ANALYTICAL REPORT

Job Number: 320-6210-1

Job Description: Makua, Perchlorate in Sea Tissue

For:
ARDL, Inc
400 Aviation Drive
Mount Vernon, IL 62864

Attention: Dean Dickerson

Approved for release.
Karen M Sellers
Project Manager II
3/30/2014 11:30 AM

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03/30/2014

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Sacramento Project Manager.

The Lab Certification ID# is CA200005

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Comments
This report contains results for Sea Cucumber samples.

Receipt
The samples were received on 2/20/2014 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was -14.4º C. All samples were kept frozen until extraction.

LC/MS/MS-Perchlorate
Method 6850
Due to matrix interference, all samples in this report went through an additional clean up procedure consisting of a shake out with Methylene chloride. This optional cleanup is referenced in lab SOP (WS-LC-0012) for samples with high organic content.

No other analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: ARDL, Inc
Project/Site: Makua, Perchlorate in Sea Tissue

TestAmerica Job ID: 320-6210-1

Client Sample ID: MAK102C — Lab Sample ID: 320-6210-1

No Detections.

Client Sample ID: MAK103C — Lab Sample ID: 320-6210-2

No Detections.

Client Sample ID: MAK104C — Lab Sample ID: 320-6210-3

No Detections.

Client Sample ID: MAK105C — Lab Sample ID: 320-6210-4

No Detections.

Client Sample ID: MAK106C — Lab Sample ID: 320-6210-5

No Detections.

Client Sample ID: MAK107C — Lab Sample ID: 320-6210-6

No Detections.

Client Sample ID: MAK108C — Lab Sample ID: 320-6210-7

No Detections.

Client Sample ID: MAK110C — Lab Sample ID: 320-6210-8

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MAK102C — Lab Sample ID: 320-6210-1

Date Collected: 01/13/14 10:02 — **Matrix: Solid**
Date Received: 02/20/14 09:30

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	0.30	ug/Kg		03/21/14 09:09	03/25/14 23:41	1

Client Sample ID: MAK103C — Lab Sample ID: 320-6210-2

Date Collected: 01/13/14 10:22 — **Matrix: Solid**
Date Received: 02/20/14 09:30

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	0.30	ug/Kg		03/21/14 09:09	03/25/14 23:57	1

Client Sample ID: MAK104C — Lab Sample ID: 320-6210-3

Date Collected: 01/13/14 11:00 — **Matrix: Solid**
Date Received: 02/20/14 09:30

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		9.7	0.29	ug/Kg		03/21/14 09:09	03/26/14 00:14	1

Client Sample ID: MAK105C — Lab Sample ID: 320-6210-4

Date Collected: 01/13/14 11:30 — **Matrix: Solid**
Date Received: 02/20/14 09:30

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	0.30	ug/Kg		03/21/14 09:09	03/26/14 00:30	1

Client Sample ID: MAK106C — Lab Sample ID: 320-6210-5

Date Collected: 01/13/14 12:05 — **Matrix: Solid**
Date Received: 02/20/14 09:30

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	0.30	ug/Kg		03/21/14 09:09	03/26/14 00:47	1

Client Sample ID: MAK107C — Lab Sample ID: 320-6210-6

Date Collected: 01/13/14 12:40 — **Matrix: Solid**
Date Received: 02/20/14 09:30

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		9.8	0.29	ug/Kg		03/21/14 09:09	03/26/14 01:03	1

Client Sample ID: MAK108C — Lab Sample ID: 320-6210-7

Date Collected: 01/13/14 13:50 — **Matrix: Solid**
Date Received: 02/20/14 09:30

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		9.7	0.29	ug/Kg		03/21/14 09:09	03/26/14 01:20	1

Client Sample Results

Client: ARDL, Inc
Project/Site: Makua, Perchlorate in Sea Tissue

TestAmerica Job ID: 320-6210-1

Client Sample ID: MAK110C

Lab Sample ID: 320-6210-8

Date Collected: 01/14/14 09:55

Matrix: Solid

Date Received: 02/20/14 09:30

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		9.8	0.29	ug/Kg		03/21/14 09:09	03/26/14 01:36	1

Default Detection Limits

Client: ARDL, Inc
Project/Site: Makua, Perchlorate in Sea Tissue

TestAmerica Job ID: 320-6210-1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	RL	MDL	Units	Method
Perchlorate	5.0	0.15	ug/Kg	6850

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 320-38755/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 38961 — **Prep Batch: 38755**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		5.0	0.15	ug/Kg		03/21/14 09:09	03/25/14 19:16	1

Lab Sample ID: LCS 320-38755/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 38961 — **Prep Batch: 38755**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	50.0	55.1		ug/Kg		110	80 - 120

Lab Sample ID: 320-6210-8 MS — **Client Sample ID: MAK110C**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 38961 — **Prep Batch: 38755**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	ND		101	110		ug/Kg		109	80 - 120

Lab Sample ID: 320-6210-8 MSD — **Client Sample ID: MAK110C**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 38961 — **Prep Batch: 38755**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	ND		100	109		ug/Kg		109	80 - 120	1	15

Lab Sample ID: INF 320-38755/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid
Analysis Batch: 38961 — **Prep Batch: 38755**

Analyte	Spike Added	INF Result	INF Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	50.0	54.0		ng/mL		108	70 - 130

QC Association Summary

Client: ARDL, Inc
Project/Site: Makua, Perchlorate in Sea Tissue

TestAmerica Job ID: 320-6210-1

LCMS

Prep Batch: 38755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-6210-1	MAK102C	Total/NA	Solid	SHAKE	
320-6210-2	MAK103C	Total/NA	Solid	SHAKE	
320-6210-3	MAK104C	Total/NA	Solid	SHAKE	
320-6210-4	MAK105C	Total/NA	Solid	SHAKE	
320-6210-5	MAK106C	Total/NA	Solid	SHAKE	
320-6210-6	MAK107C	Total/NA	Solid	SHAKE	
320-6210-7	MAK108C	Total/NA	Solid	SHAKE	
320-6210-8	MAK110C	Total/NA	Solid	SHAKE	
320-6210-8 MS	MAK110C	Total/NA	Solid	SHAKE	
320-6210-8 MSD	MAK110C	Total/NA	Solid	SHAKE	
INF 320-38755/3-A	Lab Control Sample		Solid	SHAKE	
LCS 320-38755/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
MB 320-38755/1-A	Method Blank	Total/NA	Solid	SHAKE	

Analysis Batch: 38961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-6210-1	MAK102C	Total/NA	Solid	6850	38755
320-6210-2	MAK103C	Total/NA	Solid	6850	38755
320-6210-3	MAK104C	Total/NA	Solid	6850	38755
320-6210-4	MAK105C	Total/NA	Solid	6850	38755
320-6210-5	MAK106C	Total/NA	Solid	6850	38755
320-6210-6	MAK107C	Total/NA	Solid	6850	38755
320-6210-7	MAK108C	Total/NA	Solid	6850	38755
320-6210-8	MAK110C	Total/NA	Solid	6850	38755
320-6210-8 MS	MAK110C	Total/NA	Solid	6850	38755
320-6210-8 MSD	MAK110C	Total/NA	Solid	6850	38755
INF 320-38755/3-A	Lab Control Sample		Solid	6850	38755
LCS 320-38755/2-A	Lab Control Sample	Total/NA	Solid	6850	38755
MB 320-38755/1-A	Method Blank	Total/NA	Solid	6850	38755

Lab Chronicle

Client: ARDL, Inc
Project/Site: Makua, Perchlorate in Sea Tissue

TestAmerica Job ID: 320-6210-1

Client Sample ID: MAK102C — Lab Sample ID: 320-6210-1

Date Collected: 01/13/14 10:02 — **Matrix: Solid**
Date Received: 02/20/14 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			38755	03/21/14 09:09	HJA	TAL SAC
Total/NA	Analysis	6850		1	38961	03/25/14 23:41	JRB	TAL SAC

Client Sample ID: MAK103C — Lab Sample ID: 320-6210-2

Date Collected: 01/13/14 10:22 — **Matrix: Solid**
Date Received: 02/20/14 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			38755	03/21/14 09:09	HJA	TAL SAC
Total/NA	Analysis	6850		1	38961	03/25/14 23:57	JRB	TAL SAC

Client Sample ID: MAK104C — Lab Sample ID: 320-6210-3

Date Collected: 01/13/14 11:00 — **Matrix: Solid**
Date Received: 02/20/14 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			38755	03/21/14 09:09	HJA	TAL SAC
Total/NA	Analysis	6850		1	38961	03/26/14 00:14	JRB	TAL SAC

Client Sample ID: MAK105C — Lab Sample ID: 320-6210-4

Date Collected: 01/13/14 11:30 — **Matrix: Solid**
Date Received: 02/20/14 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			38755	03/21/14 09:09	HJA	TAL SAC
Total/NA	Analysis	6850		1	38961	03/26/14 00:30	JRB	TAL SAC

Client Sample ID: MAK106C — Lab Sample ID: 320-6210-5

Date Collected: 01/13/14 12:05 — **Matrix: Solid**
Date Received: 02/20/14 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			38755	03/21/14 09:09	HJA	TAL SAC
Total/NA	Analysis	6850		1	38961	03/26/14 00:47	JRB	TAL SAC

Client Sample ID: MAK107C — Lab Sample ID: 320-6210-6

Date Collected: 01/13/14 12:40 — **Matrix: Solid**
Date Received: 02/20/14 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			38755	03/21/14 09:09	HJA	TAL SAC
Total/NA	Analysis	6850		1	38961	03/26/14 01:03	JRB	TAL SAC

Lab Chronicle

Client: ARDL, Inc
Project/Site: Makua, Perchlorate in Sea Tissue

TestAmerica Job ID: 320-6210-1

Client Sample ID: MAK108C

Lab Sample ID: 320-6210-7

Date Collected: 01/13/14 13:50
Matrix: Solid
Date Received: 02/20/14 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			38755	03/21/14 09:09	HJA	TAL SAC
Total/NA	Analysis	6850		1	38961	03/26/14 01:20	JRB	TAL SAC

Client Sample ID: MAK110C

Lab Sample ID: 320-6210-8

Date Collected: 01/14/14 09:55
Matrix: Solid
Date Received: 02/20/14 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			38755	03/21/14 09:09	HJA	TAL SAC
Total/NA	Analysis	6850		1	38961	03/26/14 01:36	JRB	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: ARDL, Inc
Project/Site: Makua, Perchlorate in Sea Tissue

TestAmerica Job ID: 320-6210-1

Laboratory: TestAmerica Sacramento

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	04-30-14
Alaska (UST)	State Program	10	UST-055	12-18-13 *
Arizona	State Program	9	AZ0708	08-11-14
Arkansas DEQ	State Program	6	88-0691	06-17-14
California	State Program	9	2897	01-31-15
Colorado	State Program	8	N/A	08-31-14
Connecticut	State Program	1	PH-0691	06-30-15
Florida	NELAP	4	E87570	06-30-14
Guam	State Program	9	N/A	08-31-14
Hawaii	State Program	9	N/A	01-29-15
Illinois	NELAP	5	200060	03-17-15
Kansas	NELAP	7	E-10375	10-31-14
Louisiana	NELAP	6	30612	06-30-14
Michigan	State Program	5	9947	01-31-15
Nebraska	State Program	7	NE-OS-22-13	01-29-15
Nevada	State Program	9	CA44	07-31-14
New Jersey	NELAP	2	CA005	06-30-14
New York	NELAP	2	11666	03-31-14
Northern Mariana Islands	State Program	9	MP0007	02-28-14 *
Oregon	NELAP	10	CA200005	01-29-15
Pennsylvania	NELAP	3	9947	03-31-14
South Carolina	State Program	4	87014	06-30-14
Texas	NELAP	6	T104704399-08-TX	05-31-14
US Fish & Wildlife	Federal		LE148388-0	12-31-14
USDA	Federal		P330-11-00436	12-30-14
USEPA UCMR	Federal	1	CA00044	11-06-14
Utah	NELAP	8	QUAN1	02-28-15
Washington	State Program	10	C581	05-05-14
West Virginia DHHR	State Program	3	9930C	12-31-14
Wyoming	State Program	8	8TMS-Q	02-28-14 *

* Expired certification is currently pending renewal and is considered valid.

Method Summary

Client: ARDL, Inc
Project/Site: Makua, Perchlorate in Sea Tissue

TestAmerica Job ID: 320-6210-1

Method	Method Description	Protocol	Laboratory
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: ARDL, Inc
Project/Site: Makua, Perchlorate in Sea Tissue

TestAmerica Job ID: 320-6210-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-6210-1	MAK102C	Solid	01/13/14 10:02	02/20/14 09:30
320-6210-2	MAK103C	Solid	01/13/14 10:22	02/20/14 09:30
320-6210-3	MAK104C	Solid	01/13/14 11:00	02/20/14 09:30
320-6210-4	MAK105C	Solid	01/13/14 11:30	02/20/14 09:30
320-6210-5	MAK106C	Solid	01/13/14 12:05	02/20/14 09:30
320-6210-6	MAK107C	Solid	01/13/14 12:40	02/20/14 09:30
320-6210-7	MAK108C	Solid	01/13/14 13:50	02/20/14 09:30
320-6210-8	MAK110C	Solid	01/14/14 09:55	02/20/14 09:30

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
LC6850IC_00005	07/06/14	01/06/14	MIllipore Water, Lot M01062014	25 mL	LC6850IM_00005	125 uL	Perchlorate	5 ng/mL
.LC6850IM_00005	07/06/14	01/06/14	MIllipore Water, Lot M01062014	25 mL	LC6850TA_00006	25 uL	Perchlorate	1 ug/mL
..LC6850TA_00006	02/28/15	AccuStandard, Inc., Lot 213025072			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850IS_00024	10/08/14	10/08/13	MIllipore Water, Lot M10072013	103.519 g	LC6850IS_00023	1.2547 g	18-O Perchlorate	1.00733 ug/mL
.LC6850IS_00023	12/20/22	Cambridge Isotope Laboratories, Lot SDCD-001			(Purchased Reagent)		18-O Perchlorate	83.11 ug/mL
LC6850L1_00005	07/06/14	01/06/14	MIllipore Water, Lot M01062014	25 mL	LC6850IS_00024	250 uL	18-O Perchlorate	10.0733 ng/mL
					LC6850SP_00017	37.5 uL	Perchlorate	0.15 ng/mL
.LC6850IS_00024	10/08/14	10/08/13	MIllipore Water, Lot M10072013	103.519 g	LC6850IS_00023	1.2547 g	18-O Perchlorate	1.00733 ug/mL
..LC6850IS_00023	12/20/22	Cambridge Isotope Laboratories, Lot SDCD-001			(Purchased Reagent)		18-O Perchlorate	83.11 ug/mL
.LC6850SP_00017	07/06/14	01/06/14	MIllipore Water, Lot M01062014	25 mL	LC6850SP_00016	2.5 mL	Perchlorate	0.1 ug/mL
..LC6850SP_00016	07/06/14	01/06/14	MIllipore Water, Lot M01062014	50 mL	LC6850TA_00005	50 uL	Perchlorate	1 ug/mL
...LC6850TA_00005	01/06/15	Absolute Standards, Inc., Lot 121213			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L2_00005	07/06/14	01/06/14	MIllipore Water, Lot M01062014	25 mL	LC6850IS_00024	250 uL	18-O Perchlorate	10.0733 ng/mL
					LC6850SP_00017	75 uL	Perchlorate	0.3 ng/mL
.LC6850IS_00024	10/08/14	10/08/13	MIllipore Water, Lot M10072013	103.519 g	LC6850IS_00023	1.2547 g	18-O Perchlorate	1.00733 ug/mL
..LC6850IS_00023	12/20/22	Cambridge Isotope Laboratories, Lot SDCD-001			(Purchased Reagent)		18-O Perchlorate	83.11 ug/mL
.LC6850SP_00017	07/06/14	01/06/14	MIllipore Water, Lot M01062014	25 mL	LC6850SP_00016	2.5 mL	Perchlorate	0.1 ug/mL
..LC6850SP_00016	07/06/14	01/06/14	MIllipore Water, Lot M01062014	50 mL	LC6850TA_00005	50 uL	Perchlorate	1 ug/mL
...LC6850TA_00005	01/06/15	Absolute Standards, Inc., Lot 121213			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L3_00005	07/06/14	01/06/14	MIllipore Water, Lot M01062014	50 mL	LC6850IS_00024	500 uL	18-O Perchlorate	10.0733 ng/mL
					LC6850SP_00017	250 uL	Perchlorate	0.5 ng/mL
.LC6850IS_00024	10/08/14	10/08/13	MIllipore Water, Lot M10072013	103.519 g	LC6850IS_00023	1.2547 g	18-O Perchlorate	1.00733 ug/mL
..LC6850IS_00023	12/20/22	Cambridge Isotope Laboratories, Lot SDCD-001			(Purchased Reagent)		18-O Perchlorate	83.11 ug/mL
.LC6850SP_00017	07/06/14	01/06/14	MIllipore Water, Lot M01062014	25 mL	LC6850SP_00016	2.5 mL	Perchlorate	0.1 ug/mL
..LC6850SP_00016	07/06/14	01/06/14	MIllipore Water, Lot M01062014	50 mL	LC6850TA_00005	50 uL	Perchlorate	1 ug/mL
...LC6850TA_00005	01/06/15	Absolute Standards, Inc., Lot 121213			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L4_00005	07/06/14	01/06/14	MIllipore Water, Lot M01062014	25 mL	LC6850IS_00024	250 uL	18-O Perchlorate	10.0733 ng/mL
					LC6850SP_00016	25 uL	Perchlorate	1 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.LC6850IS_00024	10/08/14	10/08/13	MIllipore Water, Lot M10072013	103.519 g	LC6850IS_00023	1.2547 g	18-O Perchlorate	1.00733 ug/mL
..LC6850IS_00023	12/20/22	Cambridge Isotope Laboratories, Lot SDCD-001			(Purchased Reagent)		18-O Perchlorate	83.11 ug/mL
.LC6850SP_00016	07/06/14	01/06/14	MIllipore Water, Lot M01062014	50 mL	LC6850TA_00005	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00005	01/06/15	Absolute Standards, Inc., Lot 121213			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L5_00005	07/06/14	01/06/14	MIllipore Water, Lot M01062014	25 mL	LC6850IS_00024	250 uL	18-O Perchlorate	10.0733 ng/mL
					LC6850SP_00016	50 uL	Perchlorate	2 ng/mL
.LC6850IS_00024	10/08/14	10/08/13	MIllipore Water, Lot M10072013	103.519 g	LC6850IS_00023	1.2547 g	18-O Perchlorate	1.00733 ug/mL
..LC6850IS_00023	12/20/22	Cambridge Isotope Laboratories, Lot SDCD-001			(Purchased Reagent)		18-O Perchlorate	83.11 ug/mL
.LC6850SP_00016	07/06/14	01/06/14	MIllipore Water, Lot M01062014	50 mL	LC6850TA_00005	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00005	01/06/15	Absolute Standards, Inc., Lot 121213			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L6_00005	07/06/14	01/06/14	MIllipore Water, Lot M01062014	25 mL	LC6850IS_00024	250 uL	18-O Perchlorate	10.0733 ng/mL
					LC6850SP_00016	125 uL	Perchlorate	5 ng/mL
.LC6850IS_00024	10/08/14	10/08/13	MIllipore Water, Lot M10072013	103.519 g	LC6850IS_00023	1.2547 g	18-O Perchlorate	1.00733 ug/mL
..LC6850IS_00023	12/20/22	Cambridge Isotope Laboratories, Lot SDCD-001			(Purchased Reagent)		18-O Perchlorate	83.11 ug/mL
.LC6850SP_00016	07/06/14	01/06/14	MIllipore Water, Lot M01062014	50 mL	LC6850TA_00005	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00005	01/06/15	Absolute Standards, Inc., Lot 121213			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L7_00005	07/06/14	01/06/14	MIllipore Water, Lot M01062014	25 mL	LC6850IS_00024	250 uL	18-O Perchlorate	10.0733 ng/mL
					LC6850SP_00016	250 uL	Perchlorate	10 ng/mL
.LC6850IS_00024	10/08/14	10/08/13	MIllipore Water, Lot M10072013	103.519 g	LC6850IS_00023	1.2547 g	18-O Perchlorate	1.00733 ug/mL
..LC6850IS_00023	12/20/22	Cambridge Isotope Laboratories, Lot SDCD-001			(Purchased Reagent)		18-O Perchlorate	83.11 ug/mL
.LC6850SP_00016	07/06/14	01/06/14	MIllipore Water, Lot M01062014	50 mL	LC6850TA_00005	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00005	01/06/15	Absolute Standards, Inc., Lot 121213			(Purchased Reagent)		Perchlorate	1000 ug/mL
LC6850L8_00005	07/06/14	01/06/14	MIllipore Water, Lot M01062014	25 mL	LC6850IS_00024	250 uL	18-O Perchlorate	10.0733 ng/mL
					LC6850SP_00016	500 uL	Perchlorate	20 ng/mL
.LC6850IS_00024	10/08/14	10/08/13	MIllipore Water, Lot M10072013	103.519 g	LC6850IS_00023	1.2547 g	18-O Perchlorate	1.00733 ug/mL
..LC6850IS_00023	12/20/22	Cambridge Isotope Laboratories, Lot SDCD-001			(Purchased Reagent)		18-O Perchlorate	83.11 ug/mL
.LC6850SP_00016	07/06/14	01/06/14	MIllipore Water, Lot M01062014	50 mL	LC6850TA_00005	50 uL	Perchlorate	1 ug/mL
..LC6850TA_00005	01/06/15	Absolute Standards, Inc., Lot 121213			(Purchased Reagent)		Perchlorate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
LC6850SP_00016	07/06/14	01/06/14	MIllipore Water, Lot M01062014	50 mL	LC6850TA_00005	50 uL	Perchlorate	1 ug/mL
.LC6850TA_00005	01/06/15	Absolute Standards, Inc., Lot 121213			(Purchased Reagent)		Perchlorate	1000 ug/mL

Reagent

LC6850IS_00023

Cambridge Isotope Laboratories, Inc.

50 Frontage Road, Andover, MA 01810-5413 USA
800.322.1174 (N.AMERICA) 978.749.8000 (INTERNATIONAL)
www.isotope.com

CERTIFICATE OF ANALYSIS

Product Name: (Isotopic Label & Enrichment Specification) — PERCHLORIC ACID, SODIUM SALT (18O4, 90%+) 100 UG/ML IN WATER

Lot Number: SDCD-001

Catalog Number: OLM-7310-S

Product Information

Chemical Purity Specification:	≥98%
Labeled CAS Number:	NA
Unlabeled CAS Number:	7601-89-0
MW of fully enriched product:	130.4
Chemical Formula:	NaCl*O4
Storage:	Store at room temperature away from light and moisture.
Stability:	See storage and expiration date.

Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number . Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

Approved by: T. J. Eckersley

Timothy J. Eckersley, Ph.D., Quality Assurance

Quality Control Tests and Results

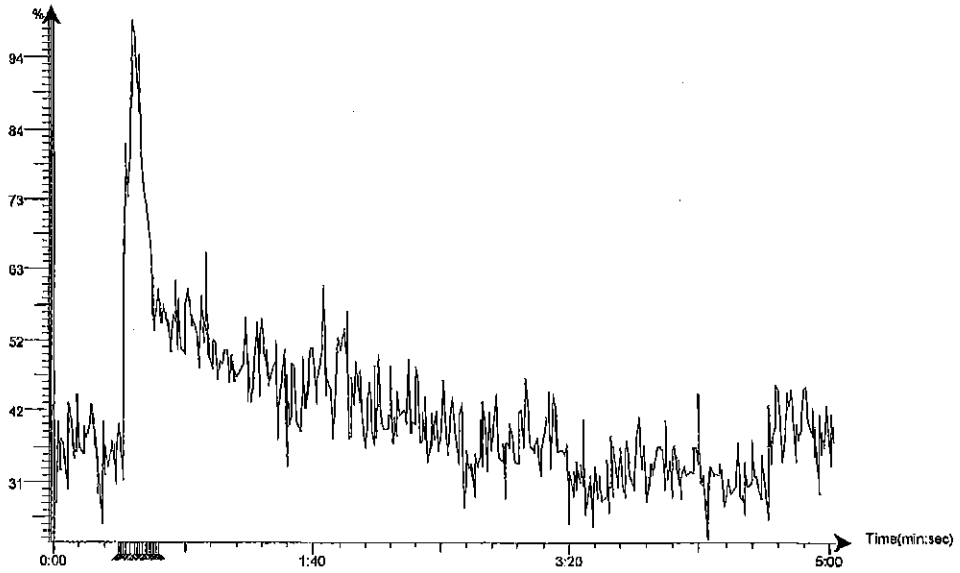
QC Release Date	12/20/2012
Expiration Date	12/20/2022
Concentration Based on Gravimetry	102 µg/mL
Chemical Purity of Neat Material(s)	98%
LC/MS for Concentration	90.9 ± 1.4 µg/mL (k=2)

130.4
− 22.99 Na
+ 1.01 H
108.42/130.4 = 0.8314

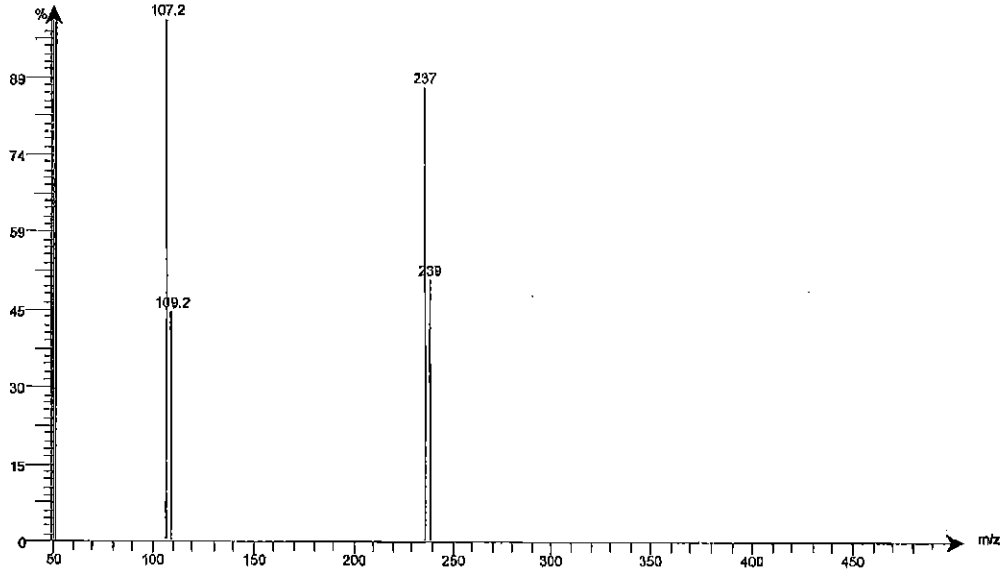
102 µg/mL NaPerc × 0.98 purity × 108.42 Perc-H / 130.4 NaPerc = 83.11 µg/mL Perchlorate-H.

DEL 1-4-12 03/30/2014

TIC
perchloric acid olm7310s sdcd001.datx;
Intensity Max: 9.5E8



Spectrum 0:25, 0:26, 0:27, .. 0:40, 0:41, 0:41 (30 indices)
perchloric acid olm7310s sdcd001.datx;
Intensity ESI - Max: 6.7E8



Reagent

LC6850TA_00005

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Analytical Reference Material ARM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57001
Lot Number: 121213
Description: Perchlorate (ClO_4^-)

Expiration Date: 121216
Storage: 4 °C
Nominal Concentration (µg/mL): 1000

Weight shown below was diluted to (mL): 499.66

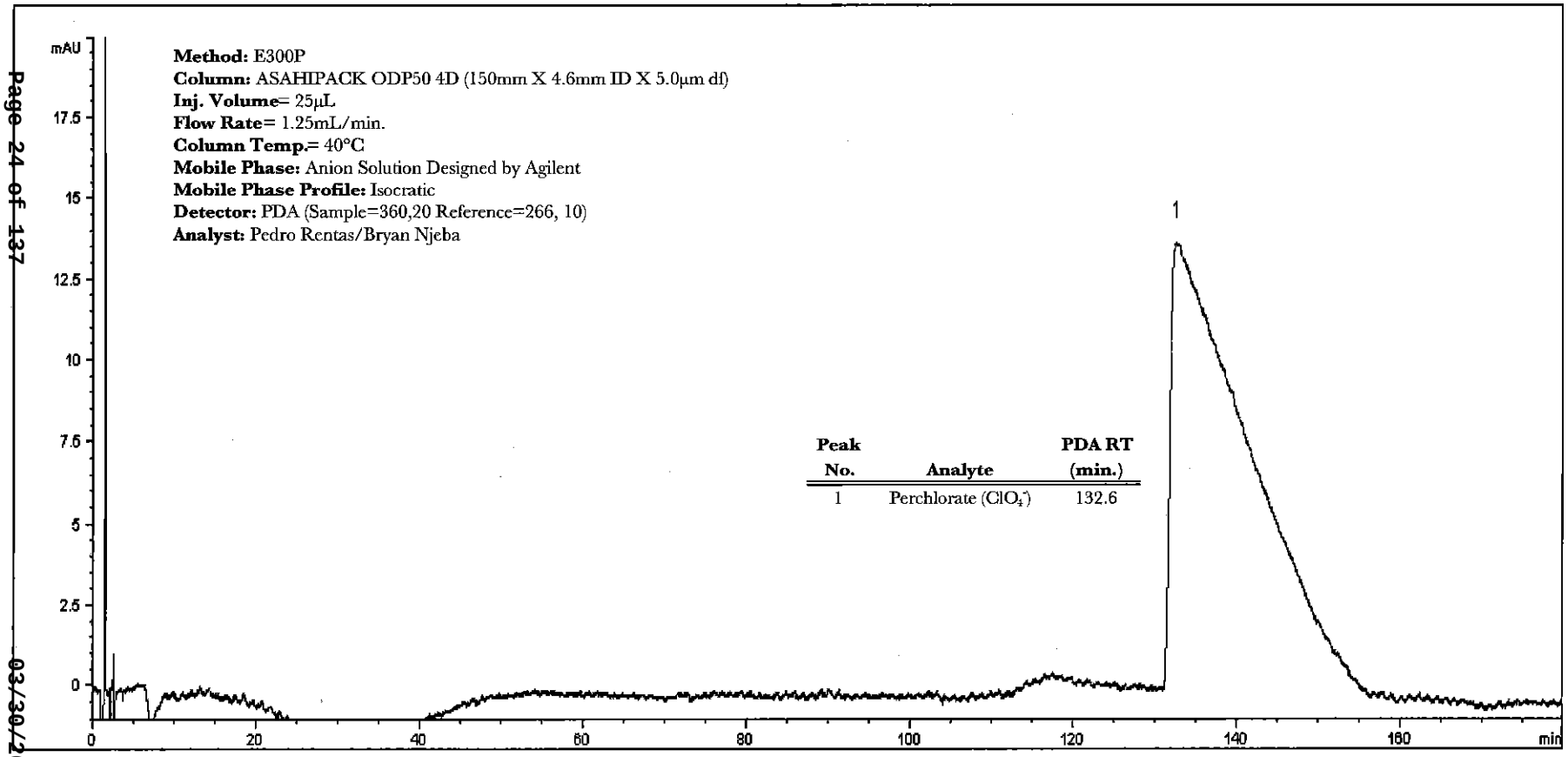
Solvent: Lot # 121213 ASTM Type 1 Water

5E-05 Balance Uncertainty
0.035 Flask Uncertainty

Formulated By:	Lawrence Barry	121213
Reviewed By:	Pedro L. Rentas	121213

MSDS Information
(Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity	Uncertainty Purity	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty (+/-)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium Perchlorate (ClO4)	IN119	MKBN1540V	1000.0	98.0	0.10	81.2	0.62772	0.62773	**1000.0**	0.00205	07601-89-0	N/A	N/A	3152a



Peak No.	Analyte	PDA RT (min.)
1	Perchlorate (ClO_4^-)	132.6

Page 24 of 137
03/30/2014

Reagent

LC6850TA_00006

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

AccuIon™ Reference Standard

Item Number: IC-PER-10X-1

Element: Perchlorate
Storage Condition: Ambient
Hazards: IRRITANT
Matrix: Water

Lot: 213025072
Date Certified: 2/22/2013
Expiration: Feb / 2015
Sample Size: 100 mL

[X] Included on ISO/IEC 17025 Scope of Accreditation
[X] Included on ISO Guide 34 Scope of Accreditation

Concentration confirmed by phone call - Nathan to Accustandard on 1-6-2014. Salt correction performed, concentration is perchlorate ion. DEL 1-6-14

Actual Lot Analysis

Perchlorate 1000 µg/mL

The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±5%. See reverse side for details.

In order to verify the concentrations, the final solution was checked against material traceable to the following NIST SRMs: Ind. Std.

RESULTS: This solution standard was certified for accuracy of the listed components via methodology traceable to primary or well characterized secondary standards.

This standard was prepared gravimetrically to contain the concentrations shown above. Balances, used in the preparation, are calibrated regularly using NIST-traceable weights. All glassware used in preparation is Class A.

We use the highest purity raw materials available, ASTM type I 18 megohm deionized water, and typically 99.999%+ starting materials to minimize impurity levels in the final solution. All solutions are filtered through a 0.2 µm filter prior to being bottled. All bottles are triple rinsed with deionized water prior to use.

Use good laboratory procedure when diluting this product. Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware.

We certify the accuracy of this standard to be ± 0.5% of the stated value until the expiration date listed above, provided it is kept tightly capped and stored under normal laboratory conditions.

L. Snyder
Lydia Snyder
Inorganic QC Supervisor

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 7/11

CERTIFICATION REPORT

1. **Quality Documentation:** This certificate is designed in accordance with ISO Guide 31 (Reference Materials - Contents of Certificates and Labels) and ISO Guide 35 (Reference Materials – General and Statistical Principles for Certification).

2. **Quality Standards:**

   ISO Guide 34 - General Requirements for the Competence of Reference Material Producers ACLASS Certificate Number AR-1463

   AR-1463

   ISO/IEC 17025:2005 - General Requirements for the Competence of Testing and Calibration Laboratories ACLASS Certificate Number AT-1339

   AT-1339

   ISO 9001:2008 Quality Management System - Requirements Eagle Registrations Certificate Number 3774

3. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 11. If dilution is required, use only Class A glassware and diluent compatible with all certified analytes in this preparation. All solutions should be thoroughly mixed prior to use.

4. **Raw Materials:** Reference standards are prepared from the highest quality starting materials with defined purities. All analytes and solvents are obtained from pre-qualified vendors and then analyzed or evaluated prior to use.

5. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this CRM.

6. **Homogeneity Assessment:** Homogeneity of the finished product is assessed by analyzing sample batches or by other methods consistent with the intended use of the product and by procedures that comply with the appropriate Quality System requirements, and ISO Guide 35.

7. **Stability Assessment:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label. To ensure a uniform solution, mix the contents of the sealed container thoroughly prior to use. Care should be taken not to contaminate the contents of the original container.

8. **Analytical Quality Control:** Products are tested by validated analytical methods specified in the manufacturer's quality system.

9. **Uncertainty Statistics and Confidence Limits:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide (Quantifying Uncertainty in Analytical Measurement). We have evaluated both Type A (based on a series of observations) and Type B (manufacturers specifications and calibration data) factors and report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_m = \sqrt{(u(P))^2 + (u(m))^2 + (u(V))^2}$. The expanded uncertainty, U, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level. Laboratories accredited to ISO/IEC 17025 and ISO Guide 34 are required to estimate uncertainty budgets associated with the measurements they make. However, for analysis, the certified value should be used as the actual value.

10. **Warranties:** The manufacturer warrants that its products shall conform to the description of such products as provided in its catalog or on the specific product label. This warranty is exclusive, and the manufacturer makes no other warranty, express or implied, including any implied warranty of merchantability or fitness for any particular purpose.

11. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. Due to the hazardous nature, only trained personnel should handle this product. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

6850

Perchlorate by LC/MS or LC/MS/MS

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 25MAR14-Per-033.d

Lab ID: LCS 320-38755/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Perchlorate	50.0	55.1	110	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 25MAR14-Per-056.d

Lab ID: 320-6210-8 MS Client ID: MAK110C MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Perchlorate	101	ND	110	109	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 25MAR14-Per-057.d

Lab ID: 320-6210-8 MSD Client ID: MAK110C MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perchlorate	100	109	109	1	15	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 25MAR14-Per-034.d

Lab ID: INF 320-38755/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/mL)	INF CONCENTRATION (ng/mL)	INF % REC	QC LIMITS REC	#
Perchlorate	50.0	54.0	108	70-130	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Lab File ID: 25MAR14-Per-032.d Lab Sample ID: MB 320-38755/1-A

Matrix: Solid Date Extracted: 03/21/2014 09:09

Instrument ID: A5 Date Analyzed: 03/25/2014 19:16

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-38755/2-A	25MAR14-Per -033.d	03/25/2014 19:32
MAK102C	320-6210-1	25MAR14-Per -048.d	03/25/2014 23:41
MAK103C	320-6210-2	25MAR14-Per -049.d	03/25/2014 23:57
MAK104C	320-6210-3	25MAR14-Per -050.d	03/26/2014 00:14
MAK105C	320-6210-4	25MAR14-Per -051.d	03/26/2014 00:30
MAK106C	320-6210-5	25MAR14-Per -052.d	03/26/2014 00:47
MAK107C	320-6210-6	25MAR14-Per -053.d	03/26/2014 01:03
MAK108C	320-6210-7	25MAR14-Per -054.d	03/26/2014 01:20
MAK110C	320-6210-8	25MAR14-Per -055.d	03/26/2014 01:36
MAK110C MS	320-6210-8 MS	25MAR14-Per -056.d	03/26/2014 01:53
MAK110C MSD	320-6210-8 MSD	25MAR14-Per -057.d	03/26/2014 02:09

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Instrument ID: A5 Calibration Start Date: 03/25/2014 11:49

GC Column: Anion HR ID: 4.6(mm) Calibration End Date: 03/25/2014 13:45

Calibration ID: 6718

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		395793578	11.65				
UPPER LIMIT		593690367	12.65				
LOWER LIMIT		197896789	10.65				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 320-38961/12		437424939	11.61				
CCV 320-38961/13		462901762	11.61				
CCV 320-38961/27		486111602	11.58				
CCVL 320-38961/29		509417641	11.58				
CCB 320-38961/30		507663998	11.58				
MB 320-38755/1-A		494312822	11.57				
LCS 320-38755/2-A		416447388	11.57				
INF 320-38755/3-A		394144057	11.50				
CCV 320-38961/43		479607033	11.20				
CCVL 320-38961/44		540835071	11.37				
CCB 320-38961/45		535994743	11.41				
320-6210-1	MAK102C	424067494	11.23				
320-6210-2	MAK103C	437128214	11.34				
320-6210-3	MAK104C	428684263	11.35				
320-6210-4	MAK105C	430676857	11.35				
320-6210-5	MAK106C	440244127	11.34				
320-6210-6	MAK107C	438753360	11.35				
320-6210-7	MAK108C	394568329	11.35				
320-6210-8	MAK110C	390155653	11.35				
320-6210-8 MS	MAK110C MS	323283797	11.34				
320-6210-8 MSD	MAK110C MSD	320776741	11.34				
CCV 320-38961/57		461569857	11.37				
CCVL 320-38961/58		498173055	11.39				
CCB 320-38961/59		507651688	11.41				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID: MAK102C
Lab Sample ID: 320-6210-1
Matrix: Solid
Lab File ID: 25MAR14-Per-048.d
Analysis Method: 6850
Date Collected: 01/13/2014 10:02
Extraction Method: SHAKE
Date Extracted: 03/21/2014 09:09
Sample wt/vol: 1.50(g)
Date Analyzed: 03/25/2014 23:41
Con. Extract Vol.: 10.00(mL)
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		10	0.30

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-048.d				
Lims ID:	320-6210-A-1-A	Lab Sample ID:	320-6210-1		
Client ID:	MAK102C				
Sample Type:	Client				
Inject. Date:	25-Mar-2014 23:41:00	ALS Bottle#:	0	Worklist Smp#:	47
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Sample Info:					
Operator ID:		Instrument ID:	A5		

Method:	\\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m		
Limit Group:	LC 6850 ICAL		
Last Update:	26-Mar-2014 10:17:53	Calib Date:	25-Mar-2014 13:45:52
Integrator:	Picker		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d		

Column 1 :			Det: MS QQQ
Process Host:	XAWRK005		

First Level Reviewer: barnettj		Date:	26-Mar-2014 10:15:09

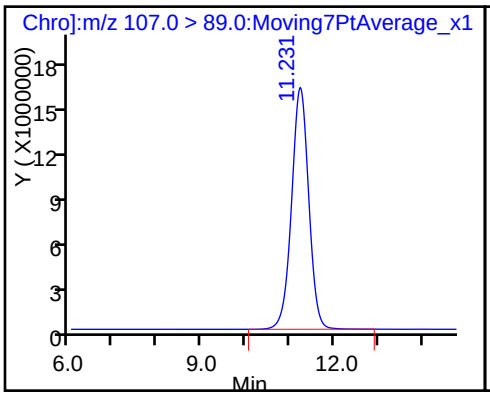
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.231	11.652	-0.421		424067494	10.1		9646	
109.0 > 91.0	11.228	11.652	-0.424		129702498		3.27(2.30-3.80)	3653	

Report Date: 26-Mar-2014 10:17:55 Chrom Revision: 2.2 12-Mar-2014 11:19:24

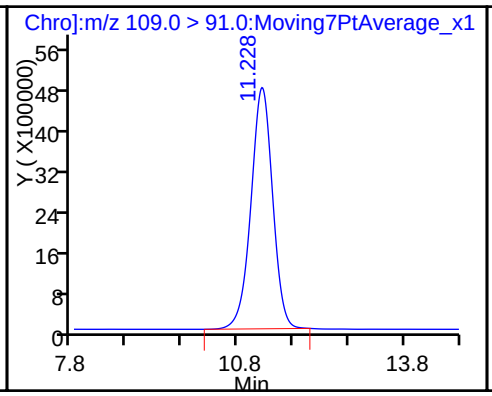
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-048.d				
Injection Date:	25-Mar-2014 23:41:00	Instrument ID:	A5		
Lims ID:	320-6210-A-1-A	Lab Sample ID:	320-6210-1		
Client ID:	MAK102C				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	47
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

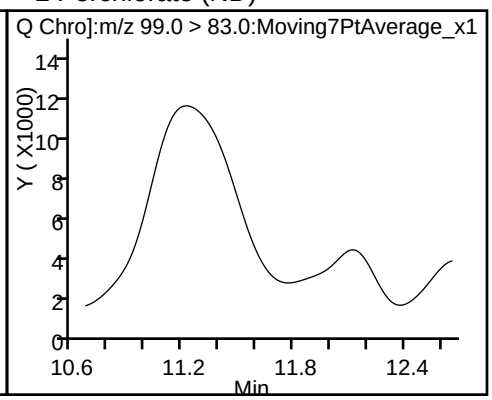
* 1 18-O Perchlorate



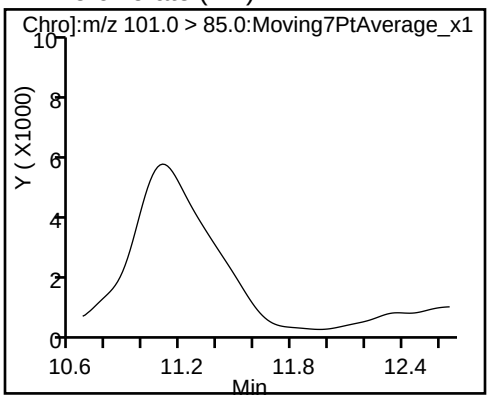
* 1 18-O Perchlorate



2 Perchlorate (ND)



2 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID: MAK103C
Lab Sample ID: 320-6210-2
Matrix: Solid
Lab File ID: 25MAR14-Per-049.d
Analysis Method: 6850
Date Collected: 01/13/2014 10:22
Extraction Method: SHAKE
Date Extracted: 03/21/2014 09:09
Sample wt/vol: 1.50(g)
Date Analyzed: 03/25/2014 23:57
Con. Extract Vol.: 10.00(mL)
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		10	0.30

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-049.d				
Lims ID:	320-6210-A-2-A	Lab Sample ID:	320-6210-2		
Client ID:	MAK103C				
Sample Type:	Client				
Inject. Date:	25-Mar-2014 23:57:33	ALS Bottle#:	0	Worklist Smp#:	48
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Sample Info:					
Operator ID:		Instrument ID:	A5		

Method:	\\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m		
Limit Group:	LC 6850 ICAL		
Last Update:	26-Mar-2014 10:17:53	Calib Date:	25-Mar-2014 13:45:52
Integrator:	Picker		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d		

Column 1 : Det: MS QQQ
Process Host: XAWRK005

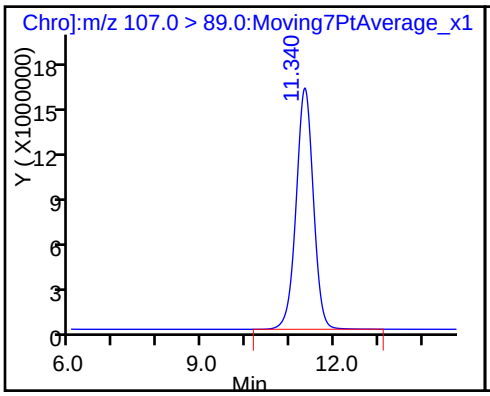
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.340	11.652	-0.312		437128214	10.1		11693	
109.0 > 91.0	11.323	11.652	-0.329		132340122		3.30(2.30-3.80)	3539	

Report Date: 26-Mar-2014 10:17:55 Chrom Revision: 2.2 12-Mar-2014 11:19:24

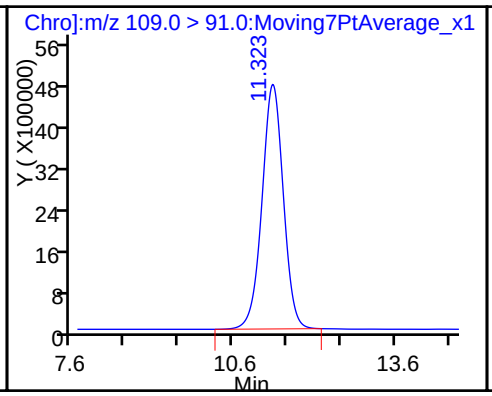
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-049.d				
Injection Date:	25-Mar-2014 23:57:33	Instrument ID:	A5		
Lims ID:	320-6210-A-2-A	Lab Sample ID:	320-6210-2		
Client ID:	MAK103C				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	48
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

