--	--	--	--	--	--	--	--	--	--	--
T-23-3	8/22/2013	3.0	YES	<2.0	1.4	17.0	<1.0	9.6	1.4	5.0	4.3	<0.10	<1.0	2.5	<1.0	22	15	<2.0	<2.0	<2.0	ND UJ†	ND UJ†	--
T-23-8	8/22/2013	8.0	YES	--	--	--	--	--	--	--	18	--	--	--	--	--	--	--	--	--	--	--	--
T1	7/21/2011	<10	YES	2.7	5.7	460	6.3	13	3.4	130	310	<0.10	<1.0	9.2	<1.0	9.3	900	--	--	--	--	--	--
T2	7/21/2011	<10	YES	12.0	11.0	130	3.5	17	4.7	150	1,000	<0.10	3.4	24	<1.0	13	230	--	--	--	--	--	--
95% UCL or Maximum				7.88	22.19	615.1	5.672	33.45	11.43	2,422	1,773	1.833	2.739	35.93	2.6	21.80	2,404	11	740	940	0.128	15	14
Exceeds Background/Screening Level				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes

*DTSC Screening Level

Shaded boxes indicate 95% UCL or maximum concentration exceeded the background/screening level/RSL

Arsenic
DTSC Ambient Level
12 mg/kg
95% UCL
22.2 mg/kg
Exceeds DTSC Ambient Level

Lead
DTSC Screening Level
80 mg/kg
Maximum Detected Concentration
1773 mg/kg
Exceeds DTSC Screening Level

Cadmium
DTSC Screening Level
4 mg/kg
Maximum Detected Concentration
5.7 mg/kg
Exceeds DTSC Screening Level

Carcinogenic Compounds

COC	95% UCL or Max. Conc	RSL res. Soil	Risk (Max/RSL)*10-6	Action Leve	Result
Cobalt	11.4	4.20E+02	2.72E-08	1.00E-06	Below Action Level
Nickel	9.2	1.50E+04	6.13E-10	1.00E-06	Below Action Level
DDD	11	2.20E+03	5.00E-09	1.00E-06	Below Action Level
DDE	740	1.60E+03	4.63E-07	1.00E-06	Below Action Level
DDT	940	1.90E+03	4.95E-07	1.00E-06	Below Action Level
Dioxin	14	4.90E+00	2.86E-06	1.00E-06	**Exceeds Action Level**
		Total	3.85E-06	1.00E-06	**Exceeds Action Level**

Non-Carcinogenic Compounds

COC	95% UCL or Max. Conc	RSL res. Soi	Risk (Max/RSL)	Action Level	Result
Antimony	7.88	3.1	**2.5**	1.0	**Exceeds Action Level**
Barium	615.1	1500	0.41	1.0	Below Action Level
Chromium	33.45	12000	0.0028	1.0	Below Action Level
Cobalt	11	2.3	**4.9696**	1.0	**Exceeds Action Level**
Copper	2422	310	**7.8129**	1.0	**Exceeds Action Level**
Mercury	2	1	**1.9500**	1.0	**Exceeds Action Level**
Molybdenum	2.739	39	0.0702	1.0	Below Action Level
Nickel	35.93	150	0.2395	1.0	Below Action Level
Silver	3	39	0.0667	1.0	Below Action Level
Zinc	2404	2300	**1.05**	1.0	**Exceeds Action Level**
DDT	940	3600	0.26	1.0	Below Action Level
Dioxin	14	5	**2.75**	1.0	**Exceeds Action Level**
		Total	**22.1**	1.0	**Exceeds Action Level**

Notes:

mg/kg – milligrams per kilogram
ng/kg - nanograms per kilogram
-- – not analyzed
bgs – below ground surface
DDD – dichlorodiphenyldichloroethane
DDE – dichlorodiphenyldichloroethylene
DDT – dichlorodiphenyltrichloroethane

J – Estimated Value (assigned by Laboratory Data Consultants)
N/A – not applicable
ND – analyte not detected. See lab report for detection limits
RSL – US Environmental Protection Agency Regional Screening Level (November 2013)
UCL - upper confidence limit
UJ – the sample detection limit is an estimated value (assigned by LDC)
< - analyte not detected at a concentration above the listed practical quantitation limit

† The UJ qualifier applies only to naphthalene, 2-methylnapthalene, and bezno(a)anthracene.
*RSL are not applicable per the Human and Ecological Risk Office.
** RSL not established for detected analytes