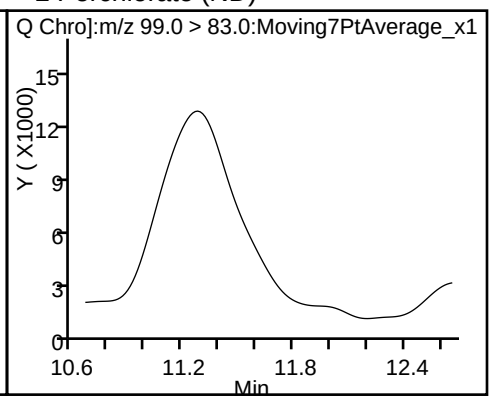
* 1 18-O Perchlorate



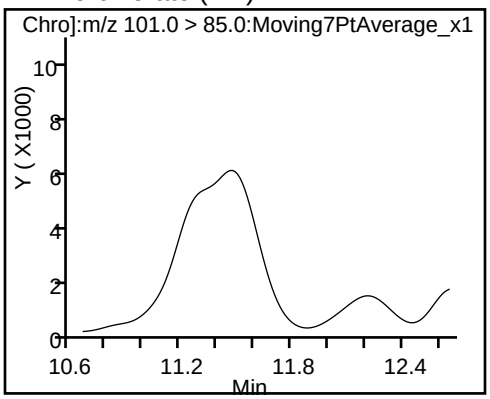
* 1 18-O Perchlorate



2 Perchlorate (ND)



2 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID: MAK104C
Lab Sample ID: 320-6210-3
Matrix: Solid
Lab File ID: 25MAR14-Per-050.d
Analysis Method: 6850
Date Collected: 01/13/2014 11:00
Extraction Method: SHAKE
Date Extracted: 03/21/2014 09:09
Sample wt/vol: 1.55(g)
Date Analyzed: 03/26/2014 00:14
Con. Extract Vol.: 10.00(mL)
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		9.7	0.29

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-050.d				
Lims ID:	320-6210-A-3-A	Lab Sample ID:	320-6210-3		
Client ID:	MAK104C				
Sample Type:	Client				
Inject. Date:	26-Mar-2014 00:14:05	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Sample Info:					
Operator ID:		Instrument ID:	A5		

Method:	\\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m		
Limit Group:	LC 6850 ICAL		
Last Update:	26-Mar-2014 10:17:53	Calib Date:	25-Mar-2014 13:45:52
Integrator:	Picker		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d		

Column 1 : Det: MS QQQ
Process Host: XAWRK005

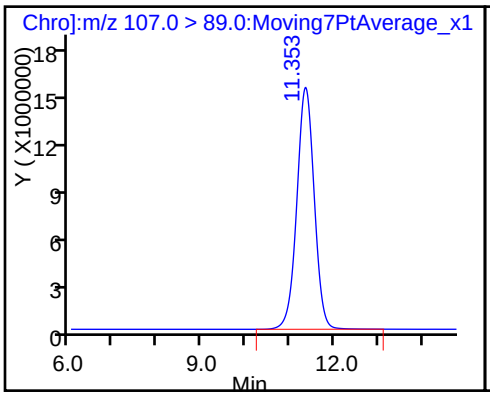
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.353	11.652	-0.299		428684263	10.1		8500	
109.0 > 91.0	11.350	11.652	-0.302		131975700		3.25(2.30-3.80)	3754	

Report Date: 26-Mar-2014 10:17:56 Chrom Revision: 2.2 12-Mar-2014 11:19:24

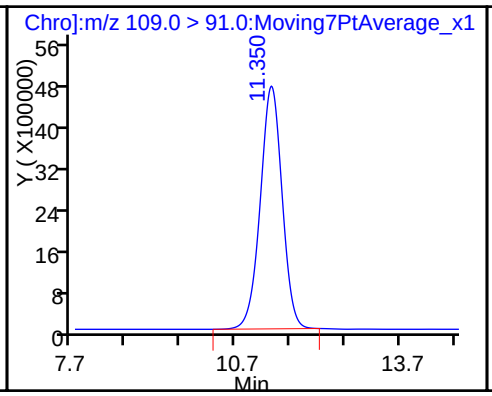
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-050.d				
Injection Date:	26-Mar-2014 00:14:05	Instrument ID:	A5		
Lims ID:	320-6210-A-3-A	Lab Sample ID:	320-6210-3		
Client ID:	MAK104C				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

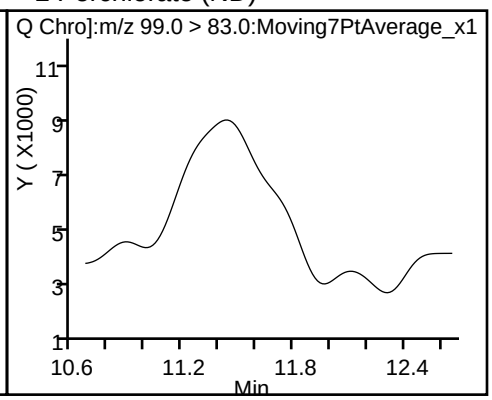
* 1 18-O Perchlorate



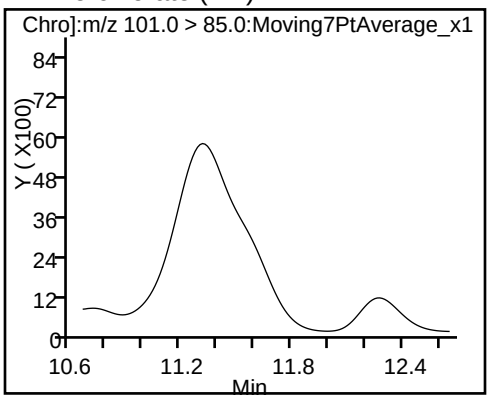
* 1 18-O Perchlorate



2 Perchlorate (ND)



2 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID: MAK105C
Lab Sample ID: 320-6210-4
Matrix: Solid
Lab File ID: 25MAR14-Per-051.d
Analysis Method: 6850
Date Collected: 01/13/2014 11:30
Extraction Method: SHAKE
Date Extracted: 03/21/2014 09:09
Sample wt/vol: 1.50(g)
Date Analyzed: 03/26/2014 00:30
Con. Extract Vol.: 10.00(mL)
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		10	0.30

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-051.d				
Lims ID:	320-6210-A-4-A	Lab Sample ID:	320-6210-4		
Client ID:	MAK105C				
Sample Type:	Client				
Inject. Date:	26-Mar-2014 00:30:36	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Sample Info:					
Operator ID:		Instrument ID:	A5		

Method:	\\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m		
Limit Group:	LC 6850 ICAL		
Last Update:	26-Mar-2014 10:17:53	Calib Date:	25-Mar-2014 13:45:52
Integrator:	Picker		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d		

Column 1 : Det: MS QQQ
Process Host: XAWRK005

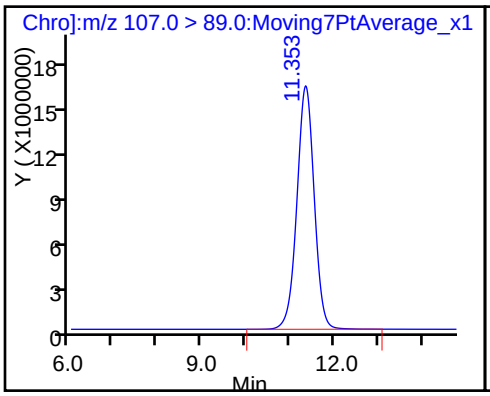
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.353	11.652	-0.299		430676857	10.1		10761	
109.0 > 91.0	11.350	11.652	-0.302		129800393		3.32(2.30-3.80)	3176	

Report Date: 26-Mar-2014 10:17:56 Chrom Revision: 2.2 12-Mar-2014 11:19:24

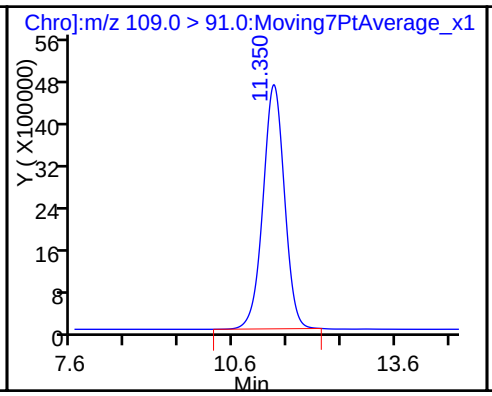
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-051.d				
Injection Date:	26-Mar-2014 00:30:36	Instrument ID:	A5		
Lims ID:	320-6210-A-4-A	Lab Sample ID:	320-6210-4		
Client ID:	MAK105C				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

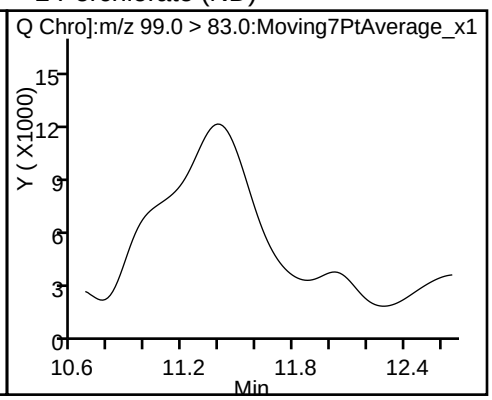
* 1 18-O Perchlorate



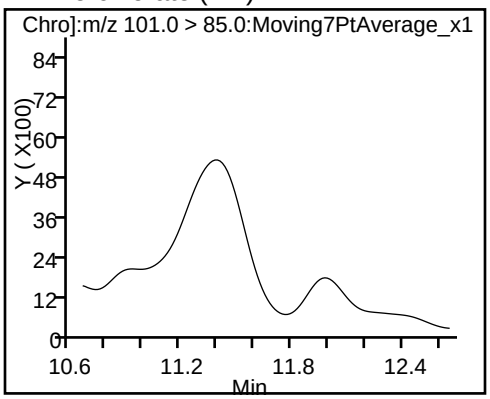
* 1 18-O Perchlorate



2 Perchlorate (ND)



2 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID: MAK106C
Lab Sample ID: 320-6210-5
Matrix: Solid
Lab File ID: 25MAR14-Per-052.d
Analysis Method: 6850
Date Collected: 01/13/2014 12:05
Extraction Method: SHAKE
Date Extracted: 03/21/2014 09:09
Sample wt/vol: 1.50(g)
Date Analyzed: 03/26/2014 00:47
Con. Extract Vol.: 10.00(mL)
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		10	0.30

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-052.d				
Lims ID:	320-6210-A-5-A	Lab Sample ID:	320-6210-5		
Client ID:	MAK106C				
Sample Type:	Client				
Inject. Date:	26-Mar-2014 00:47:07	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Sample Info:					
Operator ID:		Instrument ID:	A5		

Method:	\\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m		
Limit Group:	LC 6850 ICAL		
Last Update:	26-Mar-2014 10:17:53	Calib Date:	25-Mar-2014 13:45:52
Integrator:	Picker		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d		

Column 1 : Det: MS QQQ
Process Host: XAWRK005

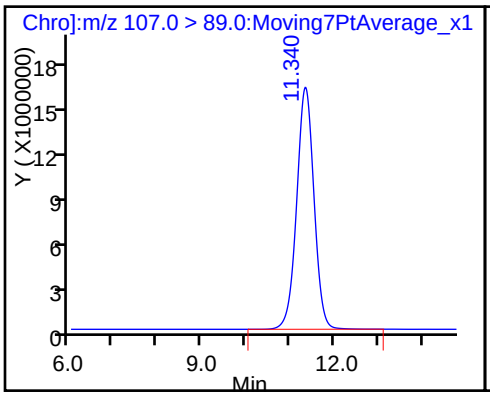
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.340	11.652	-0.312		440244127	10.1		17695	
109.0 > 91.0	11.350	11.652	-0.302		134331916		3.28(2.30-3.80)	2679	

Report Date: 26-Mar-2014 10:17:57 Chrom Revision: 2.2 12-Mar-2014 11:19:24

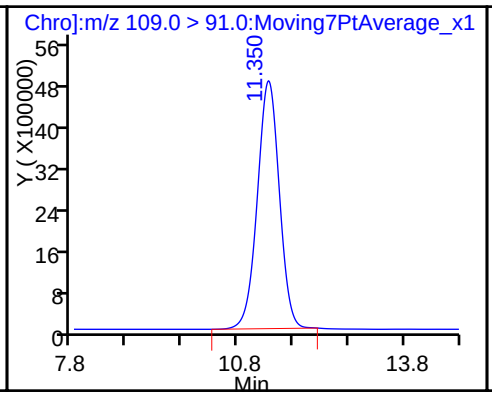
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-052.d				
Injection Date:	26-Mar-2014 00:47:07	Instrument ID:	A5		
Lims ID:	320-6210-A-5-A	Lab Sample ID:	320-6210-5		
Client ID:	MAK106C				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

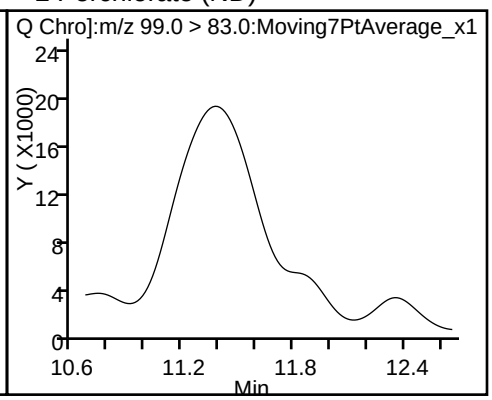
* 1 18-O Perchlorate



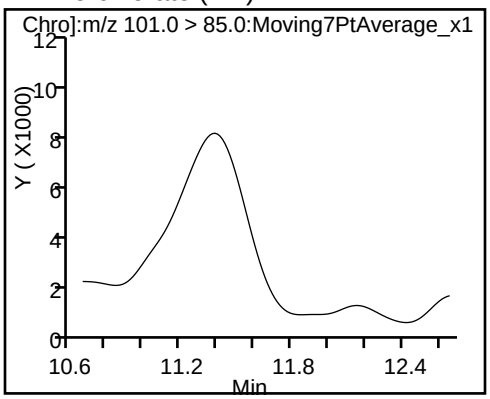
* 1 18-O Perchlorate



2 Perchlorate (ND)



2 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID: MAK107C
Lab Sample ID: 320-6210-6
Matrix: Solid
Lab File ID: 25MAR14-Per-053.d
Analysis Method: 6850
Date Collected: 01/13/2014 12:40
Extraction Method: SHAKE
Date Extracted: 03/21/2014 09:09
Sample wt/vol: 1.53(g)
Date Analyzed: 03/26/2014 01:03
Con. Extract Vol.: 10.00(mL)
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		9.8	0.29

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-053.d				
Lims ID:	320-6210-A-6-A	Lab Sample ID:	320-6210-6		
Client ID:	MAK107C				
Sample Type:	Client				
Inject. Date:	26-Mar-2014 01:03:38	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Sample Info:					
Operator ID:		Instrument ID:	A5		

Method:	\\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m		
Limit Group:	LC 6850 ICAL		
Last Update:	26-Mar-2014 10:17:53	Calib Date:	25-Mar-2014 13:45:52
Integrator:	Picker		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d		

Column 1 : Det: MS QQQ
Process Host: XAWRK005

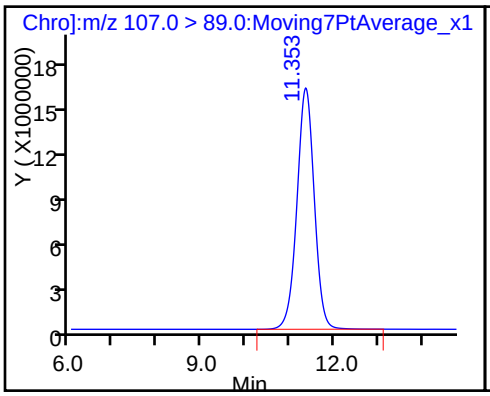
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.353	11.652	-0.299		438753360	10.1		10478	
109.0 > 91.0	11.350	11.652	-0.302		135162949		3.25(2.30-3.80)	4107	

Report Date: 26-Mar-2014 10:17:57 Chrom Revision: 2.2 12-Mar-2014 11:19:24

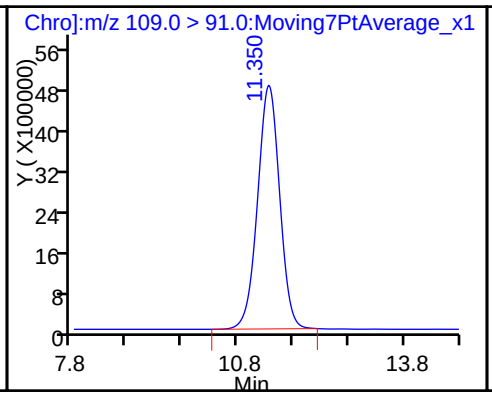
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-053.d				
Injection Date:	26-Mar-2014 01:03:38	Instrument ID:	A5		
Lims ID:	320-6210-A-6-A	Lab Sample ID:	320-6210-6		
Client ID:	MAK107C				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

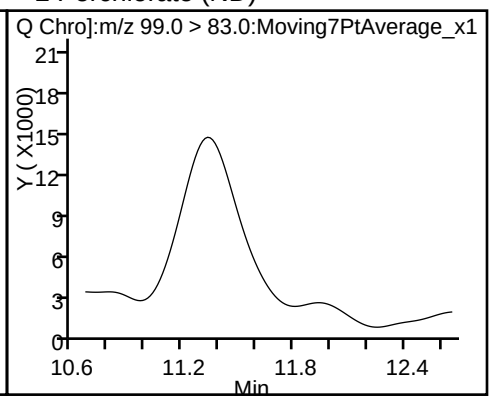
* 1 18-O Perchlorate



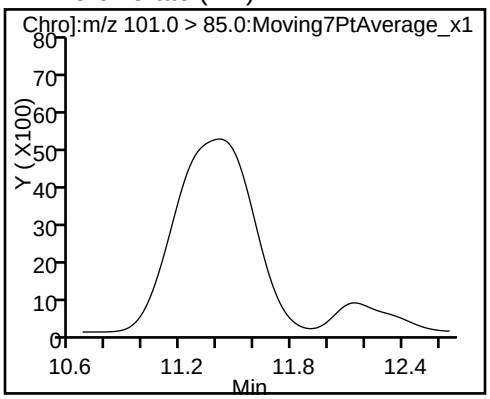
* 1 18-O Perchlorate



2 Perchlorate (ND)



2 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID: MAK108C
Lab Sample ID: 320-6210-7
Matrix: Solid
Lab File ID: 25MAR14-Per-054.d
Analysis Method: 6850
Date Collected: 01/13/2014 13:50
Extraction Method: SHAKE
Date Extracted: 03/21/2014 09:09
Sample wt/vol: 1.54(g)
Date Analyzed: 03/26/2014 01:20
Con. Extract Vol.: 10.00(mL)
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		9.7	0.29

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-054.d				
Lims ID:	320-6210-A-7-A	Lab Sample ID:	320-6210-7		
Client ID:	MAK108C				
Sample Type:	Client				
Inject. Date:	26-Mar-2014 01:20:12	ALS Bottle#:	0	Worklist Smp#:	53
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Sample Info:					
Operator ID:		Instrument ID:	A5		

Method:	\\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m		
Limit Group:	LC 6850 ICAL		
Last Update:	26-Mar-2014 10:17:53	Calib Date:	25-Mar-2014 13:45:52
Integrator:	Picker		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d		

Column 1 : Det: MS QQQ
Process Host: XAWRK005

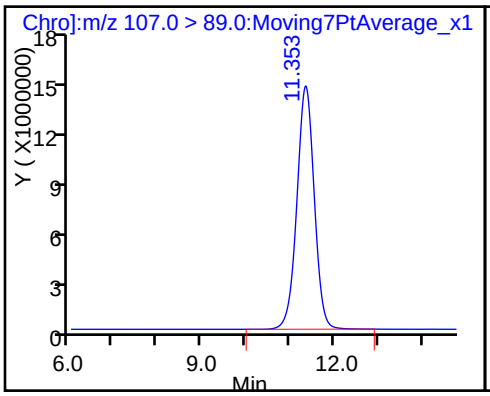
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.353	11.652	-0.299		394568329	10.1		8956	
109.0 > 91.0	11.350	11.652	-0.302		124514232		3.17(2.30-3.80)	3915	

Report Date: 26-Mar-2014 10:17:57 Chrom Revision: 2.2 12-Mar-2014 11:19:24

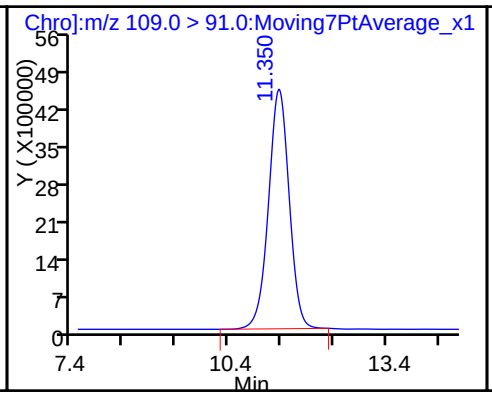
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-054.d				
Injection Date:	26-Mar-2014 01:20:12	Instrument ID:	A5		
Lims ID:	320-6210-A-7-A	Lab Sample ID:	320-6210-7		
Client ID:	MAK108C				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	53
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

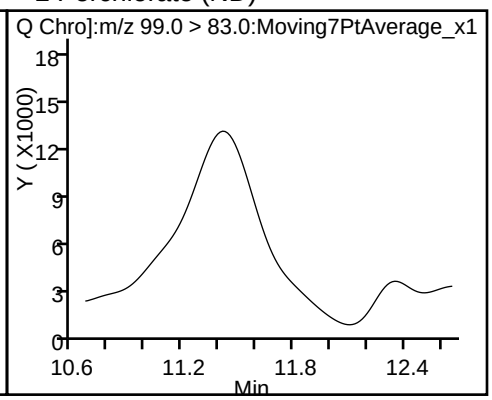
* 1 18-O Perchlorate



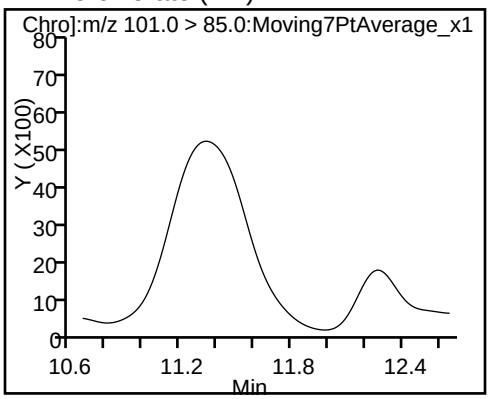
* 1 18-O Perchlorate



2 Perchlorate (ND)



2 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID: MAK110C
Lab Sample ID: 320-6210-8
Matrix: Solid
Lab File ID: 25MAR14-Per-055.d
Analysis Method: 6850
Date Collected: 01/14/2014 09:55
Extraction Method: SHAKE
Date Extracted: 03/21/2014 09:09
Sample wt/vol: 1.53(g)
Date Analyzed: 03/26/2014 01:36
Con. Extract Vol.: 10.00(mL)
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		9.8	0.29

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-055.d				
Lims ID:	320-6210-A-8-A	Lab Sample ID:	320-6210-8		
Client ID:	MAK110C				
Sample Type:	Client				
Inject. Date:	26-Mar-2014 01:36:47	ALS Bottle#:	0	Worklist Smp#:	54
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Sample Info:					
Operator ID:		Instrument ID:	A5		

Method:	\\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m		
Limit Group:	LC 6850 ICAL		
Last Update:	26-Mar-2014 10:17:53	Calib Date:	25-Mar-2014 13:45:52
Integrator:	Picker		
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d		

Column 1 : Det: MS QQQ
Process Host: XAWRK005

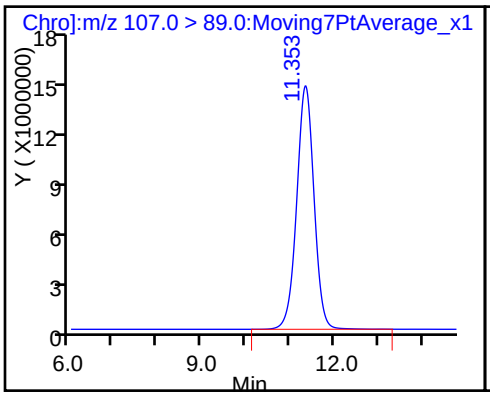
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.353	11.652	-0.299		390155653	10.1		12462	
109.0 > 91.0	11.350	11.652	-0.302		120784570		3.23(2.30-3.80)	2543	

Report Date: 26-Mar-2014 10:17:58 Chrom Revision: 2.2 12-Mar-2014 11:19:24

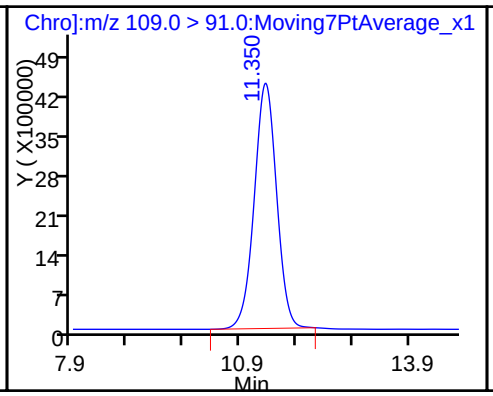
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-055.d				
Injection Date:	26-Mar-2014 01:36:47	Instrument ID:	A5		
Lims ID:	320-6210-A-8-A	Lab Sample ID:	320-6210-8		
Client ID:	MAK110C				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	54
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

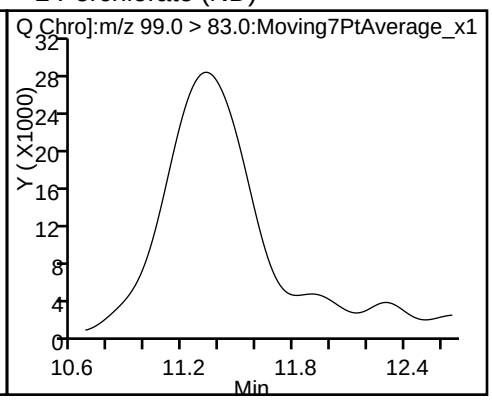
* 1 18-O Perchlorate



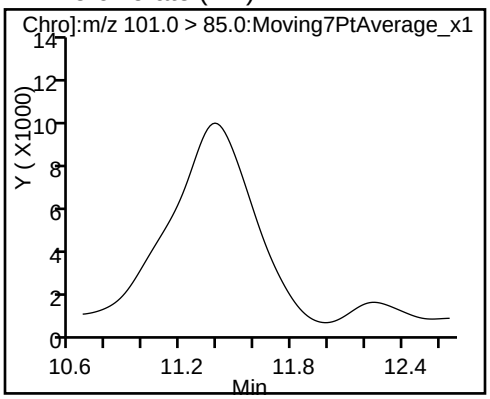
* 1 18-O Perchlorate



2 Perchlorate (ND)



2 Perchlorate (ND)



FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1 Analy Batch No.: 38961

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/25/2014 11:49 Calibration End Date: 03/25/2014 13:45 Calibration ID: 6718

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-38961/3	25MAR14-Per-005.d
Level 2	STD02 320-38961/4	25MAR14-Per-006.d
Level 3	STD03 320-38961/5	25MAR14-Per-007.d
Level 4	STD04 320-38961/6	25MAR14-Per-008.d
Level 5	STD05 320-38961/7	25MAR14-Per-009.d
Level 6	STD06 320-38961/8	25MAR14-Per-010.d
Level 7	STD07 320-38961/9	25MAR14-Per-011.d
Level 8	STD08 320-38961/10	25MAR14-Per-012.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Perchlorate	0.7967 0.8318	0.7795 0.8731	0.7925 0.9178	0.8242	0.8071	Ave		0.8278				5.6		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1 Analy Batch No.: 38961

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/25/2014 11:49 Calibration End Date: 03/25/2014 13:45 Calibration ID: 6718

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-38961/3	25MAR14-Per-005.d
Level 2	STD02 320-38961/4	25MAR14-Per-006.d
Level 3	STD03 320-38961/5	25MAR14-Per-007.d
Level 4	STD04 320-38961/6	25MAR14-Per-008.d
Level 5	STD05 320-38961/7	25MAR14-Per-009.d
Level 6	STD06 320-38961/8	25MAR14-Per-010.d
Level 7	STD07 320-38961/9	25MAR14-Per-011.d
Level 8	STD08 320-38961/10	25MAR14-Per-012.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Perchlorate	18OP	Ave	4365465 169817451	9198812 346554497	15911218 654212528	33655326	66690336	0.150 5.00	0.300 10.0	0.500 20.0	1.00	2.00

Curve Type Legend:

Ave = Average ISTD

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-005.d
Lims ID: STD01
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 25-Mar-2014 11:49:57 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist: chrom-6850_A5*sub4

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 25-Mar-2014 17:14:37 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK047

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.706	11.652	0.054		367964996	10.1		9695	
109.0 > 91.0	11.703	11.652	0.051		114238863		3.22(2.30-3.80)	3183	
2 Perchlorate									
99.0 > 83.0	11.713	11.662	0.051	1.001	4365465	0.1444		104	
101.0 > 85.0	11.723	11.662	0.061	1.001	1647935		2.65(2.30-3.80)	80.9	

Report Date: 25-Mar-2014 17:14:37 Chrom Revision: 2.2 12-Mar-2014 11:19:24

TestAmerica Sacramento

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-005.d

Injection Date: 25-Mar-2014 11:49:57 Instrument ID: A5

Lims ID: STD01

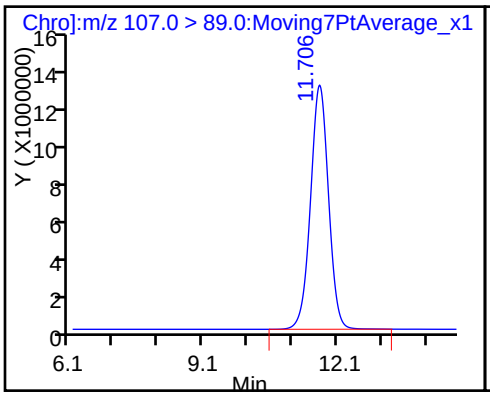
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 3

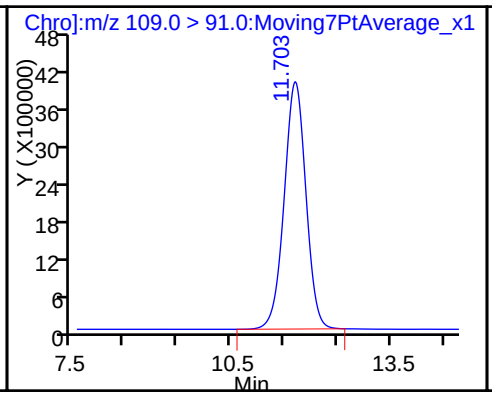
Injection Vol: 80.0 ul Dil. Factor: 1.0000

Method: 6850_A5 Limit Group: LC 6850 ICAL

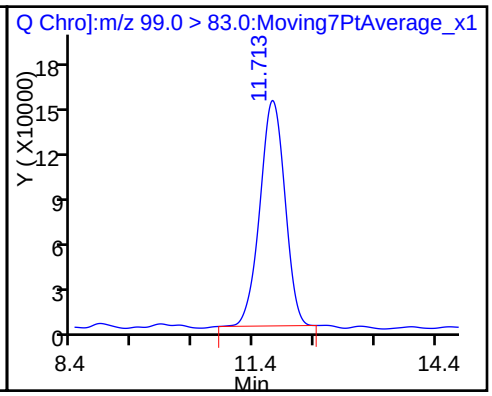
* 1 18-O Perchlorate



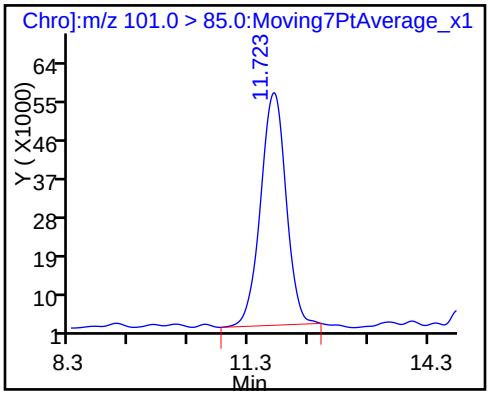
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-006.d
Lims ID: STD02
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 25-Mar-2014 12:06:27 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist: chrom-6850_A5*sub4

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 25-Mar-2014 17:14:37 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK047

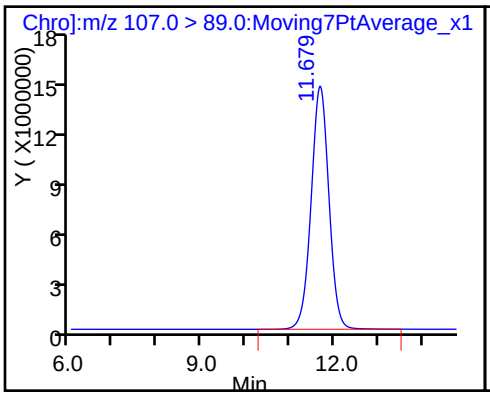
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.679	11.652	0.027		396234392	10.1		7601	
109.0 > 91.0	11.676	11.652	0.024		120927996		3.28(2.30-3.80)	2530	
2 Perchlorate									
99.0 > 83.0	11.686	11.662	0.024	1.001	9198812	0.2825		242	
101.0 > 85.0	11.669	11.662	0.007	0.999	3211543		2.86(2.30-3.80)	162	

Report Date: 25-Mar-2014 17:14:37 Chrom Revision: 2.2 12-Mar-2014 11:19:24

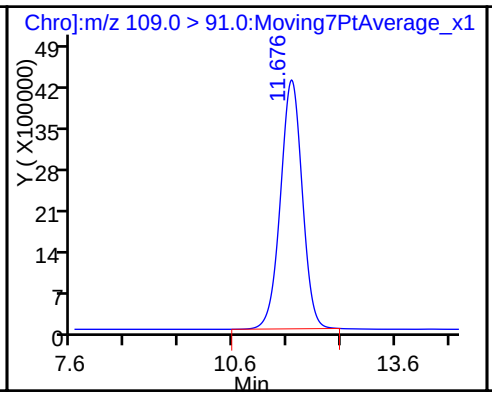
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-006.d				
Injection Date:	25-Mar-2014 12:06:27	Instrument ID:	A5		
Lims ID:	STD02				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	4
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

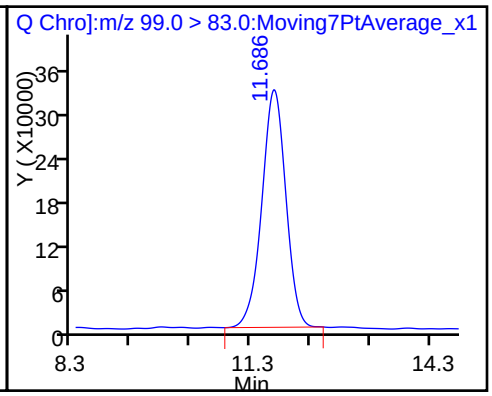
* 1 18-O Perchlorate



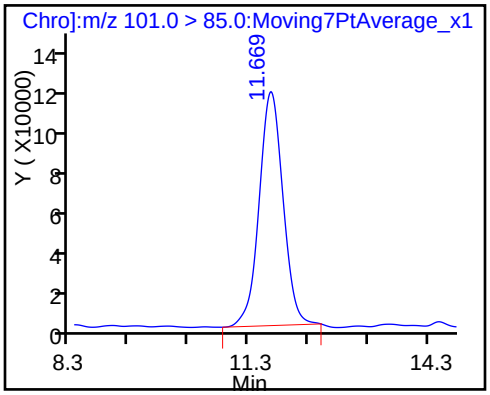
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-007.d				
Lims ID:	STD03				
Client ID:					
Sample Type:	IC	Calib Level:	3		
Inject. Date:	25-Mar-2014 12:23:06	ALS Bottle#:	0	Worklist Smp#:	5
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Sample Info:					
Operator ID:		Instrument ID:	A5		
Sublist:	chrom-6850_A5*sub4				
Method:	\\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m				
Limit Group:	LC 6850 ICAL				
Last Update:	25-Mar-2014 17:14:38	Calib Date:	25-Mar-2014 13:45:52		
Integrator:	Picker				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d				
Column 1 :			Det: MS QQQ		
Process Host:	XAWRK047				

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.666	11.652	0.014		404471803	10.1		17399	
109.0 > 91.0	11.662	11.652	0.010		125511265		3.22(2.30-3.80)	3539	
2 Perchlorate									
99.0 > 83.0	11.672	11.662	0.010	1.001	15911218	0.4787		499	
101.0 > 85.0	11.669	11.662	0.007	1.000	5363448		2.97(2.30-3.80)	245	

Report Date: 25-Mar-2014 17:14:38 Chrom Revision: 2.2 12-Mar-2014 11:19:24

TestAmerica Sacramento

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-007.d

Injection Date: 25-Mar-2014 12:23:06 Instrument ID: A5

Lims ID: STD03

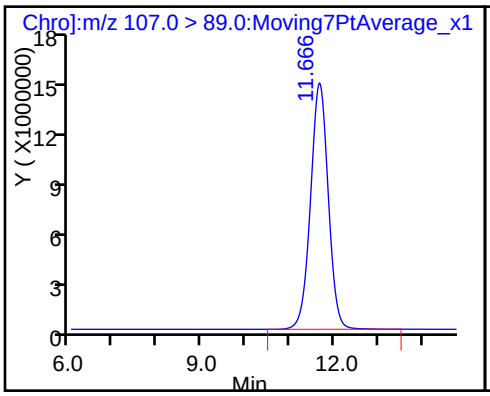
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 5

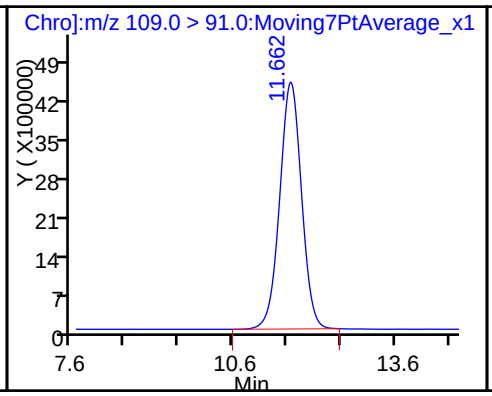
Injection Vol: 80.0 ul Dil. Factor: 1.0000

Method: 6850_A5 Limit Group: LC 6850 ICAL

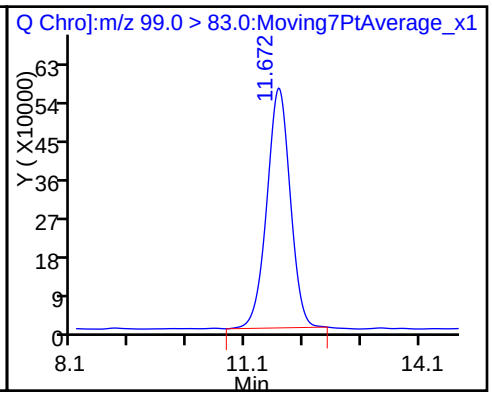
* 1 18-O Perchlorate



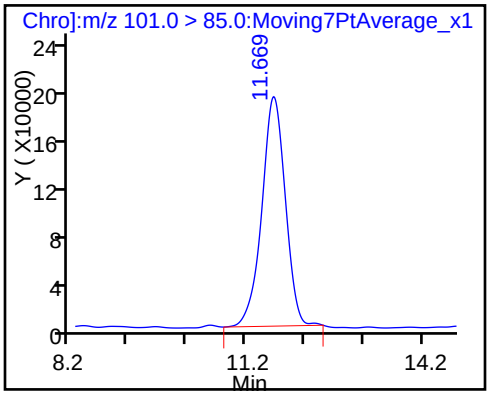
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-008.d
Lims ID: STD04
Client ID:
Sample Type: ICISAV Calib Level: 4
Inject. Date: 25-Mar-2014 12:39:40 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist: chrom-6850_A5*sub4

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 25-Mar-2014 17:14:39 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK047

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.652	11.652	0.0		411352450	10.1		19726	
109.0 > 91.0	11.649	11.652	-0.003		126243002		3.26(2.30-3.80)	5121	
2 Perchlorate									
99.0 > 83.0	11.659	11.662	-0.003	1.001	33655326	1.00		557	
101.0 > 85.0	11.655	11.662	-0.007	1.000	11094512		3.03(2.30-3.80)	377	

Report Date: 25-Mar-2014 17:14:39 Chrom Revision: 2.2 12-Mar-2014 11:19:24

TestAmerica Sacramento

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-008.d

Injection Date: 25-Mar-2014 12:39:40 Instrument ID: A5

Lims ID: STD04

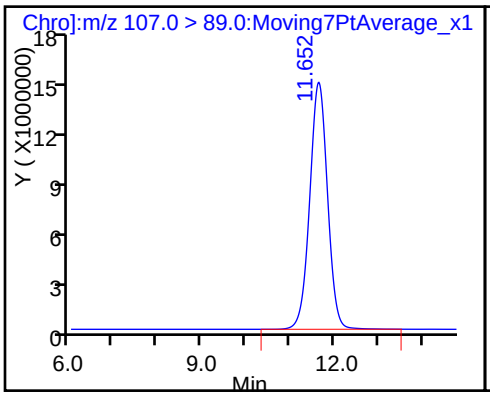
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 6

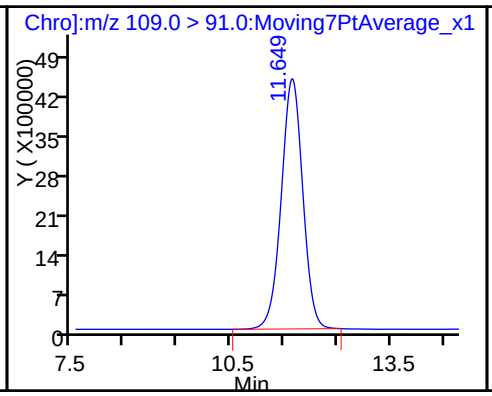
Injection Vol: 80.0 ul Dil. Factor: 1.0000

Method: 6850_A5 Limit Group: LC 6850 ICAL

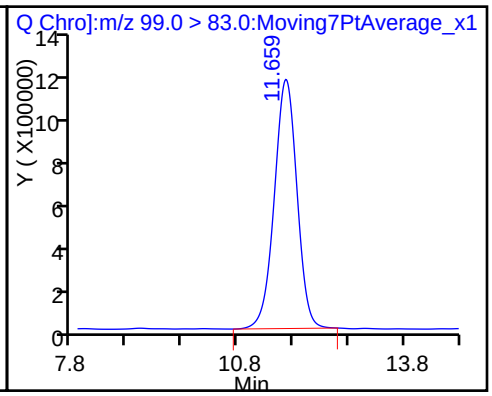
* 1 18-O Perchlorate



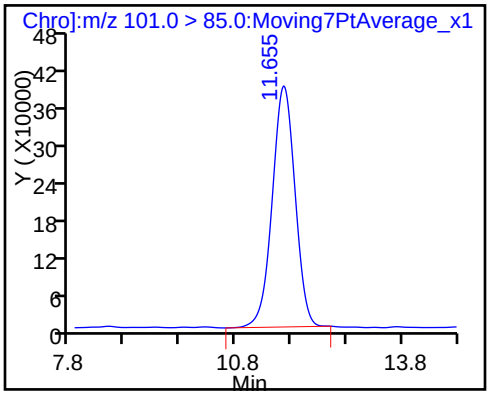
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-009.d				
Lims ID:	STD05				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	25-Mar-2014 12:56:15	ALS Bottle#:	0	Worklist Smp#:	7
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Sample Info:					
Operator ID:		Instrument ID:	A5		
Sublist:	chrom-6850_A5*sub4				
Method:	\\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m				
Limit Group:	LC 6850 ICAL				
Last Update:	25-Mar-2014 17:14:40	Calib Date:	25-Mar-2014 13:45:52		
Integrator:	Picker				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d				
Column 1 :			Det: MS QQQ		
Process Host:	XAWRK047				

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.638	11.652	-0.014		416180652	10.1		11449	
109.0 > 91.0	11.635	11.652	-0.017		126566522		3.29(2.30-3.80)	4125	
2 Perchlorate									
99.0 > 83.0	11.659	11.662	-0.003	1.002	66690336	1.95		1582	
101.0 > 85.0	11.655	11.662	-0.007	1.001	22283010		2.99(2.30-3.80)	1164	

Report Date: 25-Mar-2014 17:14:40 Chrom Revision: 2.2 12-Mar-2014 11:19:24

TestAmerica Sacramento

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-009.d

Injection Date: 25-Mar-2014 12:56:15 Instrument ID: A5

Lims ID: STD05

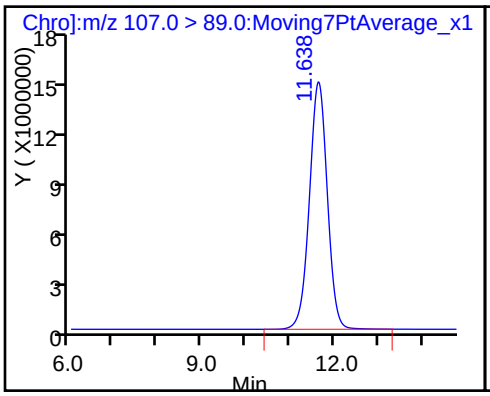
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 7

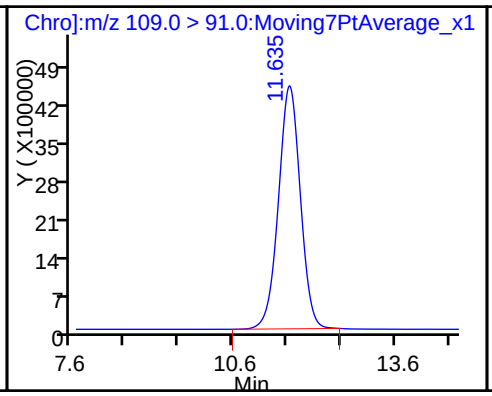
Injection Vol: 80.0 ul Dil. Factor: 1.0000

Method: 6850_A5 Limit Group: LC 6850 ICAL

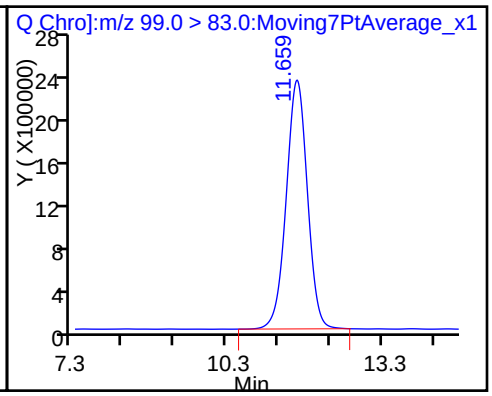
* 1 18-O Perchlorate



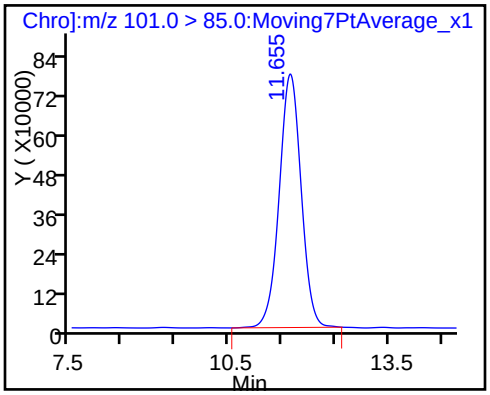
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-010.d
Lims ID: STD06
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 25-Mar-2014 13:12:46 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist: chrom-6850_A5*sub4

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 25-Mar-2014 17:14:40 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK047

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.625	11.652	-0.027		411292642	10.1		10111	
109.0 > 91.0	11.635	11.652	-0.017		126584681		3.25(2.30-3.80)	3610	
2 Perchlorate									
99.0 > 83.0	11.645	11.662	-0.017	1.002	169817451	5.02		2461	
101.0 > 85.0	11.642	11.662	-0.020	1.001	57957010		2.93(2.30-3.80)	965	