Table I-2 - Total Petroleum Hydrocarbon Evaluation - Top 10 Feet

Sample ID	Date Sampled	Depth (feet bgs)	C8-C10 (mg/kg)	C10-C18 (mg/kg)	C18-28 (mg/kg)	C28-C36 (mg/kg)	C36-C40 (mg/kg)	
OT-6	9/1/2011	6	14	14	29	25	12	
T-12-S	8/20/2013	0	<10	<10	33	140	54	
T-13-4	8/20/2013	4.0	<10	<10	<10	18	<10	
Maximum			**14**	**14**	**33**	**140**	**54**	**Total**
Maximum		C5-C8/C6-C8	--	--	--	--	--	--
		C9-C16	**14**	**14**	--	--	--	**28**
		C9-C18	**14**	**14**	**33**	--	--	**61**
		C17-C32	--	**14**	**33**	**140**	--	**187**
		C19-32	--	--	**33**	**140**	--	**173**

Non-Carcinogenic - Soil Pathway $HI_{soil}=[(C_s/RfD_o)*1.28*10^{-5}]+[(C_s/RfD_o)*3.70*10^{-5}*ABS]$

Aliphatic Carbon Chain	C_s (mg/kg)	RfD_o (mg/kg/day)	ABS	Hazard Index	Action Level	Result
C5-C8	--	0.04	1	--	1.0	Below Action Level
C9-C18	61	0.1	1	0.0304	1.0	Below Action Level
C19-C32	173	2.0	1	0.0043	1.0	Below Action Level

Aromatic Carbon Chain	Cs (mg/kg)	RfDo (mg/kg/day)	ABS	Hazard Index	Action Level	Result
C6-C8	--	*	1	--	1.0	Below Action Level
C9-C16	28	0.03	1	0.0465	1.0	Below Action Level
C17-C32	187	0.04	1	0.2328	1.0	Below Action Level
Total Soil Pathway Hazard Index - TPH				**0.3140**	1.0	Below Action Level

*VOCs are not COCs at the site due to the nature of burned waste

Table I-3 - Metals Evaluation - Top 2 Feet (Unpaved)

Sample ID	Date Sampled	Depth (feet bgs)	Covered Hardscape/ 2 Feet Clean Fill	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromiu (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Molybde (mg/kg)	Nickel (mg/kg)	Silver (mg/kg)	Vanadiu (mg/kg)	Zinc (mg/kg)
Background Concentration/Screening Level				<2.0	12*	139	4*	12.4	4.5	23	80*	<0.10	<1.0	6.6	<1.0	27.7	144.7
T-12-S	8/20/2013	0	No	3.9 J	6.0	220 J	2.1	12	3.6	81 J	190 J	<0.10	2.7	11	<1.0	20	330 J
T-12-2	8/20/2013	2	No	--	--	--	--	--	--	--	14 J	--	--	--	--	--	--
T-13-S	8/20/2013	0	Yes	--	--	--	--	--	--	--	9.1 J	--	--	--	--	--	--
T-13-2	8/20/2013	2	Yes	<2.0 UJ	7.0	28 J	<1.0	7.0	2.0	8.8 J	8.9 J	<0.10	<1.0	4.2	<1.0	21	28 J
T-14-0.5	8/20/2013	0.5	Yes	<2.0 UJ	3.2	36 J	<1.0	9.6	2.3	5.9 J	6.3 J	<0.10	<1.0	3.0	<1.0	26	17 J
T-15-2	8/21/2013	2	Yes	<2.0 UJ	1.8	42 J	<1.0	6.9	2.4	9.9 J	12 J	<0.10	<1.0	3.0	<1.0	16	42 J
T-16-S	8/21/2013	0	Yes	--	--	--	--	--	--	--	11 J	--	--	--	--	--	--
T-16-2	8/21/2013	2	Yes	--	--	--	--	--	--	--	7.7 J	--	--	--	--	--	--
95% UCL or Maximum				3.9	7.0	190.4	2.1	11.7	3.4	69	190	--	2.7	9.8	--	25.6	281.7
Exceeds Background/Screening Level				Yes	No	Yes	No	No	No	Yes	Yes	No	Yes	Yes	No	No	Yes

*DTSC Screening Level

Shaded boxes indicate 95% UCL or maximum concentration exceeded the background/screening level/RSL

Arsenic
DTSC Ambient Level
12 mg/kg
95% UCL
7.0 mg/kg
Below DTSC Ambient Level

Lead
DTSC Screening Level
80 mg/kg
Maximum Detected Concentration
190 mg/kg
Exceeds DTSC Screening Level

Cadmium
DTSC Screening Level
4 mg/kg
Maximum Detected Concentration
2.1 mg/kg
Below DTSC Screening Level