Report Date: 25-Mar-2014 17:14:41 Chrom Revision: 2.2 12-Mar-2014 11:19:24

TestAmerica Sacramento

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-010.d

Injection Date: 25-Mar-2014 13:12:46 Instrument ID: A5

Lims ID: STD06

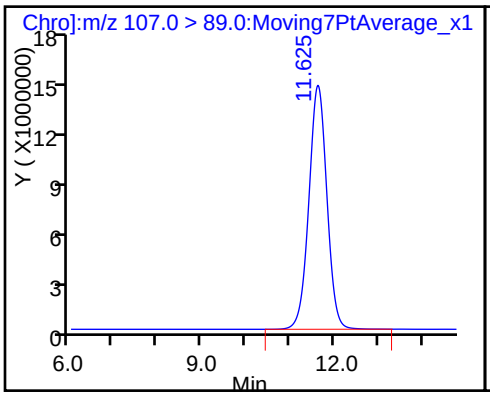
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 8

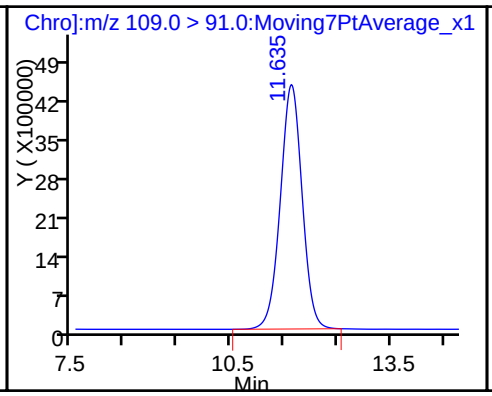
Injection Vol: 80.0 ul Dil. Factor: 1.0000

Method: 6850_A5 Limit Group: LC 6850 ICAL

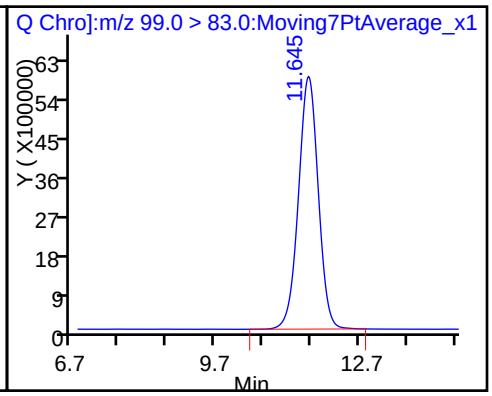
* 1 18-O Perchlorate



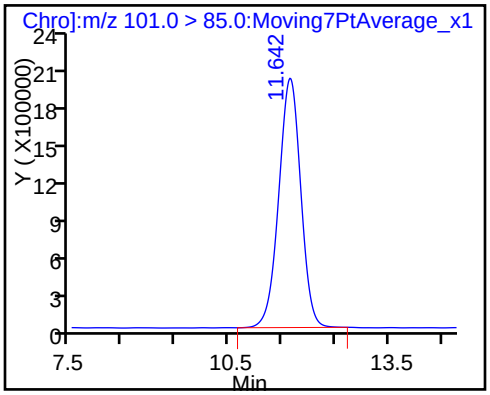
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-011.d
Lims ID: STD07
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 25-Mar-2014 13:29:22 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist: chrom-6850_A5*sub4

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 25-Mar-2014 17:14:41 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK047

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.625	11.652	-0.027		399818656	10.1		9585	
109.0 > 91.0	11.621	11.652	-0.031		123902307		3.23(2.30-3.80)	4820	
2 Perchlorate									
99.0 > 83.0	11.632	11.662	-0.030	1.001	346554497	10.5		4170	
101.0 > 85.0	11.628	11.662	-0.034	1.000	110835846		3.13(2.30-3.80)	3418	

Report Date: 25-Mar-2014 17:14:41 Chrom Revision: 2.2 12-Mar-2014 11:19:24

TestAmerica Sacramento

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-011.d

Injection Date: 25-Mar-2014 13:29:22 Instrument ID: A5

Lims ID: STD07

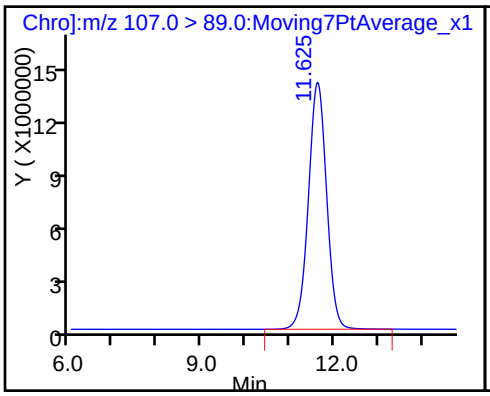
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 9

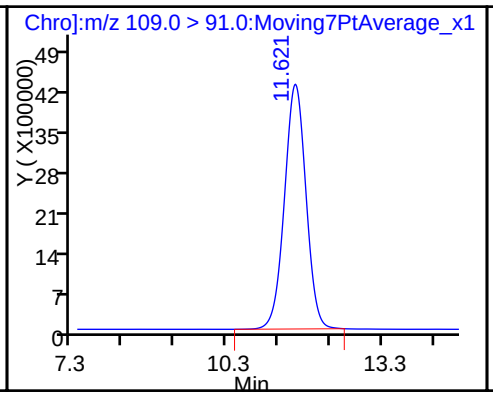
Injection Vol: 80.0 ul Dil. Factor: 1.0000

Method: 6850_A5 Limit Group: LC 6850 ICAL

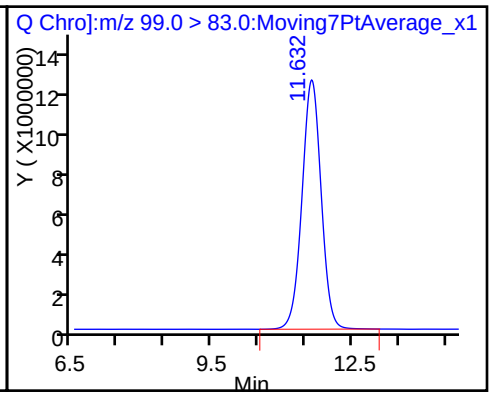
* 1 18-O Perchlorate



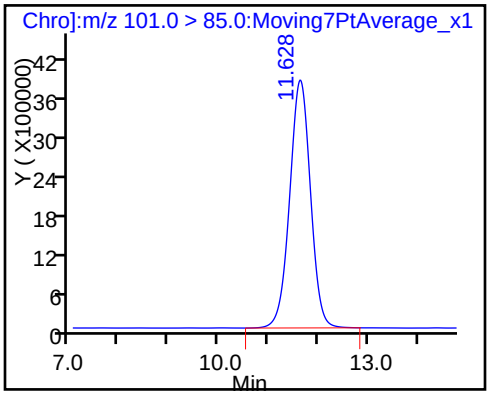
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d
Lims ID: STD08
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 25-Mar-2014 13:45:52 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist: chrom-6850_A5*sub4

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 25-Mar-2014 17:14:42 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK047

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.625	11.652	-0.027		359033036	10.1		7340	
109.0 > 91.0	11.621	11.652	-0.031		112219170		3.20(2.30-3.80)	3325	
2 Perchlorate									
99.0 > 83.0	11.632	11.662	-0.030	1.001	654212528	22.2		5479	
101.0 > 85.0	11.628	11.662	-0.034	1.000	206339242		3.17(2.30-3.80)	4496	

Report Date: 25-Mar-2014 17:14:42 Chrom Revision: 2.2 12-Mar-2014 11:19:24

TestAmerica Sacramento

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Injection Date: 25-Mar-2014 13:45:52 Instrument ID: A5

Lims ID: STD08

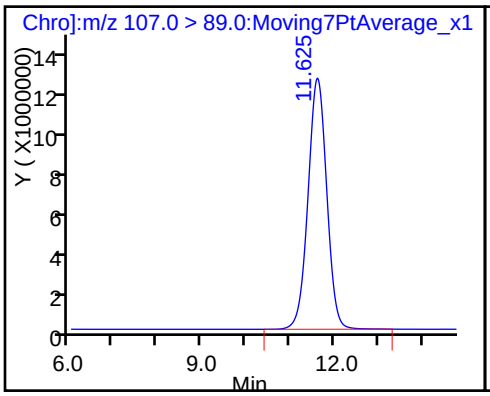
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 10

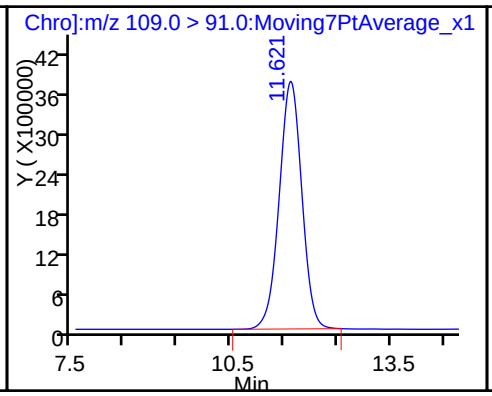
Injection Vol: 80.0 ul Dil. Factor: 1.0000

Method: 6850_A5 Limit Group: LC 6850 ICAL

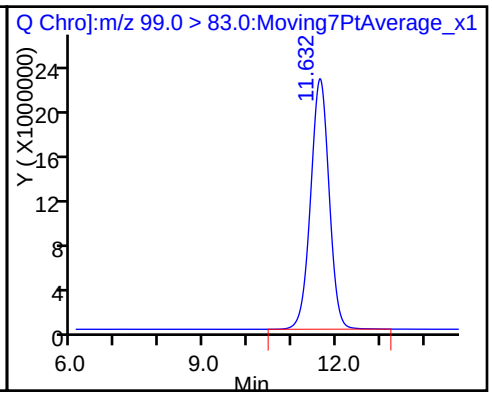
* 1 18-O Perchlorate



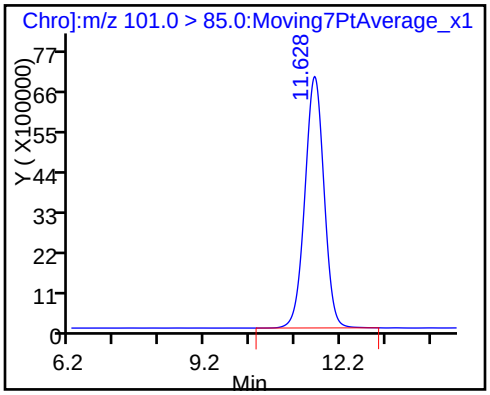
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Lab Sample ID: ICV 320-38961/12 Calibration Date: 03/25/2014 14:18

Instrument ID: A5 Calib Start Date: 03/25/2014 11:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 03/25/2014 13:45

Lab File ID: 25MAR14-Per-014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.8278	0.8386		5.06	5.00	1.3	15.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-014.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 25-Mar-2014 14:18:56 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist:

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 25-Mar-2014 17:14:43 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK047

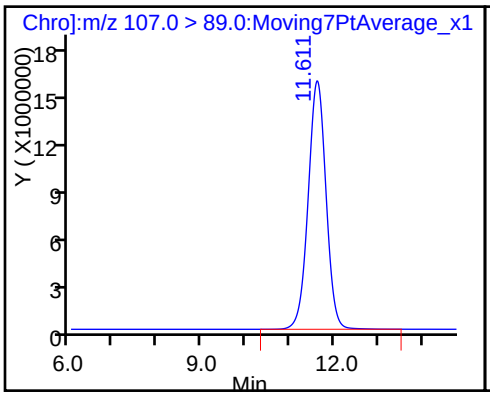
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.611	11.652	-0.041		437424939	10.1		11939	
109.0 > 91.0	11.608	11.652	-0.044		133913488		3.27(2.30-3.80)	3812	
2 Perchlorate									
99.0 > 83.0	11.618	11.662	-0.044	1.001	182068703	5.06		2381	
101.0 > 85.0	11.628	11.662	-0.034	1.001	60489806		3.01(2.30-3.80)	1722	

Report Date: 25-Mar-2014 17:14:43 Chrom Revision: 2.2 12-Mar-2014 11:19:24

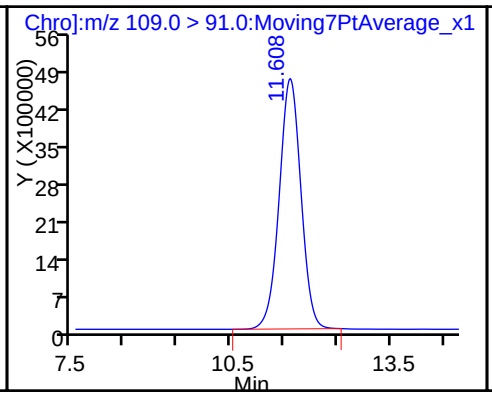
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-014.d				
Injection Date:	25-Mar-2014 14:18:56	Instrument ID:	A5		
Lims ID:	ICV				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	12
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

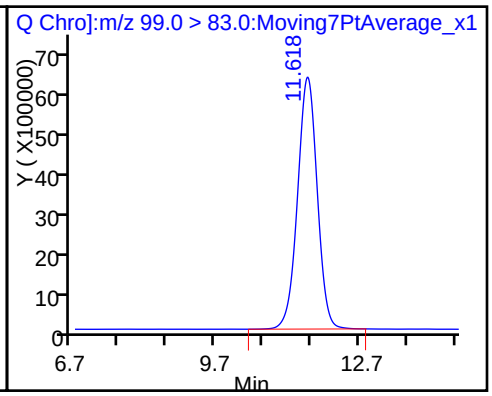
* 1 18-O Perchlorate



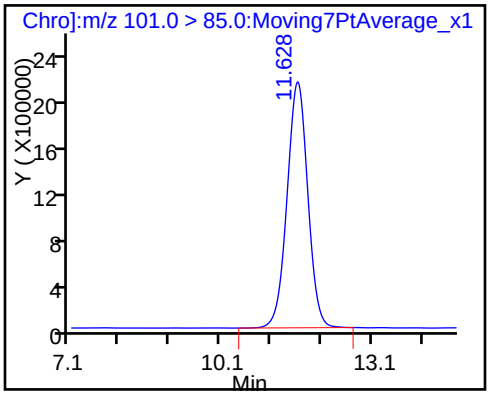
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Lab Sample ID: CCV 320-38961/13 Calibration Date: 03/25/2014 14:35

Instrument ID: A5 Calib Start Date: 03/25/2014 11:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 03/25/2014 13:45

Lab File ID: 25MAR14-Per-015.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.8278	0.7790		0.941	1.00	-5.9	15.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-015.d
Lims ID: CCV L4
Client ID:
Sample Type: CCV
Inject. Date: 25-Mar-2014 14:35:28 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist: chrom-6850_A5*sub4

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 25-Mar-2014 17:14:43 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK047

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.611	11.652	-0.041		462901762	10.1		13370	
109.0 > 91.0	11.608	11.652	-0.044		142671495		3.24(2.30-3.80)	2949	
2 Perchlorate									
99.0 > 83.0	11.618	11.662	-0.044	1.001	35795448	0.9409		859	
101.0 > 85.0	11.628	11.662	-0.034	1.001	12291312		2.91(2.30-3.80)	570	

Report Date: 25-Mar-2014 17:14:43 Chrom Revision: 2.2 12-Mar-2014 11:19:24

TestAmerica Sacramento

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-015.d

Injection Date: 25-Mar-2014 14:35:28 Instrument ID: A5

Lims ID: CCV L4

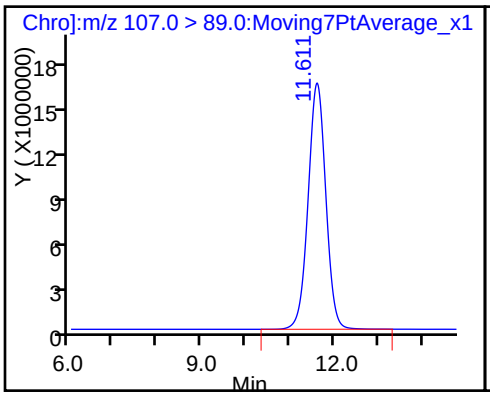
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 13

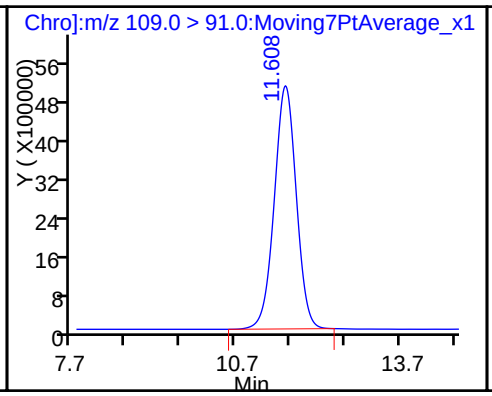
Injection Vol: 80.0 ul Dil. Factor: 1.0000

Method: 6850_A5 Limit Group: LC 6850 ICAL

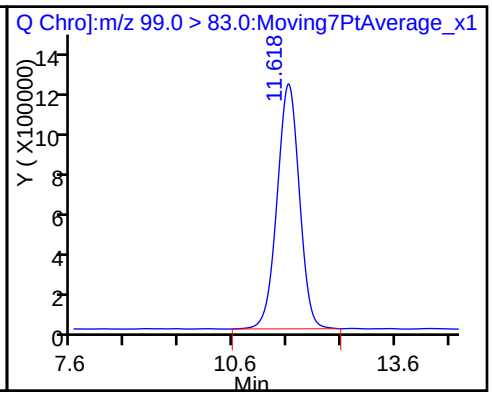
* 1 18-O Perchlorate



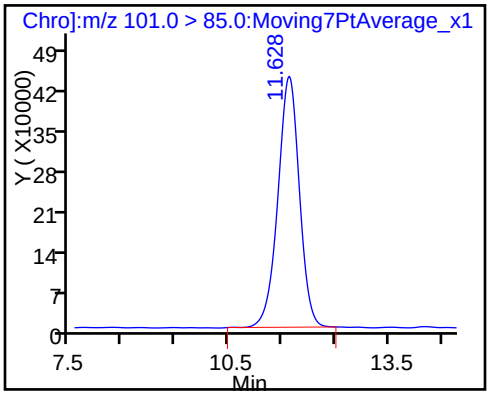
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Lab Sample ID: CCV 320-38961/27 Calibration Date: 03/25/2014 18:10

Instrument ID: A5 Calib Start Date: 03/25/2014 11:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 03/25/2014 13:45

Lab File ID: 25MAR14-Per-028.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.8278	0.8045		1.94	2.00	-2.8	15.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-028.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 25-Mar-2014 18:10:18 ALS Bottle#: 0 Worklist Smp#: 27
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist: chrom-6850_A5*sub4

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:35:11 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

First Level Reviewer: barnettj Date: 26-Mar-2014 10:17:42

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.584	11.652	-0.068		486111602	10.1		9391	
109.0 > 91.0	11.581	11.652	-0.071		148797088		3.27(2.30-3.80)	3911	
2 Perchlorate									
99.0 > 83.0	11.591	11.662	-0.071	1.001	77647714	1.94		1753	
101.0 > 85.0	11.588	11.662	-0.074	1.000	26472440		2.93(2.30-3.80)	874	

Report Date: 26-Mar-2014 10:35:11 Chrom Revision: 2.2 12-Mar-2014 11:19:24

TestAmerica Sacramento

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-028.d

Injection Date: 25-Mar-2014 18:10:18 Instrument ID: A5

Lims ID: CCV L5

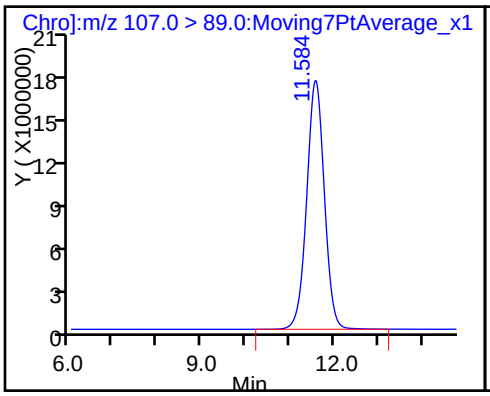
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 27

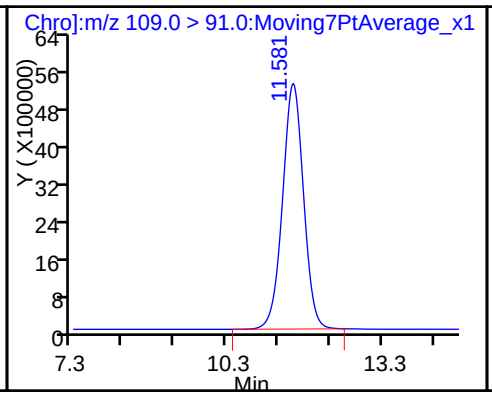
Injection Vol: 80.0 ul Dil. Factor: 1.0000

Method: 6850_A5 Limit Group: LC 6850 ICAL

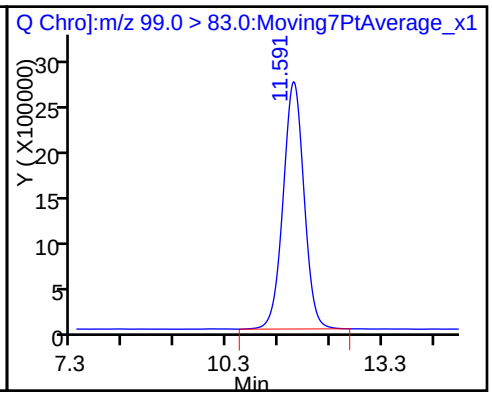
* 1 18-O Perchlorate



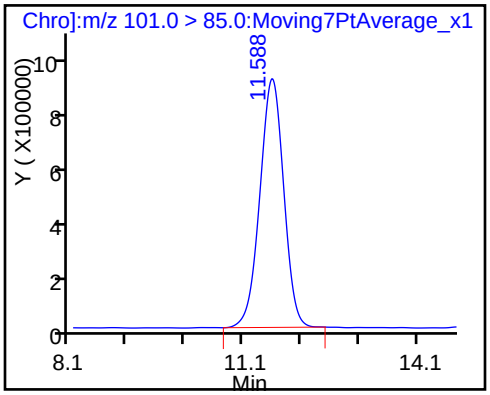
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Lab Sample ID: CCVL 320-38961/29 Calibration Date: 03/25/2014 18:43

Instrument ID: A5 Calib Start Date: 03/25/2014 11:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 03/25/2014 13:45

Lab File ID: 25MAR14-Per-030.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.8278	0.7680		0.464	0.500	-7.2	50.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-030.d
Lims ID: CCVL
Client ID:
Sample Type: CCVL
Inject. Date: 25-Mar-2014 18:43:24 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist: chrom-6850_A5*sub4

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:17:45 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.584	11.652	-0.068		509417641	10.1		11528	
109.0 > 91.0	11.581	11.652	-0.071		156441805		3.26(2.30-3.80)	4566	
2 Perchlorate									
99.0 > 83.0	11.591	11.662	-0.071	1.001	19419953	0.4639		443	
101.0 > 85.0	11.601	11.662	-0.061	1.001	6828995		2.84(2.30-3.80)	318	

Report Date: 26-Mar-2014 10:17:45 Chrom Revision: 2.2 12-Mar-2014 11:19:24

TestAmerica Sacramento

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-030.d

Injection Date: 25-Mar-2014 18:43:24 Instrument ID: A5

Lims ID: CCVL

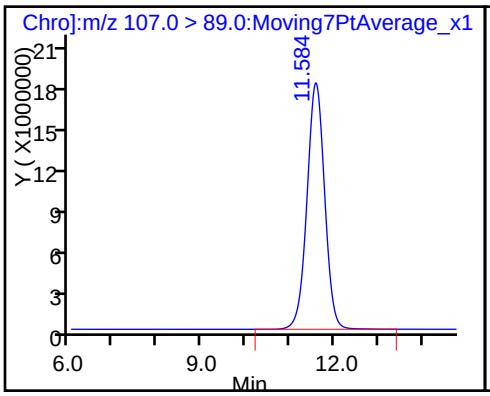
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 29

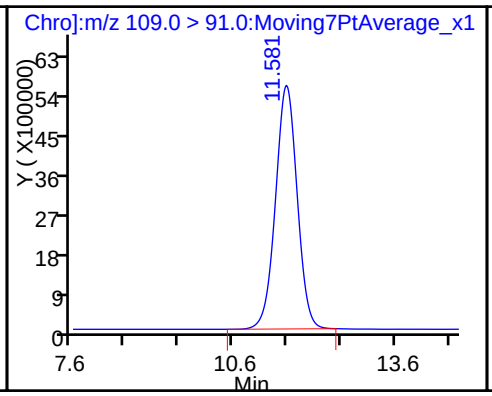
Injection Vol: 80.0 ul Dil. Factor: 1.0000

Method: 6850_A5 Limit Group: LC 6850 ICAL

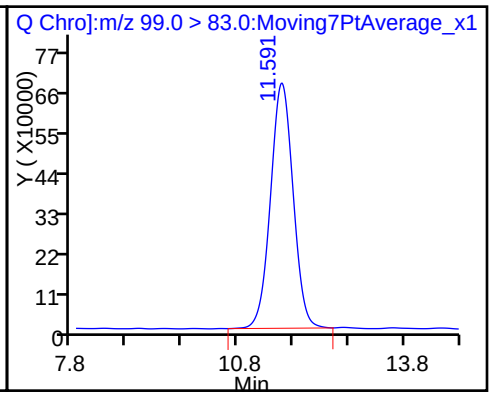
* 1 18-O Perchlorate



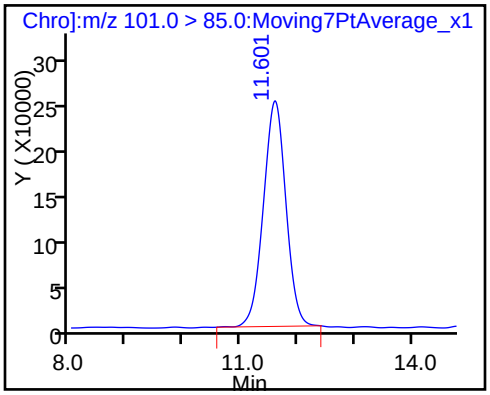
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Lab Sample ID: CCV 320-38961/43 Calibration Date: 03/25/2014 22:34

Instrument ID: A5 Calib Start Date: 03/25/2014 11:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 03/25/2014 13:45

Lab File ID: 25MAR14-Per-044.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.8278	0.7902		0.954	1.00	-4.6	15.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-044.d
Lims ID: CCV L4
Client ID:
Sample Type: CCV
Inject. Date: 25-Mar-2014 22:34:53 ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist: chrom-6850_A5*sub4

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:17:53 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.204	11.652	-0.448		479607033	10.1		14193	
109.0 > 91.0	11.214	11.652	-0.438		147843022		3.24(2.30-3.80)	5802	
2 Perchlorate									
99.0 > 83.0	11.211	11.662	-0.451	1.001	37621365	0.9545		762	
101.0 > 85.0	11.221	11.662	-0.441	1.002	12572144		2.99(2.30-3.80)	1096	

Report Date: 26-Mar-2014 10:17:53 Chrom Revision: 2.2 12-Mar-2014 11:19:24

TestAmerica Sacramento

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-044.d

Injection Date: 25-Mar-2014 22:34:53 Instrument ID: A5

Lims ID: CCV L4

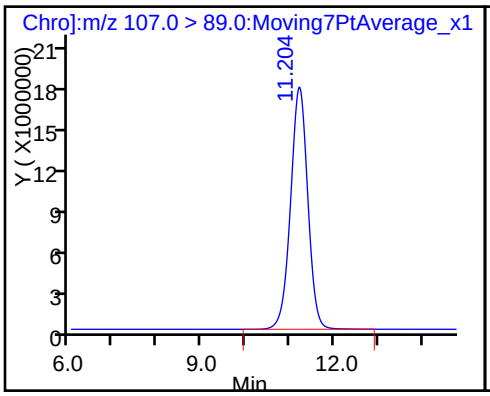
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 43

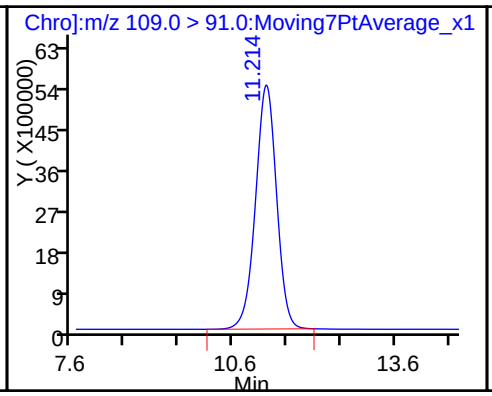
Injection Vol: 80.0 ul Dil. Factor: 1.0000

Method: 6850_A5 Limit Group: LC 6850 ICAL

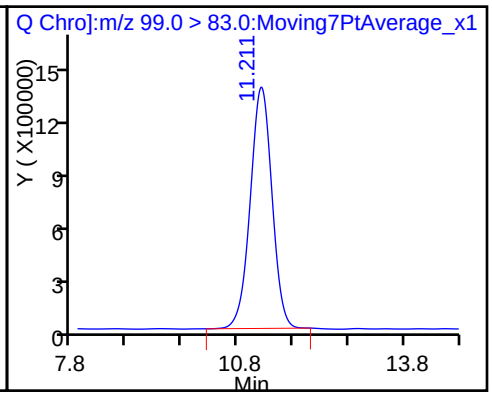
* 1 18-O Perchlorate



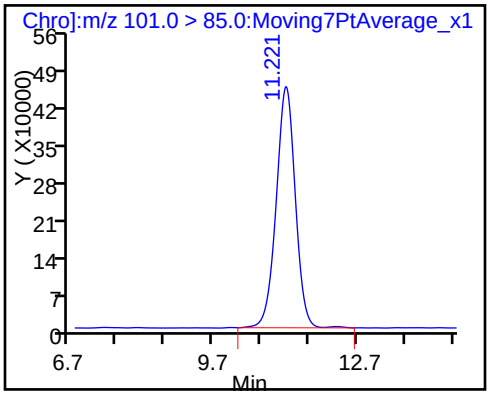
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Lab Sample ID: CCVL 320-38961/44 Calibration Date: 03/25/2014 22:51

Instrument ID: A5 Calib Start Date: 03/25/2014 11:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 03/25/2014 13:45

Lab File ID: 25MAR14-Per-045.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.8278	0.7633		0.461	0.500	-7.8	50.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-045.d
Lims ID: CCVL
Client ID:
Sample Type: CCVL
Inject. Date: 25-Mar-2014 22:51:24 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist: chrom-6850_A5*sub4

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:17:53 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.367	11.652	-0.285		540835071	10.1		13649	
109.0 > 91.0	11.364	11.652	-0.288		165484060		3.27(2.30-3.80)	3472	
2 Perchlorate									
99.0 > 83.0	11.374	11.662	-0.288	1.001	20490352	0.4610		392	
101.0 > 85.0	11.370	11.662	-0.292	1.000	6740305		3.04(2.30-3.80)	412	

Report Date: 26-Mar-2014 10:17:54 Chrom Revision: 2.2 12-Mar-2014 11:19:24

TestAmerica Sacramento

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-045.d

Injection Date: 25-Mar-2014 22:51:24 Instrument ID: A5

Lims ID: CCVL

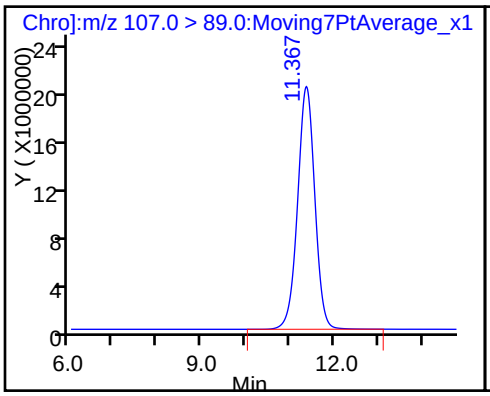
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 44

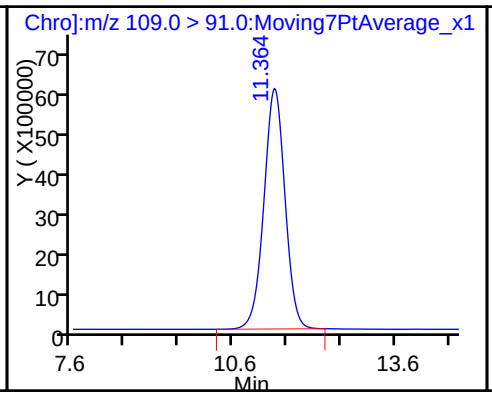
Injection Vol: 80.0 ul Dil. Factor: 1.0000

Method: 6850_A5 Limit Group: LC 6850 ICAL

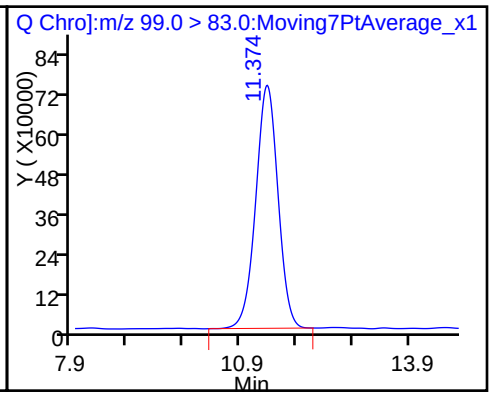
* 1 18-O Perchlorate



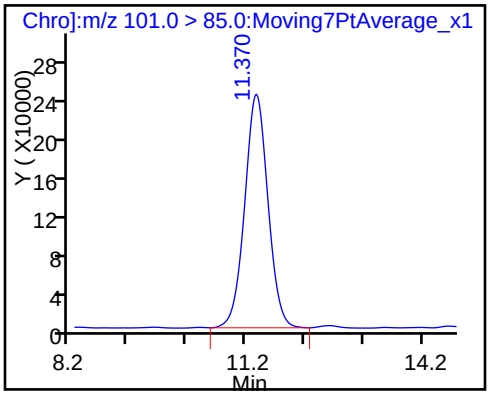
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Lab Sample ID: CCV 320-38961/57 Calibration Date: 03/26/2014 02:26

Instrument ID: A5 Calib Start Date: 03/25/2014 11:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 03/25/2014 13:45

Lab File ID: 25MAR14-Per-058.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.8278	0.8145		1.97	2.00	-1.6	15.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-058.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 26-Mar-2014 02:26:21 ALS Bottle#: 0 Worklist Smp#: 57
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist: chrom-6850_A5*sub4

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:17:59 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

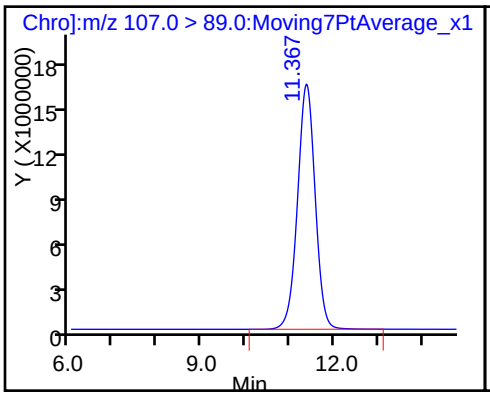
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.367	11.652	-0.285		461569857	10.1		8724	
109.0 > 91.0	11.364	11.652	-0.288		142095135		3.25(2.30-3.80)	5190	
2 Perchlorate									
99.0 > 83.0	11.374	11.662	-0.288	1.001	74642277	1.97		1023	
101.0 > 85.0	11.370	11.662	-0.292	1.000	24973458		2.99(2.30-3.80)	1040	

Report Date: 26-Mar-2014 10:17:59 Chrom Revision: 2.2 12-Mar-2014 11:19:24

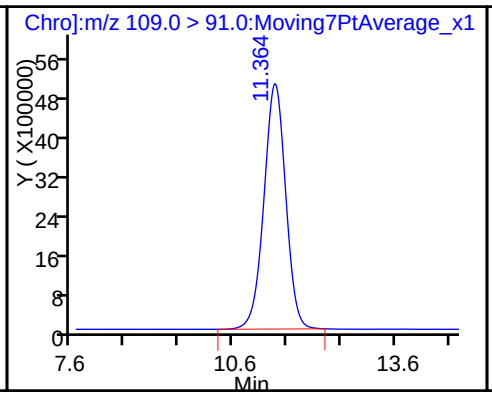
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-058.d				
Injection Date:	26-Mar-2014 02:26:21	Instrument ID:	A5		
Lims ID:	CCV L5				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	57
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

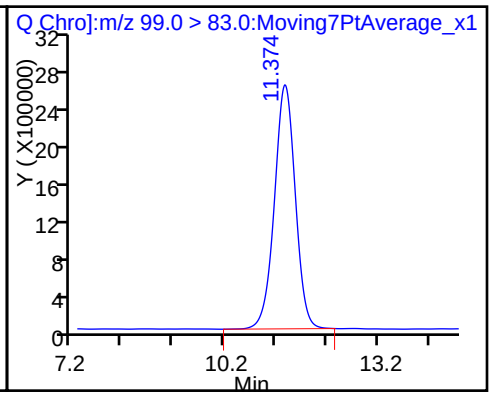
* 1 18-O Perchlorate



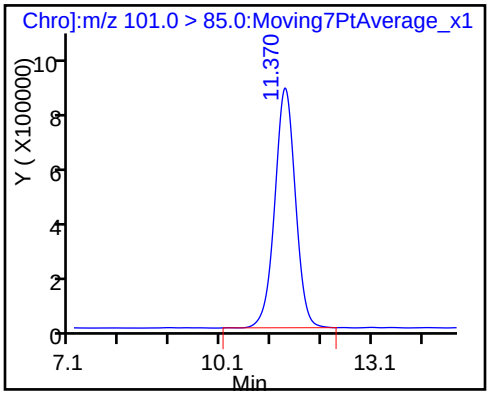
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Lab Sample ID: CCVL 320-38961/58 Calibration Date: 03/26/2014 02:42

Instrument ID: A5 Calib Start Date: 03/25/2014 11:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 03/25/2014 13:45

Lab File ID: 25MAR14-Per-059.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.8278	0.7385		0.446	0.500	-10.8	50.0

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-059.d
Lims ID: CCVL
Client ID:
Sample Type: CCVL
Inject. Date: 26-Mar-2014 02:42:53 ALS Bottle#: 0 Worklist Smp#: 58
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist: chrom-6850_A5*sub4

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:18:00 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

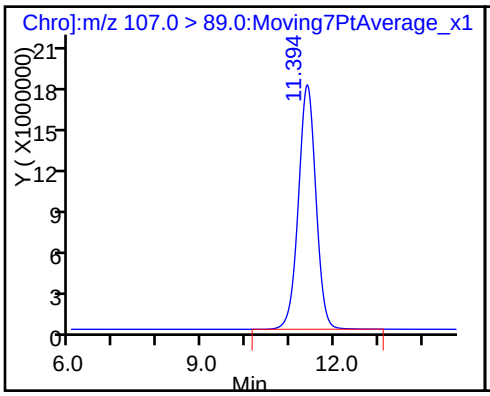
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.394	11.652	-0.258		498173055	10.1		11446	
109.0 > 91.0	11.391	11.652	-0.261		150834685		3.30(2.30-3.80)	5116	
2 Perchlorate									
99.0 > 83.0	11.401	11.662	-0.261	1.001	18260409	0.4460		254	
101.0 > 85.0	11.397	11.662	-0.265	1.000	6108065		2.99(2.30-3.80)	216	

Report Date: 26-Mar-2014 10:18:00 Chrom Revision: 2.2 12-Mar-2014 11:19:24

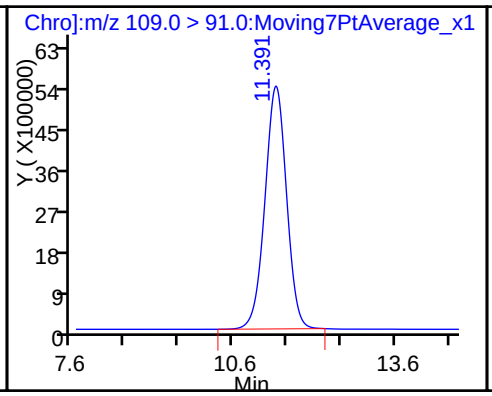
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-059.d				
Injection Date:	26-Mar-2014 02:42:53	Instrument ID:	A5		
Lims ID:	CCVL				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	58
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

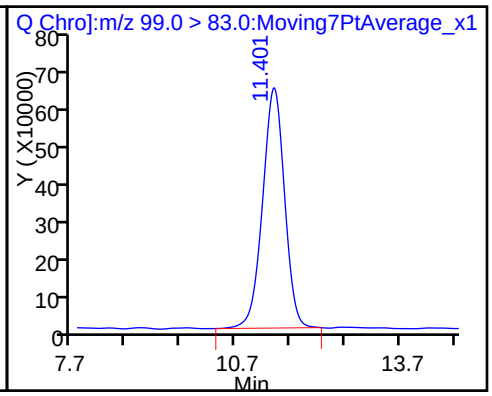
* 1 18-O Perchlorate



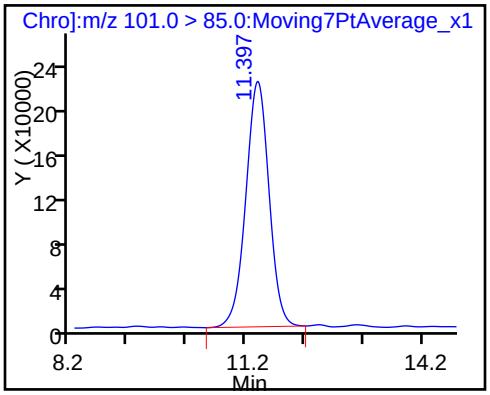
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID:
Lab Sample ID: MB 320-38755/1-A
Matrix: Solid
Lab File ID: 25MAR14-Per-032.d
Analysis Method: 6850
Date Collected:
Extraction Method: SHAKE
Date Extracted: 03/21/2014 09:09
Sample wt/vol: 3.00(g)
Date Analyzed: 03/25/2014 19:16
Con. Extract Vol.: 10.00(mL)
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		5.0	0.15

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-032.d
Lims ID: MB 320-38755/1-A
Client ID:
Sample Type: MB
Inject. Date: 25-Mar-2014 19:16:26 ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:17:45 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

First Level Reviewer: barnettj Date: 26-Mar-2014 10:10:44

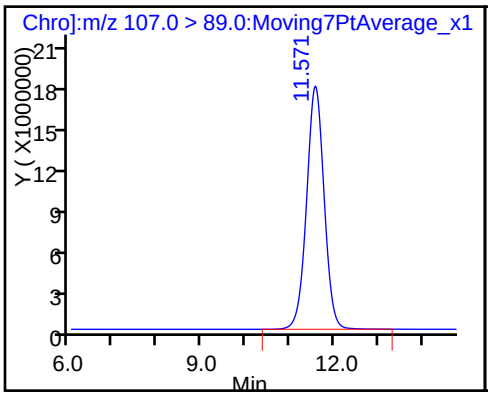
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.571	11.652	-0.081		494312822	10.1		12104	
109.0 > 91.0	11.567	11.652	-0.085		151756246		3.26(2.30-3.80)	4337	

Report Date: 26-Mar-2014 10:17:46 Chrom Revision: 2.2 12-Mar-2014 11:19:24

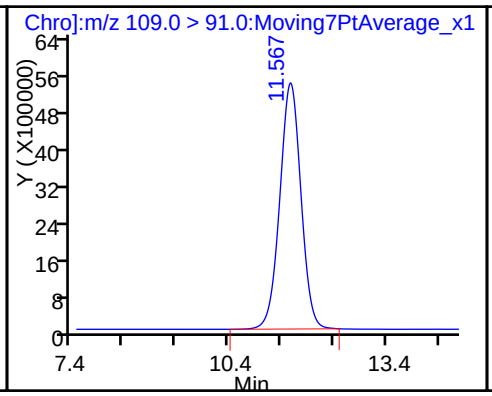
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-032.d				
Injection Date:	25-Mar-2014 19:16:26	Instrument ID:	A5		
Lims ID:	MB 320-38755/1-A				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	31
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

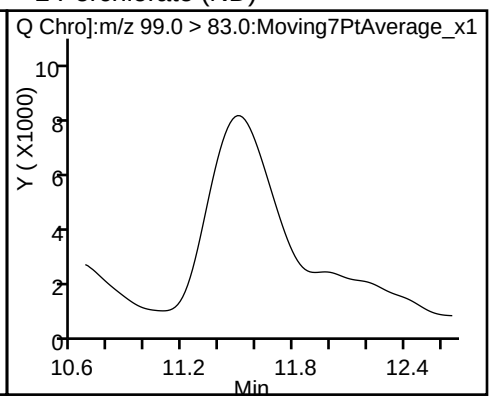
* 1 18-O Perchlorate



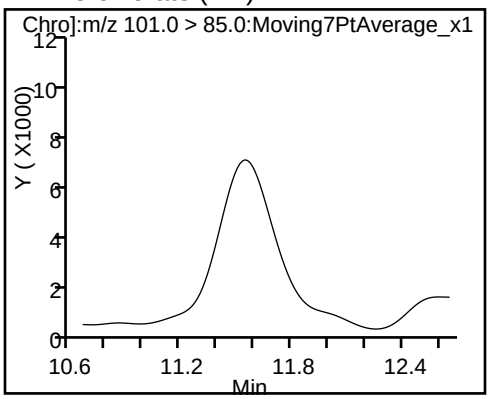
* 1 18-O Perchlorate



2 Perchlorate (ND)



2 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID:
Lab Sample ID: CCB 320-38961/30
Matrix: Solid
Lab File ID: 25MAR14-Per-031.d
Analysis Method: 6850
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 03/25/2014 18:59
Con. Extract Vol.:
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		0.50	0.078

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-031.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 25-Mar-2014 18:59:54 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:35:05 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

First Level Reviewer: barnettj Date: 26-Mar-2014 10:35:10

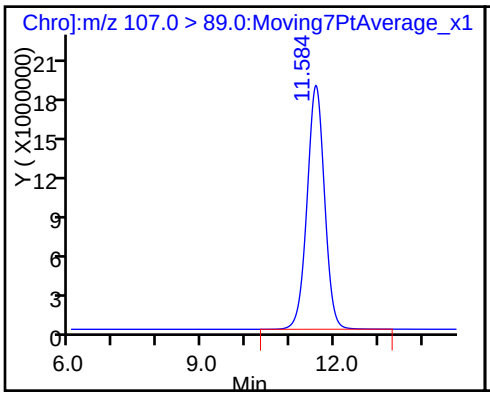
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.584	11.652	-0.068		507663998	10.1		10314	
109.0 > 91.0	11.581	11.652	-0.071		156492915		3.24(2.30-3.80)	3819	

Report Date: 26-Mar-2014 10:35:10 Chrom Revision: 2.2 12-Mar-2014 11:19:24

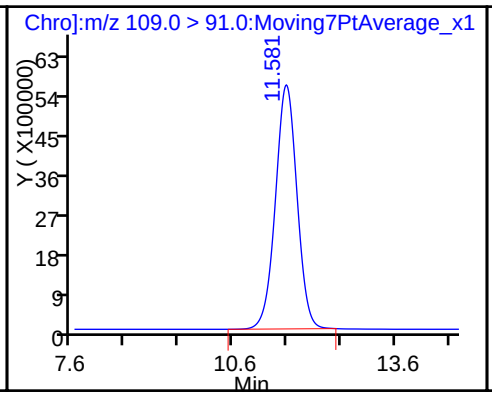
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-031.d				
Injection Date:	25-Mar-2014 18:59:54	Instrument ID:	A5		
Lims ID:	CCB				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	30
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