Carcinogenic Compounds

COC	95% UCL or Max. Conc	RSL res. Soil	Risk (Max/RSL)*10-6	Action Level	Result
Nickel	9.8	1.50E+04	6.53E-10	1.00E-06	Below Action Level
		Total	6.53E-10	1.00E-06	Below Action Level

Non-Carcinogenic Compounds

COC	95% UCL or Max. Conc	RSL res. Soil	Risk (Max/RSL)	Action Leve	Result
Antimony	3.9	3.1	**1.3**	1.0	**Exceeds Action Level**
Barium	190	1500	0.13	1.0	Below Action Level
Copper	69	310	0.2235	1.0	Below Action Level
Molybdenum	3	39	0.07	1.0	Below Action Level
Nickel	9.8	150	0.1	1.0	Below Action Level
Zinc	282	2300	0.122	1.0	Below Action Level
		Total	**1.9**	1.0	**Exceeds Action Level**

Notes:

mg/kg – milligrams per kilogram
-- – not analyzed
bgs – below ground surface
J – Estimated Value (assigned by Laboratory Data Consultants)

RSL – US Environmental Protection Agency Regional Screening Level (November 2013)
UCL - upper confidence limit
< - analyte not detected at a concentration above the listed practical quantitation limit
*RSL are not applicable per the Human and Ecological Risk Office.

Table I-4 - Total Petroleum Hydrocarbon Evaluation - Top 2 Feet (Unpaved)

Sample ID	Date Sampled	Depth (feet bgs)	C8-C10 (mg/kg)	C10-C18 (mg/kg)	C18-28 (mg/kg)	C28-C36 (mg/kg)	C36-C40 (mg/kg)	
T-12-S	8/20/2013	0	<10	<10	33	140	54	
Maximum			**0**	**0**	**33**	**140**	**54**	**Total**
Maximum		C5-C8/C6-C8	--	--	--	--	--	--
		C9-C16	--	--	--	--	--	**0**
		C9-C18	--	--	**33**	--	--	**33**
		C17-C32	--	--	**33**	**140**	--	**173**
		C19-32	--	--	**33**	**140**	--	**173**

Non-Carcinogenic - Soil Pathway $HI_{soil}=[(C_s/RfD_o)*1.28*10^{-5}]+[(C_s/RfD_o)*3.70*10^{-5}*ABS]$

Aliphatic Carbon Chain	C_s (mg/kg)	RfD_o (mg/kg/day)	ABS	Hazard Index	Action Level	Result
C9-C18	33	0.1	1	0.0164	1.0	Below Action Level
C19-C32	173	2.0	1	0.0043	1.0	Below Action Level

Aromatic Carbon Chain	Cs (mg/kg)	RfDo (mg/kg/day)	ABS	Hazard Index	Action Level	Result
C17-C32	173	0.04	1	0.2154	1.0	Below Action Level
Total Soil Pathway Hazard Index - TPH				**0.2361**	1.0	Below Action Level

*VOCs are not COCs at the site due to the nature of burned waste

Table I-5 - Metals Evaluation - Top 2 Feet Excluding Planter (Unpaved)

Sample ID	Date Sampled	Depth (feet bgs)	Covered Hardscape/ 2 Feet Clean Fill	Antimony (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromi (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Molybde (mg/kg)	Nickel (mg/kg)	Silver (mg/kg)	Vanadiu (mg/kg)	Zinc (mg/kg)
Background Concentration/Screening Level				<2.0	12*	139	4*	12.4	4.5	23	80*	<0.10	<1.0	6.6	<1.0	27.7	144.7
T-13-S	8/20/2013	0	Yes	--	--	--	--	--	--	--	9.1 J	--	--	--	--	--	--
T-13-2	8/20/2013	2	Yes	<2.0 UJ	7.0	28 J	<1.0	7.0	2.0	8.8 J	8.9 J	<0.10	<1.0	4.2	<1.0	21	28 J
T-14-0.5	8/20/2013	0.5	Yes	<2.0 UJ	3.2	36 J	<1.0	9.6	2.3	5.9 J	6.3 J	<0.10	<1.0	3.0	<1.0	26	17 J
T-15-2	8/21/2013	2	Yes	<2.0 UJ	1.8	42 J	<1.0	6.9	2.4	9.9 J	12 J	<0.10	<1.0	3.0	<1.0	16	42 J
T-16-S	8/21/2013	0	Yes	--	--	--	--	--	--	--	11 J	--	--	--	--	--	--
T-16-2	8/21/2013	2	Yes	--	--	--	--	--	--	--	7.7 J	--	--	--	--	--	--
95% UCL or Maximum				--	7.0	42	--	9.6	2.4	10	10.89	--	--	4.2	--	26.0	42
Exceeds Background/Screening Level				No	No	No	No	No	No	No	No	No	No	No	No	No	No

*DTSC Screening Level

Shaded boxes indicate 95% UCL or maximum concentration exceeded the background/screening level/RSL

Arsenic
DTSC Ambient Level
12 mg/kg
95% UCL
7.0 mg/kg
Below DTSC Ambient Level

Lead
DTSC Screening Level
80 mg/kg
Maximum Detected Concentration
10.89 mg/kg
Below DTSC Screening Level

Cadmium
DTSC Screening Level
4 mg/kg
Maximum Detected Concentration
-- mg/kg
Below DTSC Screening Level

Carcinogenic Compounds

COC	95% UCL or Max. Conc	RSL res. Soil	Risk (Max/RSL)*10-6	Action Level	Result
N/A			#DIV/0!	1.00E-06	
		Total	#DIV/0!	1.00E-06	

Non-Carcinogenic Compounds

COC	95% UCL or Max. Conc	RSL res. Soil	Risk (Max/RSL)	Action Leve	Result
N/A			#DIV/0!	1.0	
		Total	#DIV/0!	1.0	Exceeds Action Level

Notes:

mg/kg – milligrams per kilogram
-- – not analyzed
bgs – below ground surface
J – Estimated Value (assigned by Laboratory Data Consultants)

RSL – US Environmental Protection Agency Regional Screening Level (November 2013)
UCL - upper confidence limit
< - analyte not detected at a concentration above the listed practical quantitation limit
*RSL are not applicable per the Human and Ecological Risk Office.

LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Click here for ABBREVIATED INSTRUCTIONS FOR LEADSPREAD 8

INPUT	
MEDIUM	LEVEL
Lead in Soil/Dust (ug/g)	190.0
Respirable Dust (ug/m^3)	1.5

OUTPUT						
Percentile Estimate of Blood Pb (ug/dl)						PRG-90
	50th	90th	95th	98th	99th	(ug/g)
BLOOD Pb, CHILD	1.3	2.5	2.9	3.5	4.0	77
BLOOD Pb, PICA CHILD	2.7	4.9	5.8	7.1	8.0	39

EXPOSURE PARAMETERS		
	units	children
Days per week	days/wk	7
Geometric Standard Deviation		1.6
Blood lead level of concern (ug/dl)		1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.192

PATHWAYS						
CHILDREN	typical			with pica		
	Pathway contribution			Pathway contribution		
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	5.8E-5	0.01	1%		0.01	0%
Soil Ingestion	7.0E-3	1.34	99%	1.4E-2	2.68	100%
Inhalation	2.0E-6	0.00	0%		0.00	0%

Click here for REFERENCES

LEAD RISK ASSESSMENT SPREADSHEET 8

CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Click here for ABBREVIATED INSTRUCTIONS FOR LEADSPREAD 8

INPUT	
MEDIUM	LEVEL
Lead in Soil/Dust (ug/g)	10.9
Respirable Dust (ug/m^3)	1.5

OUTPUT						
Percentile Estimate of Blood Pb (ug/dl)						PRG-90
	50th	90th	95th	98th	99th	(ug/g)
BLOOD Pb, CHILD	0.1	0.1	0.2	0.2	0.2	77
BLOOD Pb, PICA CHILD	0.2	0.3	0.3	0.4	0.5	39

EXPOSURE PARAMETERS		
	units	children
Days per week	days/wk	7
Geometric Standard Deviation		1.6
Blood lead level of concern (ug/dl)		1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.192

PATHWAYS						
CHILDREN	typical			with pica		
	Pathway contribution			Pathway contribution		
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	5.8E-5	0.00	1%		0.00	0%
Soil Ingestion	7.0E-3	0.08	99%	1.4E-2	0.15	100%
Inhalation	2.0E-6	0.00	0%		0.00	0%

Click here for REFERENCES

LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Click here for ABBREVIATED INSTRUCTIONS FOR LEADSPREAD 8

INPUT	
MEDIUM	LEVEL
Lead in Soil/Dust (ug/g)	1773.0
Respirable Dust (ug/m^3)	1.5

OUTPUT						
Percentile Estimate of Blood Pb (ug/dl)						PRG-90
	50th	90th	95th	98th	99th	(ug/g)
BLOOD Pb, CHILD	12.6	23.0	27.2	33.1	37.6	77
BLOOD Pb, PICA CHILD	25.1	45.8	54.2	65.9	74.9	39