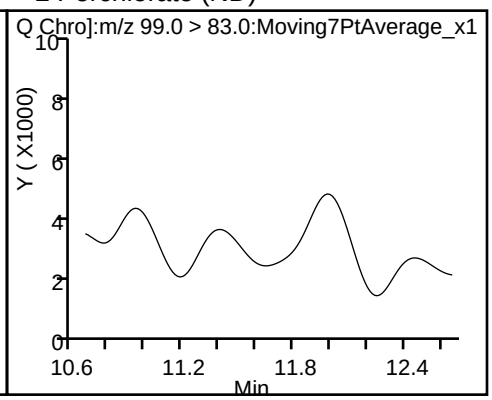
* 1 18-O Perchlorate



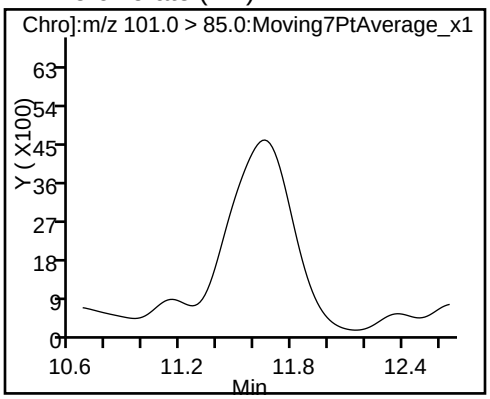
* 1 18-O Perchlorate



2 Perchlorate (ND)



2 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID:
Lab Sample ID: CCB 320-38961/45
Matrix: Solid
Lab File ID: 25MAR14-Per-046.d
Analysis Method: 6850
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 03/25/2014 23:07
Con. Extract Vol.:
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		0.50	0.078

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-046.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 25-Mar-2014 23:07:57 ALS Bottle#: 0 Worklist Smp#: 45
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:17:53 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

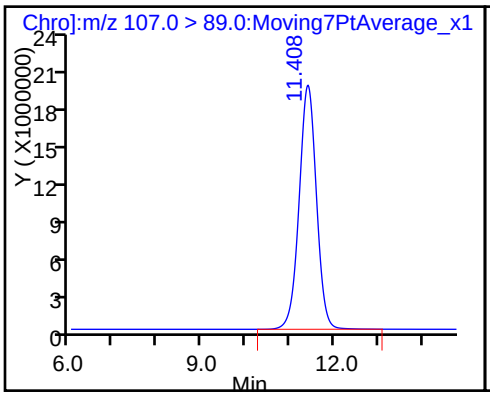
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.408	11.652	-0.244		535994743	10.1		13962	
109.0 > 91.0	11.404	11.652	-0.248		164387588		3.26(2.30-3.80)	4196	

Report Date: 26-Mar-2014 10:17:54 Chrom Revision: 2.2 12-Mar-2014 11:19:24

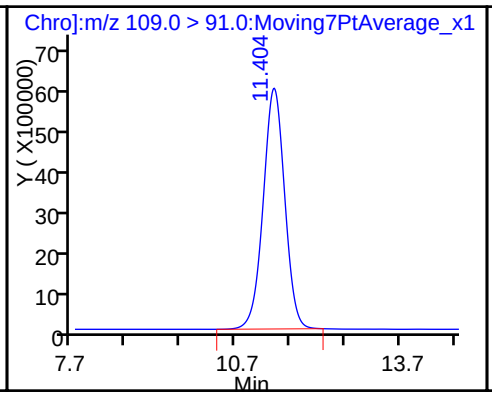
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-046.d				
Injection Date:	25-Mar-2014 23:07:57	Instrument ID:	A5		
Lims ID:	CCB				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

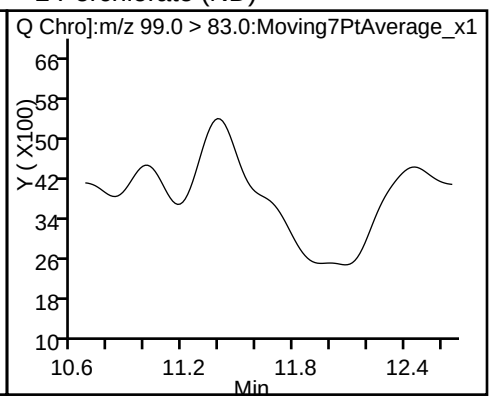
* 1 18-O Perchlorate



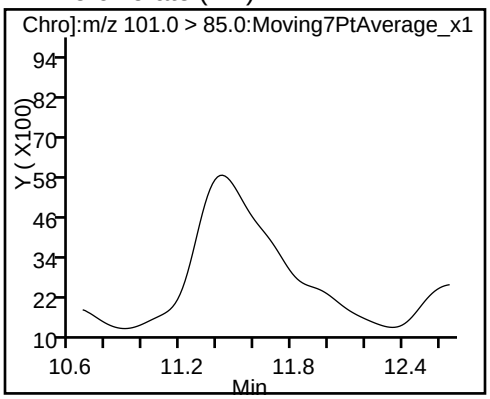
* 1 18-O Perchlorate



2 Perchlorate (ND)



2 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID:
Lab Sample ID: CCB 320-38961/59
Matrix: Solid
Lab File ID: 25MAR14-Per-060.d
Analysis Method: 6850
Date Collected:
Extraction Method:
Date Extracted:
Sample wt/vol: 1(mL)
Date Analyzed: 03/26/2014 02:59
Con. Extract Vol.:
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	ND		0.50	0.078

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-060.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 26-Mar-2014 02:59:25 ALS Bottle#: 0 Worklist Smp#: 59
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:18:00 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

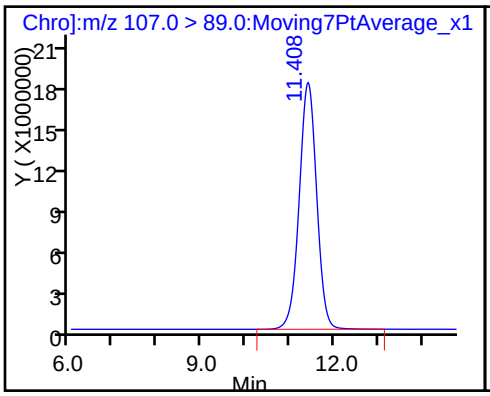
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.408	11.652	-0.244		507651688	10.1		11249	
109.0 > 91.0	11.404	11.652	-0.248		155995850		3.25(2.30-3.80)	3932	

Report Date: 26-Mar-2014 10:18:01 Chrom Revision: 2.2 12-Mar-2014 11:19:24

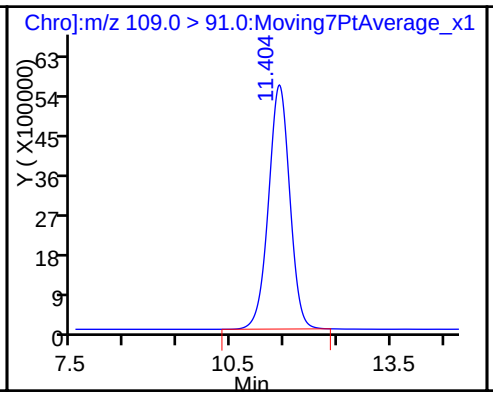
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-060.d				
Injection Date:	26-Mar-2014 02:59:25	Instrument ID:	A5		
Lims ID:	CCB				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	59
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

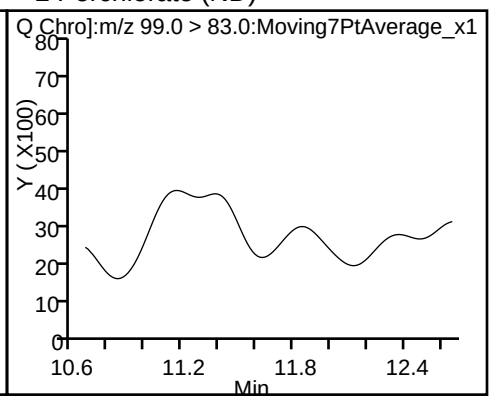
* 1 18-O Perchlorate



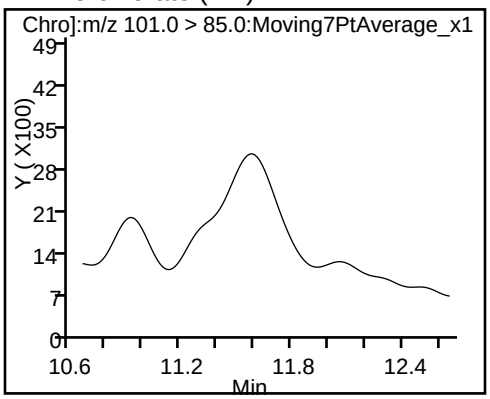
* 1 18-O Perchlorate



2 Perchlorate (ND)



2 Perchlorate (ND)



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID:
Lab Sample ID: LCS 320-38755/2-A
Matrix: Solid
Lab File ID: 25MAR14-Per-033.d
Analysis Method: 6850
Date Collected:
Extraction Method: SHAKE
Date Extracted: 03/21/2014 09:09
Sample wt/vol: 3.00(g)
Date Analyzed: 03/25/2014 19:32
Con. Extract Vol.: 10.00(mL)
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	55.1		5.0	0.15

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-033.d
Lims ID: LCS 320-38755/2-A
Client ID:
Sample Type: LCS
Inject. Date: 25-Mar-2014 19:32:58 ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:17:45 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

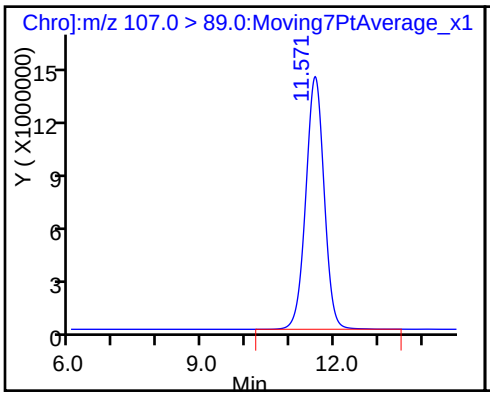
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.571	11.652	-0.081		416447388	10.1		10748	
109.0 > 91.0	11.567	11.652	-0.085		127644183		3.26(2.30-3.80)	4066	
2 Perchlorate									
99.0 > 83.0	11.577	11.662	-0.085	1.001	566121922	16.5		4441	
101.0 > 85.0	11.574	11.662	-0.088	1.000	178230928		3.18(2.30-3.80)	3610	

Report Date: 26-Mar-2014 10:17:47 Chrom Revision: 2.2 12-Mar-2014 11:19:24

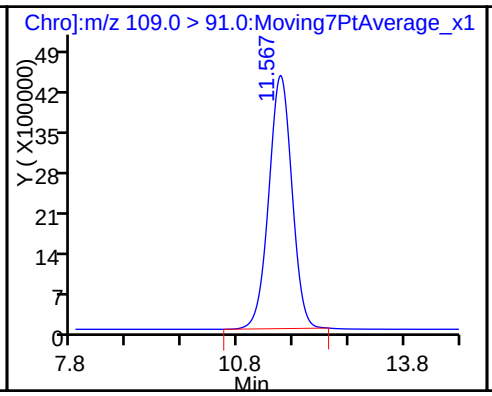
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-033.d				
Injection Date:	25-Mar-2014 19:32:58	Instrument ID:	A5		
Lims ID:	LCS 320-38755/2-A				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	32
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

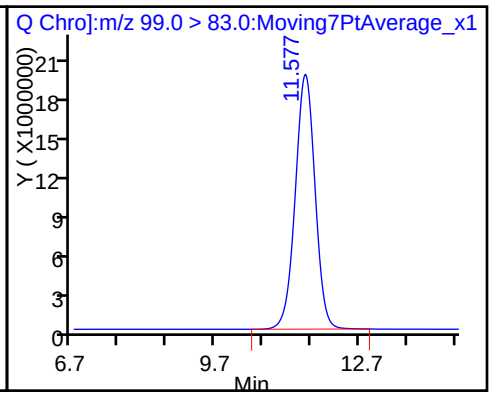
* 1 18-O Perchlorate



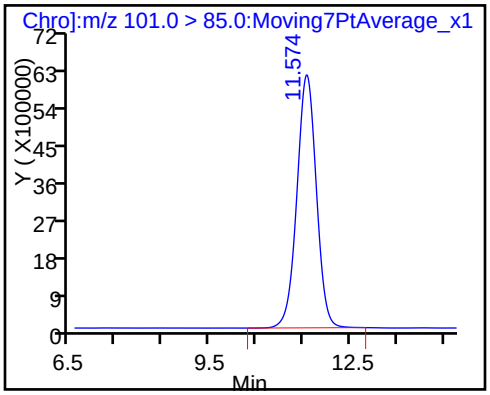
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID:
Lab Sample ID: INF 320-38755/3-A
Matrix: Solid
Lab File ID: 25MAR14-Per-034.d
Analysis Method: 6850
Date Collected:
Extraction Method: SHAKE
Date Extracted: 03/21/2014 09:09
Sample wt/vol: 3.00(g)
Date Analyzed: 03/25/2014 19:49
Con. Extract Vol.: 10.00(mL)
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	54.0		1.7	0.26

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-034.d
Lims ID: INF 320-38755/3-A
Client ID:
Sample Type: INF
Inject. Date: 25-Mar-2014 19:49:29 ALS Bottle#: 0 Worklist Smp#: 33
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5
Sublist:

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:17:45 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

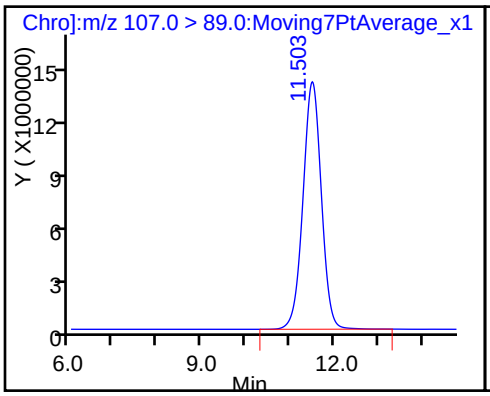
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.503	11.652	-0.149		394144057	10.1		9193	
109.0 > 91.0	11.499	11.652	-0.153		121626675		3.24(2.30-3.80)	4247	
2 Perchlorate									
99.0 > 83.0	11.509	11.662	-0.153	1.001	524789420	16.2		5351	
101.0 > 85.0	11.506	11.662	-0.156	1.000	166763315		3.15(2.30-3.80)	2704	

Report Date: 26-Mar-2014 10:17:47 Chrom Revision: 2.2 12-Mar-2014 11:19:24

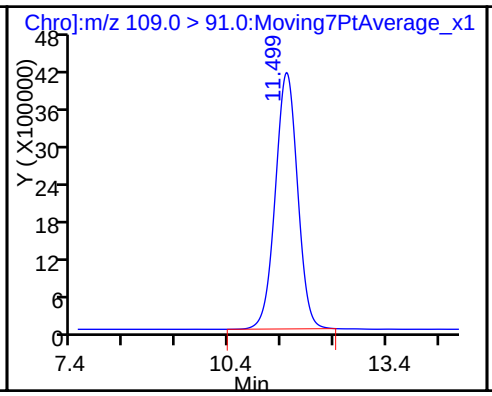
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-034.d				
Injection Date:	25-Mar-2014 19:49:29	Instrument ID:	A5		
Lims ID:	INF 320-38755/3-A				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	33
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

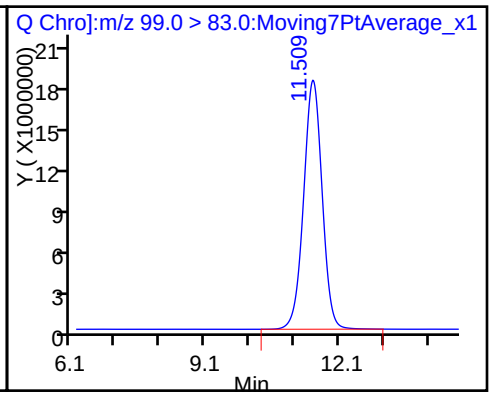
* 1 18-O Perchlorate



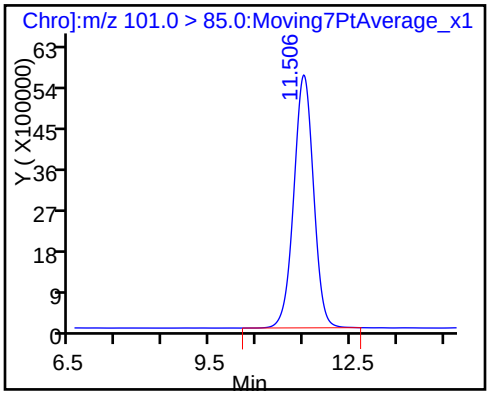
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID: MAK110C MS
Lab Sample ID: 320-6210-8 MS
Matrix: Solid
Lab File ID: 25MAR14-Per-056.d
Analysis Method: 6850
Date Collected: 01/14/2014 09:55
Extraction Method: SHAKE
Date Extracted: 03/21/2014 09:09
Sample wt/vol: 1.49(g)
Date Analyzed: 03/26/2014 01:53
Con. Extract Vol.: 10.00(mL)
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	110		10	0.30

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-056.d
Lims ID: 320-6210-A-8-B MS
Client ID: MAK110C
Sample Type: MS
Inject. Date: 26-Mar-2014 01:53:19 ALS Bottle#: 0 Worklist Smp#: 55
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:17:53 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

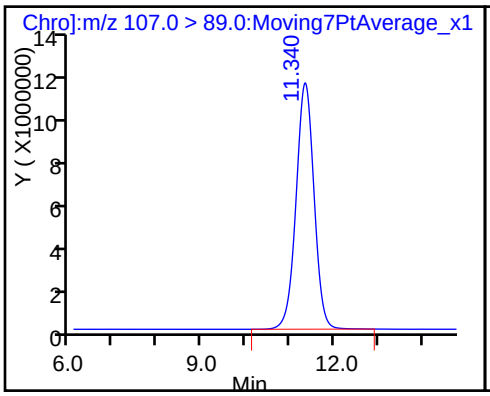
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.340	11.652	-0.312		323283797	10.1		5783	
109.0 > 91.0	11.336	11.652	-0.316		99549174		3.25(2.30-3.80)	1495	
2 Perchlorate									
99.0 > 83.0	11.347	11.662	-0.315	1.001	435424521	16.4		4810	
101.0 > 85.0	11.343	11.662	-0.319	1.000	137251546		3.17(2.30-3.80)	2973	

Report Date: 26-Mar-2014 10:17:58 Chrom Revision: 2.2 12-Mar-2014 11:19:24

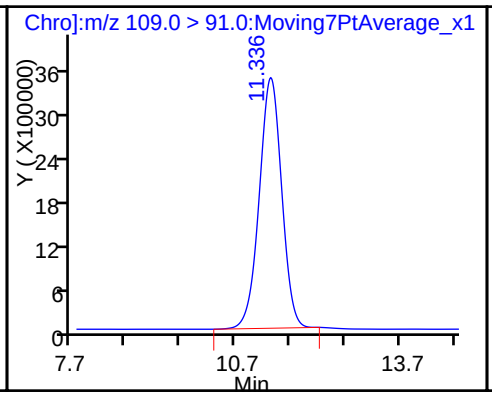
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-056.d				
Injection Date:	26-Mar-2014 01:53:19	Instrument ID:	A5		
Lims ID:	320-6210-A-8-B MS				
Client ID:	MAK110C				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	55
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

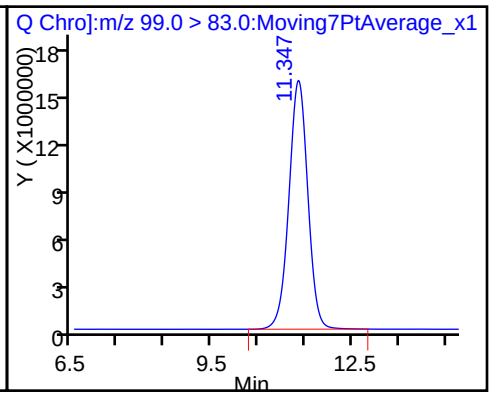
* 1 18-O Perchlorate



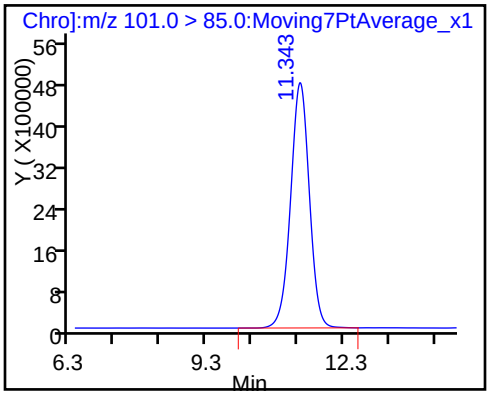
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento
Job No.: 320-6210-1
SDG No.:
Client Sample ID: MAK110C MSD
Lab Sample ID: 320-6210-8 MSD
Matrix: Solid
Lab File ID: 25MAR14-Per-057.d
Analysis Method: 6850
Date Collected: 01/14/2014 09:55
Extraction Method: SHAKE
Date Extracted: 03/21/2014 09:24
Sample wt/vol: 1.50(g)
Date Analyzed: 03/26/2014 02:09
Con. Extract Vol.: 10.00(mL)
Dilution Factor: 1
Injection Volume: 80(uL)
GC Column: Anion HR ID: 4.6(mm)
% Moisture:
GPC Cleanup:(Y/N) N
Analysis Batch No.: 38961
Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	109		10	0.30

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-057.d
Lims ID: 320-6210-A-8-C MSD
Client ID: MAK110C
Sample Type: MSD
Inject. Date: 26-Mar-2014 02:09:49 ALS Bottle#: 0 Worklist Smp#: 56
Injection Vol: 80.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A5

Method: \\Sacchrom\ChromData\A5\20140325-11357.b\6850_A5.m
Limit Group: LC 6850 ICAL
Last Update: 26-Mar-2014 10:17:53 Calib Date: 25-Mar-2014 13:45:52
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-012.d

Column 1 : Det: MS QQQ
Process Host: XAWRK005

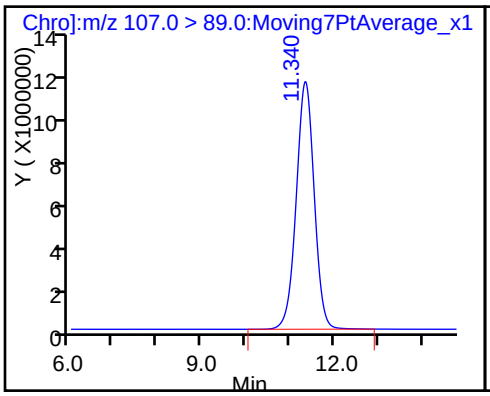
Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	11.340	11.652	-0.312		320776741	10.1		5971	
109.0 > 91.0	11.350	11.652	-0.302		97431674		3.29(2.30-3.80)	1793	
2 Perchlorate									
99.0 > 83.0	11.360	11.662	-0.302	1.002	430272705	16.3		4050	
101.0 > 85.0	11.357	11.662	-0.305	1.001	134458640		3.20(2.30-3.80)	2780	

Report Date: 26-Mar-2014 10:17:59 Chrom Revision: 2.2 12-Mar-2014 11:19:24

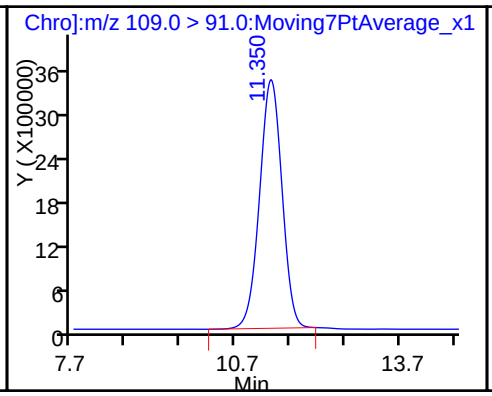
TestAmerica Sacramento

Data File:	\\Sacchrom\ChromData\A5\20140325-11357.b\25MAR14-Per-057.d				
Injection Date:	26-Mar-2014 02:09:49	Instrument ID:	A5		
Lims ID:	320-6210-A-8-C MSD				
Client ID:	MAK110C				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	56
Injection Vol:	80.0 ul	Dil. Factor:	1.0000		
Method:	6850_A5	Limit Group:	LC 6850 ICAL		