EXPOSURE PARAMETERS		
	units	children
Days per week	days/wk	7
Geometric Standard Deviation		1.6
Blood lead level of concern (ug/dl)		1
Skin area, residential	cm^2	2900
Soil adherence	ug/cm^2	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m^3/day	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.192

PATHWAYS						
CHILDREN	typical			with pica		
	Pathway contribution			Pathway contribution		
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	5.8E-5	0.10	1%		0.10	0%
Soil Ingestion	7.0E-3	12.48	99%	1.4E-2	24.96	100%
Inhalation	2.0E-6	0.00	0%		0.00	0%

Click here for REFERENCES

APPENDIX J

RESUMES

BETH ABRAMSON-BECK, PG, OSHA

PRINCIPAL GEOLOGIST

EDUCATION

M.S., Geology, 1981, New Mexico Institute of Mining & Technology, Socorro, New Mexico

B.A, Geology, 1977, University of California, Santa Barbara

Professional Certificate, Hazardous Materials Management, 1991, University of California, San Diego

REGISTRATIONS AND CERTIFICATIONS

PG 4580 (California)

PG 33821 (Arizona)

40-Hour OSHA HAZWOPER Certification

OSHA 8-Hour Health and Safety Supervisor Training

EXPERIENCE HIGHLIGHTS

California Integrated Waste Management Board, As-Need Services 'Contract Statewide

San Diego County Regional Airport Authority, On-Call Contract

Caltrans, Statewide Contract

San Diego Unified Port District, On-Call Environmental Investigation Contract

PROFESSIONAL AFFILIATIONS

Association of Engineering Geologists

San Diego Association of Geologists

Society of Mining Geologists

PUBLICATIONS

Geological Society of America

USGS Open-File Reports

As Principal Geologist, Ms. Abramson-Beck's project experience includes soil, groundwater, soil vapor, sediment, surface water, and subsurface site assessments; human health and ecological risk assessments; remedial design, and remedial/removal actions involving metals, volatile and semi-volatile organic compounds, refined petroleum products, and pesticides; underground storage tank assessments and remediation; radiological surveys, and various phases of hydrologic/groundwater supply projects. Other experience includes site assessment investigations for real estate transfers, landfills and burn sites, school sites, power and coal gasification plants, Brownfields, pipeline, transportation and railroad rights-of-way. She conducts technical studies for inclusion in CEQA/NEPA documents, preliminary endangerment assessments, and expert witness and litigation support. She provides environmental services for regulatory compliance projects that involves interaction with the U.S. Environmental Protection Agency, California Department of Toxic Substances Control, California Fish and Game Department, Regional Water Quality Control Board, Department of Health Services, Air Pollution Control District, California Integrated Waste Management Board, State Water Resources Control Board, and California Coastal Commission. She also has extensive exploration mining and mineral resource assessment experience.

REPRESENTATIVE PROJECT EXPERIENCE

California Integrated Waste Management Board (CIWMB) On-Call Services Contract for Closed, Illegal and Abandoned Disposal Site Investigation Program, Various Locations, California: Project Manager and Principal Investigator during performance of subsurface investigations of illegal disposal sites, solid waste disposal and codisposal sites where further site characterization was necessary for monitoring, enforcement action, or site cleanup. The investigations characterized wastes and delineated the lateral and vertical extent, and provided required information to develop remedial action plans. Projects at an additional 20 waste disposal sites involved designing and constructing landfill monitoring programs in compliance with regulatory requirements. The projects were at closed landfill and burn sites with identified potential risk to human health and the environment. She worked closely with Solid Waste Local Enforcement Agencies (LEAs), Department of Health Services (DEHs), and Regional Water Quality Control Boards (RWQCBs), statewide.

San Diego Unified Port District, On-Call Environmental Investigation Services Contract, San Diego, California: Contract and Project Manager during site investigation and remedial services at numerous environmentally impacted sites including the former Campbell Shipyard, former Eighth Avenue Tidelands Dump and East Parking Lot, 10th Avenue Marine Terminal, Lindbergh Field, and the Naval Training Center (NTC) Landfill. She performed a comprehensive historical investigation of numerous bay front properties; performed subsurface investigations that delineated soil and groundwater contamination at tideland properties; prepared remedial action plans; evaluated remedial alternatives, effectiveness and cost estimates; provided third-party review of technical documents and reports; and third-party oversight of subsurface investigative work. She also provided progress reports and coordinated project work with the Regional Water Quality Control Board (RWQCB), San Diego Department of Environmental Health (DEH), and the Solid Waste Local Enforcement Agency (LEA); provided technical support for an Environmental Impact Report (EIR); and prepared a technical memorandum that provided alternative designs and associated costs for remediation of contaminated bay sediments.

REPRESENTATIVE PROJECT EXPERIENCE (continued)

San Diego Unified School District, As Needed Environmental Consulting Services Contract, San Diego, California: Project Geologist and Technical Advisor for site investigations and provision of technical guidance for remedial services at San Diego school sites. Projects included Phase I Environmental Site Assessments (ESAs) and Addenda, Preliminary Environmental Assessments, Supplementary Site Investigations, Removal Action Work Plans, Remedial Action Plans, Phase II ESAs, Operations & Maintenance Plans, unexploded ordinance document review, and support, select Title 5 requirements, and public participation/community outreach activities. The sites included proposed and existing elementary, middle, and high schools and other District-owned facilities. The scope of work for these projects were designed in coordination with regulatory agency and District representatives to achieve timely completion of the environmental assessment and review process.

Naval Training Center (NTC) Landfill Investigation and Remedial Action, San Diego, California: Project Manager and Principal Investigator where she characterized and delineated burned and municipal solid wastes; performed a geotechnical evaluation; identified and evaluated remedial action alternatives; provided cost estimates for implementing corrective action; conducted extensive interfacing with the client, Regional Water Quality Control Board (RWQCB), California Integrated Waste Management Board (CIWMB) and other agencies; and presented investigation findings to technical advisory boards. She coordinated site investigation activities on a highly accelerated schedule by using several geologists and specialized equipment to complete fieldwork to accommodate the annual Least Tern nesting period and other environmentally sensitive areas and buffer zones. She designed and oversaw construction of the landfill gas monitoring system and managed the landfill gas and groundwater monitoring programs for the site. She evaluated remedial options and prepared a remedial action plan to remediate the site by removing the wastes and affected media and assisted the contractor with preparing bid specifications to implement the removal action. She also provided as-needed assistance to the client with regulatory compliance issues.

Correia Middle School Remedial Investigation, San Diego, California: Technical Advisor and Quality Assurance/Quality Control (QA/QC) Advisor where she evaluated soil impacted with elevated metal concentrations in association with burned wastes possibly mixed with fill during site grading activities. She reviewed the PEA, which indicated lead concentrations in soil exceeded the Department of Toxic Substances Control (DTSC) action level, and the draft remedial action plan (RAP). Based on regulatory review and public comment, groundwater monitoring wells were constructed to evaluate potential impacts to groundwater at the site. She also provided technical and QA/QC oversight for the soil management plan prepared to assist contractors with protocol for excavation, trenching, temporary stockpiling/storage, handling, and re-use and/or off-site disposal of soil associated with a Stormceptor system installation.

County of San Diego Department of Public Works, On-Call Environmental Services Burn Site and Landfill Engineering, Various Locations, San Diego County, California: Program Manager and Principal Investigator during investigations and development of remedial action plans at inactive solid waste disposal sites. She provided as-needed environmental services including characterizing and delineating former burn sites, preparing landfill closure and post-closure maintenance plans, construction plans, health and safety plans, specifications, and cost estimates for landfill maintenance projects. She also oversaw implementation of remedial action plans, provided value engineering, and assistance during the construction activities bidding process.

Mineral Resource Assessment, Yucca Mountain, Nevada: Project Manager and Geologist along with a team of mining and mineral exploration experts to evaluate the mineral resource potential along approximately 310 miles of the rail corridor and based on findings, an additional approximately 200 miles of alignment. This high-profile project involved extensive data compilation, working with various Bureau of Land Management (BLM) personnel statewide, interviews of knowledgeable persons, conducting field reconnaissance of known mineral occurrences and mining properties, conducting meetings with the Department of Energy (DOE) representatives and their subcontractor, and compiling data into a graphical information system (GIS) database. She and a team of mining and mineral exploration experts evaluated the mineral resource potential and corresponding certainty level. She also provided preliminary recommendations regarding the proposed rail alignment with respect to mineral resource potential.

REPRESENTATIVE PROJECT EXPERIENCE (continued)

Mineral Resource Assessment of State Lands, Sonoran Preserve, Maricopa County, Arizona: As Project Manager and Geologist, she managed and performed studies associated with developing a GIS mineral resource database for a portion of Maricopa County. She obtained background data including relevant GIS databases, existing mineral resource databases, and obtained information from published documents and open file reports; interviewed knowledgeable persons at various local, state and federal agencies as well as property owners of mineral properties; analyzed and compiled existing mineral resource data; merged the data into an existing, modified GIS database; performed field verification of digital and nondigital mineral resources data; and created a geologic and mineral resource database within a very restricted time frame and project budget.