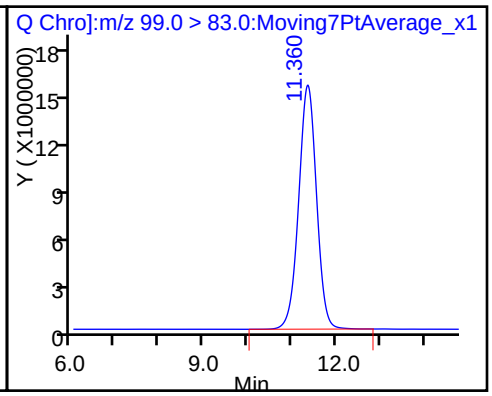
* 1 18-O Perchlorate



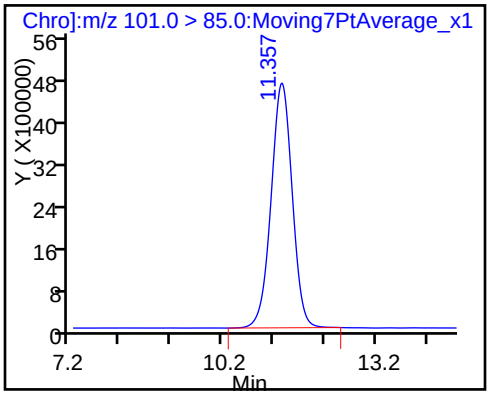
* 1 18-O Perchlorate



2 Perchlorate



2 Perchlorate



LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Instrument ID: A5 Start Date: 03/25/2014 11:49

Analysis Batch Number: 38961 End Date: 03/26/2014 02:59

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD01 320-38961/3 IC		03/25/2014 11:49	1	25MAR14-Per-005 .d	Anion HR 4.6(mm)
STD02 320-38961/4 IC		03/25/2014 12:06	1	25MAR14-Per-006 .d	Anion HR 4.6(mm)
STD03 320-38961/5 IC		03/25/2014 12:23	1	25MAR14-Per-007 .d	Anion HR 4.6(mm)
STD04 320-38961/6 ICISAV		03/25/2014 12:39	1	25MAR14-Per-008 .d	Anion HR 4.6(mm)
STD05 320-38961/7 IC		03/25/2014 12:56	1	25MAR14-Per-009 .d	Anion HR 4.6(mm)
STD06 320-38961/8 IC		03/25/2014 13:12	1	25MAR14-Per-010 .d	Anion HR 4.6(mm)
STD07 320-38961/9 IC		03/25/2014 13:29	1	25MAR14-Per-011 .d	Anion HR 4.6(mm)
STD08 320-38961/10 IC		03/25/2014 13:45	1	25MAR14-Per-012 .d	Anion HR 4.6(mm)
CCB 320-38961/11		03/25/2014 14:02	1		Anion HR 4.6(mm)
ICV 320-38961/12		03/25/2014 14:18	1	25MAR14-Per-014 .d	Anion HR 4.6(mm)
CCV 320-38961/13		03/25/2014 14:35	1	25MAR14-Per-015 .d	Anion HR 4.6(mm)
CCV 320-38961/27		03/25/2014 18:10	1	25MAR14-Per-028 .d	Anion HR 4.6(mm)
CCVL 320-38961/29		03/25/2014 18:43	1	25MAR14-Per-030 .d	Anion HR 4.6(mm)
CCB 320-38961/30		03/25/2014 18:59	1	25MAR14-Per-031 .d	Anion HR 4.6(mm)
MB 320-38755/1-A		03/25/2014 19:16	1	25MAR14-Per-032 .d	Anion HR 4.6(mm)
LCS 320-38755/2-A		03/25/2014 19:32	1	25MAR14-Per-033 .d	Anion HR 4.6(mm)
INF 320-38755/3-A		03/25/2014 19:49	1	25MAR14-Per-034 .d	Anion HR 4.6(mm)
ZZZZZ		03/25/2014 20:06	1		Anion HR 4.6(mm)
ZZZZZ		03/25/2014 20:22	1		Anion HR 4.6(mm)
ZZZZZ		03/25/2014 20:39	1		Anion HR 4.6(mm)
ZZZZZ		03/25/2014 20:55	1		Anion HR 4.6(mm)
ZZZZZ		03/25/2014 21:12	1		Anion HR 4.6(mm)
ZZZZZ		03/25/2014 21:28	1		Anion HR 4.6(mm)
ZZZZZ		03/25/2014 21:45	1		Anion HR 4.6(mm)
ZZZZZ		03/25/2014 22:01	1		Anion HR 4.6(mm)
ZZZZZ		03/25/2014 22:18	1		Anion HR 4.6(mm)
CCV 320-38961/43		03/25/2014 22:34	1	25MAR14-Per-044 .d	Anion HR 4.6(mm)
CCVL 320-38961/44		03/25/2014 22:51	1	25MAR14-Per-045 .d	Anion HR 4.6(mm)
CCB 320-38961/45		03/25/2014 23:07	1	25MAR14-Per-046 .d	Anion HR 4.6(mm)
ZZZZZ		03/25/2014 23:24	1		Anion HR 4.6(mm)
320-6210-1	MAK102C	03/25/2014 23:41	1	25MAR14-Per-048 .d	Anion HR 4.6(mm)
320-6210-2	MAK103C	03/25/2014 23:57	1	25MAR14-Per-049 .d	Anion HR 4.6(mm)
320-6210-3	MAK104C	03/26/2014 00:14	1	25MAR14-Per-050 .d	Anion HR 4.6(mm)
320-6210-4	MAK105C	03/26/2014 00:30	1	25MAR14-Per-051 .d	Anion HR 4.6(mm)
320-6210-5	MAK106C	03/26/2014 00:47	1	25MAR14-Per-052 .d	Anion HR 4.6(mm)

6850

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Instrument ID: A5 Start Date: 03/25/2014 11:49

Analysis Batch Number: 38961 End Date: 03/26/2014 02:59

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
320-6210-6	MAK107C	03/26/2014 01:03	1	25MAR14-Per-053 .d	Anion HR 4.6(mm)
320-6210-7	MAK108C	03/26/2014 01:20	1	25MAR14-Per-054 .d	Anion HR 4.6(mm)
320-6210-8	MAK110C	03/26/2014 01:36	1	25MAR14-Per-055 .d	Anion HR 4.6(mm)
320-6210-8 MS	MAK110C MS	03/26/2014 01:53	1	25MAR14-Per-056 .d	Anion HR 4.6(mm)
320-6210-8 MSD	MAK110C MSD	03/26/2014 02:09	1	25MAR14-Per-057 .d	Anion HR 4.6(mm)
CCV 320-38961/57		03/26/2014 02:26	1	25MAR14-Per-058 .d	Anion HR 4.6(mm)
CCVL 320-38961/58		03/26/2014 02:42	1	25MAR14-Per-059 .d	Anion HR 4.6(mm)
CCB 320-38961/59		03/26/2014 02:59	1	25MAR14-Per-060 .d	Anion HR 4.6(mm)

6850

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 320-6210-1

SDG No.:

Batch Number: 38755 Batch Start Date: 03/21/14 09:09 Batch Analyst: Arauz, Horacio

Batch Method: SHAKE Batch End Date: 03/24/14 14:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	LC6850IS 00024	LC6850SP 00016		
MB 320-38755/1		SHAKE, 6850		3.00 g	10.00 mL	100 uL			
LCS 320-38755/2		SHAKE, 6850		3.00 g	10.00 mL	100 uL	150 uL		
INF 320-38755/3		SHAKE, 6850		3.00 g	10.00 mL	100 uL	150 uL		
320-6210-A-1	MAK102C	SHAKE, 6850	T	1.50 g	10.00 mL	100 uL			
320-6210-A-2	MAK103C	SHAKE, 6850	T	1.50 g	10.00 mL	100 uL			
320-6210-A-3	MAK104C	SHAKE, 6850	T	1.55 g	10.00 mL	100 uL			
320-6210-A-4	MAK105C	SHAKE, 6850	T	1.50 g	10.00 mL	100 uL			
320-6210-A-5	MAK106C	SHAKE, 6850	T	1.50 g	10.00 mL	100 uL			
320-6210-A-6	MAK107C	SHAKE, 6850	T	1.53 g	10.00 mL	100 uL			
320-6210-A-7	MAK108C	SHAKE, 6850	T	1.54 g	10.00 mL	100 uL			
320-6210-A-8	MAK110C	SHAKE, 6850	T	1.53 g	10.00 mL	100 uL			
320-6210-A-8 MS	MAK110C	SHAKE, 6850	T	1.49 g	10.00 mL	100 uL	150 uL		
320-6210-A-8 MSD	MAK110C	SHAKE, 6850	T	1.50 g	10.00 mL	100 uL	150 uL		

Batch Notes	
Batch Comment	INF 4515-055D;
Filter Lot #	.45um Millipore R3KA44832; .20um Millex R2DA94163
Millipore Water Dispense Date	3-20-14
Person's name who witnessed reagent drop	ALH
Blank Sand Lot #	Fisher 135365
SPE Cartridge Lot #	Dionex 131115
SPE Cartridge Type	Ba/Ag/H

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

West Sacramento

HPLC/LCMS Data Review Checklist

Job Number(s): 320-6209, 320-6210 Work List ID(s): 11357

Extraction Batch: 38755 Analysis Batch(es): 38961

Delivery Rank 4 Due Date: 3/24/14

A. Calibration/Instrument Run QC	1st Level	2nd Level	N/A
1. ICAL locked in Chrom and TALS? ICAL Batch#	✓	✓	
2. ICAL, CCV Frequency & Criteria met.	✓	✓	
• $RF_{average}$ criteria appropriate for the method.	✓	✓	
• Linear Regression criteria appropriate if required ($r \geq 0.995$).	NA		✓
• Quadratic fit criteria appropriate if required ($r^2 \geq 0.990$).	NA		✓
• For Linear Regression and Quadratic fit – Does the y-intercept support ½ the reporting limit as described in CA-Q-S-005?	NA		✓
• All curve points show calculated concentrations.	✓	✓	
3. Peaks correctly ID'd by data system.	✓	✓	
5. Tune check frequency & criteria met and Tune check report attached.	NA		✓
B. QA/QC			
1. Are all QC samples properly linked in TALS?	✓	✓	
2. Method blank, LCS/LCSD and MS/SD frequencies met.	✓	✓	
3. LCS/LCSD and MB data are within control limits. If not, NCM is present.	✓	✓	
4. Are MS/MSD recoveries and RPD within control limits?	✓	✓	
5. Holding Times were met for prep and analytical.	* ✓	✓	
6. IS/Surrogate recoveries meet criteria or properly noted.	✓	✓	
C. Sample Analysis			
1. Was correct analysis performed and were project instructions followed?	✓	✓	
2. If required, are compounds within RT windows?	✓	✓	
3. If required, are positive hits confirmed and >40% RPD flagged?	NA		✓
4. Manual Integrations reviewed and appropriate.	✓	✓	
5. All analytes correctly reported. (Primary, secondary, acceptable status)	✓	✓	
6. Correct reporting limits used. (based on client request, prep factors, and dilutions)			
D. Documentation			
1. Are all non-conformances documented/attached? NCM#	✓	✓	
2. Do results make sense (e.g. dilutions, etc.)?	✓	✓	
3. Have all flags been reviewed for appropriateness?	✓	✓	
4. For level 3 and 4 reports, have forms and raw data been reviewed?		✓	
5. Was QC Checker run for this job?	✓	✓	

Upon completion of this checklist, the reviewer must scan and attach the checklist to the TALS job.

1st Level (Analyst): JRB Date: 3/26/14

2nd Level Reviewer: MLWuf Date: 3/28/2014

* Holding times are extended for tissue samples.

KL

Solid SW-846-3500 Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-38755

Analyst: Arauz, Horacio

Batch Open: 3/21/2014 9:09:19AM

Method Code: 320-Shake_SonicBath-320

Batch End: 3-24-14 14:40

Shake Extraction with Ultrasonic Bath Extraction

reviewed by: l 3/25/14

	Input Sample Lab ID (Analytical Method)	SDG	Initial Amount	Final Amount	Due Date	Analytical TAT	Dlv Rank	Comments	Output Sample Lab ID
1	MB~320-38755/1 N/A	N/A	3.00 g	10.00 mL	N/A	N/A	N/A		MB 320-38755/1-A
2	LCS~320-38755/2 N/A	N/A	3.00 g	10.00 mL	N/A	N/A	N/A		LCS 320-38755/2-A
3	INF~320-38755/3 N/A	N/A	3.00 g	10.00 mL	N/A	N/A	N/A		INF 320-38755/3-A
4	320-6209-A-1 (6850)	N/A	1.51 g	10.00 mL	3/24/14	22_Days	4		320-6209-A-1-A
5	320-6209-A-2 (6850)	N/A	1.54 g	10.00 mL	3/24/14	22_Days	4		320-6209-A-2-A
6	320-6209-A-3 (6850)	N/A	1.54 g	10.00 mL	3/24/14	22_Days	4		320-6209-A-3-A
7	320-6209-A-4 (6850)	N/A	1.51 g	10.00 mL	3/24/14	22_Days	4		320-6209-A-4-A
8	320-6209-A-4~MS (6850)	N/A	1.55 g	10.00 mL	3/24/14	22_Days	4		320-6209-A-4-B MS
9	320-6209-A-4~MSD (6850)	N/A	1.49 g	10.00 mL	3/24/14	22_Days	4		320-6209-A-4-C MSD
10	320-6209-A-5 (6850)	N/A	1.50 g	10.00 mL	3/24/14	22_Days	4		320-6209-A-5-A
11	320-6209-A-6 (6850)	N/A	1.49 g	10.00 mL	3/24/14	22_Days	4		320-6209-A-6-A
12	320-6209-A-7 (6850)	N/A	1.48 g	10.00 mL	3/24/14	22_Days	4		320-6209-A-7-A
13	320-6209-A-8 (6850)	N/A	1.49 g	10.00 mL	3/24/14	22_Days	4		320-6209-A-8-A
14	320-6210-A-1 (6850)	N/A	1.50 g	10.00 mL	3/24/14	22_Days	4		320-6210-A-1-A
15	320-6210-A-2 (6850)	N/A	1.50 g	10.00 mL	3/24/14	22_Days	4		320-6210-A-2-A

Solid SW-846-3500 Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-38755 | Analyst: Arauz, Horacio | Batch Open: 3/21/2014 9:09:19AM

Method Code: 320-Shake_SonicBath-320 | Batch End: 3-24-14 14:40

16	320-6210-A-3 (6850)	N/A	1.55 g	10.00 mL	3/24/14	22_Days	4	320-6210-A-3-A
17	320-6210-A-4 (6850)	N/A	1.50 g	10.00 mL	3/24/14	22_Days	4	320-6210-A-4-A
18	320-6210-A-5 (6850)	N/A	1.50 g	10.00 mL	3/24/14	22_Days	4	320-6210-A-5-A
19	320-6210-A-6 (6850)	N/A	1.53 g	10.00 mL	3/24/14	22_Days	4	320-6210-A-6-A
20	320-6210-A-7 (6850)	N/A	1.54 g	10.00 mL	3/24/14	22_Days	4	320-6210-A-7-A
21	320-6210-A-8 (6850)	N/A	1.53 g	10.00 mL	3/24/14	22_Days	4	320-6210-A-8-A
22	320-6210-A-8~MS (6850)	N/A	1.49 g	10.00 mL	3/24/14	22_Days	4	320-6210-A-8-B MS
23	320-6210-A-8~MSD (6850)	N/A	1.50 g	10.00 mL	3/24/14	22_Days	4	320-6210-A-8-C MSD

Batch Notes

Millipore Water Dispense Date	3-20-14
SPE Cartridge Lot #	Dionex 131115
SPE Cartridge Type	Ba/Ag/H
Filter Lot #	.45um Millipore R3KA44832; .20um Millex R2DA94163
Blank Sand Lot #	Fisher 135365
Person's name who witnessed reagent drop	ALH 3/21/14
Batch Comment	INF 4515-055D; DCM J.T.Baker 0000063937

Solid SW-846-3500 Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-38755 | Analyst: Arauz, Horacio | Batch Open: 3/21/2014 9:09:19AM

Method Code: 320-Shake_SonicBath-320 | Batch End: 3-24-14 14:40

Comments

320-6209-A-1	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6209-A-2	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6209-A-3	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6209-A-4	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6209-A-4~MS	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6209-A-4~MSD	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6209-A-5	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6209-A-6	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6209-A-7	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6209-A-8	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6210-A-1	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6210-A-2	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6210-A-3	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6210-A-4	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6210-A-5	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6210-A-6	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6210-A-7	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6210-A-8	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.

Solid SW-846-3500 Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-38755 | Analyst: Arauz, Horacio | Batch Open: 3/21/2014 9:09:19AM

Method Code: 320-Shake_SonicBath-320 | Batch End: 3-24-14 14:40

320-6210-A-8~MS	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.
320-6210-A-8~MSD	Method Comments: Tissue-Extract 1.5 grams. MeCl2 cleanup of extracts . MS/MSD as assigned.

Solid SW-846-3500 Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-38755 Analyst: Arauz, Horacio Batch Open: 3/21/2014 9:09:19AM

Method Code: 320-Shake_SonicBath-320 Batch End: 3-24-14 14:40

Reagent Additions Worksheet

Lab ID	Reagent Code	Amount Added	Final Amount	By	Witness
MB 320-38755/1	LC6850IS_00024	100 uL	10.00 mL	HJA 3-21-14	ALH 3/21/14
LCS 320-38755/2	LC6850IS_00024	100 uL	10.00 mL		
LCS 320-38755/2	LC6850SP_00016	150 uL	10.00 mL		
INF 320-38755/3	LC6850IS_00024	100 uL	10.00 mL		
INF 320-38755/3	LC6850SP_00016	150 uL	10.00 mL		
320-6209-A-1	LC6850IS_00024	100 uL	10.00 mL		
320-6209-A-2	LC6850IS_00024	100 uL	10.00 mL		
320-6209-A-3	LC6850IS_00024	100 uL	10.00 mL		
320-6209-A-4	LC6850IS_00024	100 uL	10.00 mL		
320-6209-A-4 MS	LC6850IS_00024	100 uL	10.00 mL		
320-6209-A-4 MS	LC6850SP_00016	150 uL	10.00 mL		
320-6209-A-4 MSD	LC6850IS_00024	100 uL	10.00 mL		
320-6209-A-4 MSD	LC6850SP_00016	150 uL	10.00 mL		
320-6209-A-5	LC6850IS_00024	100 uL	10.00 mL		
320-6209-A-6	LC6850IS_00024	100 uL	10.00 mL		
320-6209-A-7	LC6850IS_00024	100 uL	10.00 mL		
320-6209-A-8	LC6850IS_00024	100 uL	10.00 mL		
320-6210-A-1	LC6850IS_00024	100 uL	10.00 mL		

Solid SW-846-3500 Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 320-38755 Analyst: Arauz, Horacio Batch Open: 3/21/2014 9:09:19AM

Method Code: 320-Shake_SonicBath-320 Batch End: 3-24-14 14:40

320-6210-A-2	LC6850IS_00024	100 uL	10.00 mL	HJA 3-21-14	ALH 3/21/14
320-6210-A-3	LC6850IS_00024	100 uL	10.00 mL		
320-6210-A-4	LC6850IS_00024	100 uL	10.00 mL		
320-6210-A-5	LC6850IS_00024	100 uL	10.00 mL		
320-6210-A-6	LC6850IS_00024	100 uL	10.00 mL		
320-6210-A-7	LC6850IS_00024	100 uL	10.00 mL		
320-6210-A-8	LC6850IS_00024	100 uL	10.00 mL		
320-6210-A-8 MS	LC6850IS_00024	100 uL	10.00 mL		
320-6210-A-8 MS	LC6850SP_00016	150 uL	10.00 mL		
320-6210-A-8 MSD	LC6850IS_00024	100 uL	10.00 mL		
320-6210-A-8 MSD	LC6850SP_00016	150 uL	10.00 mL		

Other Reagents:

Reagent	Amount/Units	Lot#:

Shipping and Receiving Documents

ARDL, Inc

P.O. Box 1566, 400 Aviation Drive, Mount Vernon, Illinois 62864
Phone (618) 244-3235, Fax (618) 244-1149

CHAIN OF CUSTODY RECORD

Project
ARDL / Makau Military Reservation Oahu, Hawaii Project

SAMPLERS (Signature)

320-6210 Chain of Custody

Test America

SAMPLE NUMBER	DATE	TIME	Comp	Grab	# of Containers	Perchlorate via EPA Method 6850	marks or Sample Location	PRESERVATION ICED	PRESERVATION Specify Chemicals added and final pH if known
MAK101O	1/13/2014	10:02		X	1	X	Octopus	x	
MAK102O	1/13/2014	10:30		X	1	X	Octopus	x	
MAK103O	1/13/2014	11:02		X	1	X	Octopus	x	
MAK104O	1/13/2014	11:30		X	1	X	Octopus	x	
MAK105O	1/13/2014	11:58		X	1	X	Octopus	x	
MAK106O	1/13/2014	12:20		X	1	X	Octopus	x	
MAK107O	1/13/2014	13:05		X	1	X	Octopus	x	
MAK108O	1/13/2014	14.20		X	1	X	Octopus	x	
MAK102C	1/13/2014	10.02		X	1	X	Sea Cucumber	x	
MAK103C	1/13/2014	10:22		X	1	X	Sea Cucumber	x	
MAK104C	1/13/2014	11:00		X	1	X	Sea Cucumber	x	
MAK105C	1/13/2014	11:30		X	1	X	Sea Cucumber	x	
MAK106C	1/13/2014	12:05		X	1	X	Sea Cucumber	x	
MAK107C	1/13/2014	12:40		X	1	X	Sea Cucumber	x	
MAK108C	1/13/2014	13:50		X	1	X	Sea Cucumber	x	
MAK110C	1/14/2014	9:55		X	1	X	Sea Cucumber	x	
MAK101L	1/13/2014	9:10		X	1	X	Limu (seaweed)	x	
MAK102L	1/13/2014	10:02		X	1	X	Limu (seaweed)	x	
MAK105L	1/13/2014	15:20		X	1	X	Limu (seaweed)	x	
MAK106L	1/14/2014	8:45		X	1	X	Limu (seaweed)	x	
MAK108,109,110,113L	1/14/2014		X		1	X	Limu (seaweed)	x	
MAK111L	1/14/2014	12:05		X	1	X	Limu (seaweed)	x	
MAK112L	1/14/2014	12:50		X	1	X	Limu (seaweed)	x	
MAK115L	1/14/2014	14:00		X	1	X	Limu (seaweed)	x	

Relinquished by: (Signature)	Date	Time	Relinquished by. (Signature)
L Page	2/19/14	1600	
Relinquished by. (Signature)	Date	Time	Relinquished by (Signature)
Received for Laboratory by: (Signature)	Date	Time	Shipping Ticket No.
Kim Nelson	2/20/14	930	

REMARKS / SPECIAL INSTRUCTIONS:

Please send level 4 hardcopy report and excel edd to: Dean Dickerson, c/o ARDL, Inc. 400 Aviation Drive, Mount Vernon, IL 62864. Email questons to ddickerson@ardlinc.com.

* rec'd 25 rvs. 2-20-14

-14.4°C

Login Sample Receipt Checklist

Client: ARDL, Inc

Job Number: 320-6210-1

Login Number: 6210

List Source: TestAmerica Sacramento

List Number: 1

Creator: Hytrek, Cheryl

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	