OTHER EXPERIENCE

Exploration Mining Geologist-Various Mining Companies, California, Nevada, Arizona, Idaho: As Exploration Geologist for various mining companies, she performed evaluations, geologic mapping and sampling of potential mineral properties on both reconnaissance and project level scales for potential acquisition and development. She generated and conducted gold and base metals reconnaissance programs in California, Nevada, and Idaho, using geologic maps, reports, mining claim records and reports, mineral potential maps and other available data. She performed detailed and reconnaissance geologic mapping, sampling, field exams/property evaluations, geophysical surveys and drilling to evaluate mineral potential. She also evaluated former mining districts and properties for potential development of mineral resources. Mineral potential evaluations also included estimating the concentrations; configuration including the location and extent of the mineral deposits; volume of waste generated during mining operations and estimated costs required to develop the ore deposits. Factors considered included economic factors, ore deposits location, metal types and concentrations, required permits, and access to the market.

U.S. Geological Survey, Statewide, California: As Geologist for the federal government, she compiled and published three USGS open-file reports for the U.S. Geological Survey, as part of the Mineral Resource Assessment Program. The project involved comprehensive literature research, compilations of mineral resources data and preparation of a database. The maps and reports also evaluated properties and historic mining districts with respect to their potential mineral resources and value.

LISA BESTARD, REA, OSHA

SENIOR PROJECT ENVIRONMENTAL SCIENTIST

EDUCATION

B.A., Biology, 2001, University of San Diego

REGISTRATIONS AND CERTIFICATIONS

REA 08319 (California)

40-Hour OSHA HAZWOPER Certification

First Aid/CPR Certification

Certified Niton XRF Spectrum Analyzer

Transportation Worker Identification Credential

Caltrans Water Pollution Control on Construction Sites Certification

EXPERIENCE HIGHLIGHTS

Centre City Development Corporation, On-Call Approved Consultant Contract

San Diego County Regional Airport Authority, On-Call Contract

Caltrans, Statewide Contract

San Diego Unified Port District, Environmental Contract

San Diego Unified School District, Environmental On-Call Contract

PROFESSIONAL AFFILIATIONS

San Diego Environmental Professionals

Women's Environmental Council

As a Senior Project Environmental Scientist for Ninyo & Moore and a California Registered Environmental Assessor, Ms. Hill prepares cost estimates and project budgets; performs Phase I and II Environmental Site Assessments at a variety of sites (e.g., gas stations, maintenance yards, schools, industrial and residential properties, etc.); prepares work plans, permit requests, reports, and other documents; interfaces with regulatory agencies; conducts groundwater monitoring utilizing a variety of methods; and, provides project oversight for remediation projects.

REPRESENTATIVE PROJECT EXPERIENCE

Centre City Development Corporation, East Block of East Village Green, Phase I Environmental Site Assessments and Remediation Cost Estimates, San Diego, California: Prepared a Phase I Environmental Site Assessment report and subsequent updates for six parcels in downtown San Diego as part of the East Block of East Village Green development project. The reports were prepared in accordance with the clients specific scope of work, American Society of Testing and Materials Standard Practice # 1527-05 and the United States Environmental Protection Agency's All Appropriate Inquiry. The project involved coordinating with multiple property owners and tenants and researching a long development history (pre-1900). After the Phase I Environmental Site Assessment reports were completed, letter reports were prepared for each property owner estimating the potential remediation costs the client may incur during redevelopment. The costs were utilized by the client to negotiate purchase prices for the properties. Services also included attending negotiation meetings with the client's attorney's and property owners.

Centre City Development Corporation, West Block of East Village Green, Phase II Environmental Site Assessment and Remediation Cost Estimates, San Diego, California: Based on the recommendations of the Phase I ESA, Ninyo & Moore performed geophysical surveys to evaluate the possible presence of underground storage tanks on two properties. Hand auger borings were also advanced and soil samples collected on four properties to evaluate shallow soil conditions. Based on the findings of the Phase I ESA, geophysical surveys, and soil sampling activities, Ninyo & Moore prepared remediation cost estimates for each property owner. Challenges of the project include interfacing with multiple property owners to gain site access and allocating costs by property owner. The goals of the assessment were to provide additional information to CCDC for remediation planning.

City of San Diego Sewer and Water Infrastructure Design Services, Design – Build 554 Water Projects, Water Groups 901, 902, 903, 904, and 905CI: Prepared five Initial Site Assessment (ISAs) reports for the proposed alignment, approximatley 40,000 linear feet, to identify facilities in the vicinity that had the potential to have impacted soil. Specific tasks performed included a review of readily available maps and environmental reports pertaining to the alignment, review of federal, state, and local regulatory agency databases and select files, site reconnaissance, review of historical documents, including historical aerial photographs and city directories, and impact analysis. Based on the results of the ISAs, Ninyo & Moore consulted with the client on the selection of boring locations. Twelve borings were advanced in areas throughout the alignment. Soil samples were collected and analyzed to evaluate the potential impacts to soil that may be encountered during construction activities. The results indicated that there was the potential to encounter impacted soil in four of the locations evaluated along the pipeline alignment. The project involved obtaining boring permits and traffic control permits and performing geophysical surveys of the selected locations to prevent potential utility conflicts.

REPRESENTATIVE PROJECT EXPERIENCE (continued)

Centre City Development Corporation, Soil Remediation and Export Monitoring Services, 6th and K Parkade, San Diego, California: Provided environmental services for the assessment and remediation of burn ash and petroleum hydrocarbon contamination in a one city block area adjacent to Petco Park. Soil excavation monitoring services included documenting the removal of approximately 9,000 tons of contaminated soil for off site disposal and 27,000 cubic yards of clean soil for off site reuse. A health risk assessment was also completed for the site using available contaminant data. A closure report summarizing the data collected was prepared for the County of San Diego Department of Environmental Health. Project responsibilities also included oversight of remedial excavation, segregation, profiling, disposal of soil with elevated concentrations of metals, polynuclear aromatic hydrocarbons, and petroleum hydrocarbons, and preparation of the Closure Report.

T.Y. Lin, Harbor Drive Pedestrian Bridge, San Diego, California: Prepared the initial site assessment, soil management plan, and community health and safety plan and provided construction oversight services for the project, which was within areas known to be impacted by a former burn site, manufactured gas plant, and oil pipelines. Project activities also included provided oversight for waste characterization and disposal, coordinated with the on-site contractor, provided regulatory agency interfacing, provided litigation support, and prepared a project closeout report.

Metropolitan Transit System, Imperial Avenue Bus Division, San Diego, California: Provided environmental services including semi-annual groundwater monitoring. Based on the results of groundwater monitoring, a Site Conceptual Model report was prepared that involved the compilation of over 20 years of assessment and monitoring data, identifying areas where additional assessment is needed, eliminating areas where assessment was complete, and providing recommendations for additional assessment. Based on the recommendations, an Interim Remedial Action Plan was prepare to install monitoring wells to delineate the extent of free product and perform bail-down testing to evaluate the volume of product in the subsurface. The findings of the assessment activities will be utilized to select the most appropriate and cost effective method of remediation.

SDUSD, Normal Heights Elementary School, Preliminary Environmental Assessment (PEA) and Removal Action, San Diego, California: Provided environmental services to evaluate the potential impacts of lead-based paint to soil from the demolition and weathering of current and/or historical buildings at a proposed school site. A PEA recommending the excavation of lead-impacted soil at the site was submitted to the Department of Toxic Substances Control (DTSC) for review. Based on coordination with SDUSD and DTSC representatives, Ninyo & Moore prepared a Removal Action Work Plan (RAW) for the property. The RAW was approved and the removal action was completed. A completion report was submitted to the DTSC, which granted a determination of no further action with regard to lead in soil. Project responsibilities included the collection of soil samples, analysis of soil samples for lead using a Niton XRF, preparation of a PEA Report, preparation of the RAW, implementation and oversight of the removal action, and preparation of the closeout report. Soil excavation monitoring services included the documentation of the removal of approximately 3,000 tons of contaminated soil for disposal.

Jacobs, United States Federal Courthouse, Site Assessment and Remediation, San Diego, California: Assisted with the site assessment and remediation of the new Federal courthouse site. The goal of the assessment was to pre-characterize the soil for waste disposal profiling and develop a soil management plan (SMP) for use during the grading and excavation of site soils during construction. Site assessment data was utilized to develop the SMP that was incorporated into the bid specifications and provided to contractors to assist in the development of a dewatering system. Remediation oversight services were provided during excavation and grading of the site during two phases of work. Services during the first phase included marking out locations for excavation where contaminated soil was previously identified, segregating soil into separate stockpiles based on analytical results, collecting confirmation samples to verify that contaminated soil had been removed, completing waste profiles for each stockpile, and transporting soil under manifest to the appropriate off-site facilities. During the second phase services included performing pre-characterization sampling of previously inaccessible areas, providing remediation oversight and monitoring during grading and excavation activities, preparing and implementing a Community Health and Safety Plan, submitting a notice of intent to the Regional Water Quality Control Board under Conditional Waiver No. 8, and receiving approval for the unrestricted export and reuse of formational soil at the site. The second phase of work is currently ongoing.