



---

2655 Park Center Dr., Suite A  
Simi Valley, CA 93065  
T: +1 805 526 7161  
F: +1 805 526 7270  
[www.alsglobal.com](http://www.alsglobal.com)

## LABORATORY REPORT

November 30, 2016

Matt Macosko  
Divine Tribe  
455 I St Ste 204  
Arcata, CA 95521

### RE: Product Testing - Vaporizer

Dear Matt:

Enclosed are the results of the sample submitted to our laboratory on October 25, 2016. The sample was sent out for partial analysis to our Salt Lake City facility. Please find their report (Work Order 1632229) attached. For your reference, these analyses have been assigned our service request number P1605022.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at [www.alsglobal.com](http://www.alsglobal.com). Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

**ALS | Environmental**

By Samantha Henningsen at 4:11 pm, Nov 30, 2016

Samantha Henningsen  
Project Manager



2655 Park Center Dr., Suite A  
Simi Valley, CA 93065  
T: +1 805 526 7161  
F: +1 805 526 7270  
[www.alsglobal.com](http://www.alsglobal.com)

Client: Divine Tribe  
Project: Product Testing - Vaporizer

Service Request No: P1605022

---

## CASE NARRATIVE

The sample was received intact under chain of custody on October 25, 2016 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

### Sample Preparation

The Vaporizer was connected via the mouth piece to the appropriate media using silicone tubing and PTFE tape. The vaporizer was operated at the settings specified by the client and that vapor drawn onto the thermal desorption tube for the TO-17 analysis and onto the MCE cassette for the metals analysis being performed by our Salt Lake City facility. Approximately 150mL of air was drawn onto each tube using a 250 ml ground-glass syringe over a twenty second period starting when the device was fired. The fire button was held for five seconds although it appeared the maximum temperature was achieved in less than five seconds. Controls were prepared for each analysis using the same procedure but without firing the device.

For the VOC analysis the ambient conditions were 77.4 F (25.2 C) at 27% RH.

For the Metals analysis the ambient conditions were 76.7 F (24.8 C) at 31% RH.

### Volatile Organic Compound Analysis

The thermal desorption tube collected was then analyzed for tentatively identified compounds (TICs) in accordance with the methodology outlined in EPA Method TO-17. This procedure is described in laboratory SOP VOA-TO17. The analyses were performed by thermal desorption/gas chromatography/mass spectrometry. This analysis is not included on the laboratory's NELAP, DoD-ELAP, or AIHA-LAP, LLC scope of accreditation.

---

*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.*

*Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.*



---

2655 Park Center Dr., Suite A  
Simi Valley, CA 93065  
T: +1 805 526 7161  
F: +1 805 526 7270  
[www.alsglobal.com](http://www.alsglobal.com)



2655 Park Center Dr., Suite A  
 Simi Valley, CA 93065  
 T: +1 805 526 7161  
 F: +1 805 526 7270  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	<a href="http://www.azdhs.gov/lab/license/env.htm">http://www.azdhs.gov/lab/license/env.htm</a>	AZ0694
PJLA (DoD ELAP)	<a href="http://www.pjlabs.com/search-accredited-labs">http://www.pjlabs.com/search-accredited-labs</a>	65818 (Testing)
Florida DOH (NELAP)	<a href="http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm">http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm</a>	E871020
Maine DHHS	<a href="http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm">http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm</a>	2016036
Minnesota DOH (NELAP)	<a href="http://www.health.state.mn.us/accreditation">http://www.health.state.mn.us/accreditation</a>	977273
New Jersey DEP (NELAP)	<a href="http://www.nj.gov/dep/oqa/">http://www.nj.gov/dep/oqa/</a>	CA009
New York DOH (NELAP)	<a href="http://www.wadsworth.org/labcert/elap/elap.html">http://www.wadsworth.org/labcert/elap/elap.html</a>	11221
Oregon PHD (NELAP)	<a href="http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx">http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx</a>	4068-003
Pennsylvania DEP	<a href="http://www.depweb.state.pa.us/labs">http://www.depweb.state.pa.us/labs</a>	68-03307 (Registration)
Texas CEQ (NELAP)	<a href="http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html">http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html</a>	T104704413- 16-7
Utah DOH (NELAP)	<a href="http://www.health.utah.gov/lab/labimp/certification/index.html">http://www.health.utah.gov/lab/labimp/certification/index.html</a>	CA01627201 6-6
Washington DOE	<a href="http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html">http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html</a>	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at [www.alsglobal.com](http://www.alsglobal.com), or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

**ALS ENVIRONMENTAL**

**DETAIL SUMMARY REPORT**

Client: Divine Tribe  
Project ID: Product Testing - Vaporizer

Service Request: P1605022

Date Received: 10/25/2016  
Time Received: 16:00

TO-17 Modified - VOC Solid
None - Misc Out 1

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	TO-17 Modified - VOC Solid	None - Misc Out 1
Vaporizer	P1605022-001	Solid	10/25/2016	00:00	X	X





# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Divine Tribe  
**Client Sample ID:** Vaporizer  
**Client Project ID:** Product Testing - Vaporizer

ALS Project ID: P1605022  
ALS Sample ID: P1605022-001

### Tentatively Identified Compounds

Test Code: EPA TO-17  
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18  
Analyst: Rui Malinowski  
Sampling Media: Solid  
Test Notes: **T**

Date Collected: 10/25/16  
Date Received: 10/25/16  
Date Analyzed: 11/10/16  
Volume(s) Analyzed: NA Liter(s)

GC/MS Retention Time	Compound Identification	Concentration ng/Tube	Data Qualifier
5.35	Acetaldehyde	5.3	
6.99	Acetone	6.1	
9.68	Acetic Acid	11	
24.90	Siloxane unknown	12	
27.18	Siloxane unknown	29	

T = Analyte is a tentatively identified compound, result is estimated.



# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Divine Tribe  
**Client Sample ID:** Vaporizer Blank  
**Client Project ID:** Product Testing - Vaporizer

ALS Project ID: P1605022  
ALS Sample ID: P161110-VB

### Tentatively Identified Compounds

Test Code: EPA TO-17  
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18  
Analyst: Rui Malinowski  
Sampling Media: Solid  
Test Notes: **T**

Date Collected: NA  
Date Received: NA  
Date Analyzed: 11/10/16  
Volume(s) Analyzed: NA Liter(s)

GC/MS Retention Time	Compound Identification	Concentration ng/Tube	Data Qualifier
4.73	1,1-Difluoroethane	<b>160</b>	
4.84	Propene	<b>5.0</b>	
24.90	Siloxane unknown	<b>11</b>	
27.18	Siloxane unknown	<b>20</b>	

T = Analyte is a tentatively identified compound, result is estimated.

**ALS ENVIRONMENTAL**

RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Divine Tribe  
**Client Sample ID:** Method Blank  
**Client Project ID:** Product Testing - Vaporizer

ALS Project ID: P1605022  
ALS Sample ID: P160202-MB

**Tentatively Identified Compounds**

Test Code: EPA TO-17  
Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18  
Analyst: Rui Malinowski  
Sampling Media: Solid  
Test Notes:

Date Collected: NA  
Date Received: NA  
Date Analyzed: 2/02/16  
Volume(s) Analyzed: NA Liter(s)

GC/MS Retention Time	Compound Identification	Concentration ng/Tube	Data Qualifier
4.84	Propene	9.3	

NF = Compound was searched for, but not found.



# ANALYTICAL REPORT

Report Date: November 22, 2016

Samantha Henningsen  
ALS Environmental Laboratory  
2655 Park Center Drive  
Suite A  
Simi Valley, CA 93065

Phone: (805) 526-7161

E-mail: [Samantha.Henningsen@alsglobal.com](mailto:Samantha.Henningsen@alsglobal.com)

Workorder: **34-1632229**

Client Project ID: P1605022 111716  
Purchase Order: P1605022  
Project Manager: Paul Pope

## Analytical Results

Sample ID: <b>Vaporizer</b>		Collected: 10/25/2016	
Lab ID: 1632229001		Received: 11/17/2016	
Method: NIOSH 7300, MCE		Media: MCE Filter	
		Prepared: 11/21/2016	
		Analyzed: 11/21/2016	
Sampling Location: P1605022			
Sampling Parameter: Air Volume Not Provided			
Analyte	Result (ug/sample)	Result (mg/m <sup>3</sup> )	RL (ug/sample)
Aluminum	<5.0	NA	5.0
Arsenic	<2.5	NA	2.5
Beryllium	<0.013	NA	0.013
Cadmium	<0.075	NA	0.075
Calcium	<15	NA	15
Chromium	<1.3	NA	1.3
Cobalt	<0.075	NA	0.075
Copper	<1.2	NA	1.2
Iron	<5.0	NA	5.0
Lead	<1.3	NA	1.3
Lithium	<0.50	NA	0.50
Magnesium	<1.3	NA	1.3
Manganese	<0.31	NA	0.31
Molybdenum	<0.38	NA	0.38
Nickel	<0.34	NA	0.34
Phosphorus	<5.0	NA	5.0
Platinum	<3.8	NA	3.8
Selenium	<2.5	NA	2.5
Silver	<0.25	NA	0.25
Sodium	<5.1	NA	5.1
Tellurium	<1.3	NA	1.3
Thallium	<1.3	NA	1.3
Titanium	<0.075	NA	0.075
Vanadium	<b>0.10</b>	NA	0.075
Yttrium	<0.075	NA	0.075
Zinc	<0.50	NA	0.50

Results Continued on Next Page

ADDRESS 960 West LeVoy Drive, Salt Lake City, Utah, 84123 USA | PHONE +1 801 266 7700 | FAX +1 801 268 9992

ALS GROUP USA, CORP. An ALS Limited Company

Environmental

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

11 of 17



# ANALYTICAL REPORT

Workorder: **34-1632229**

Client Project ID: P1605022 111716

Purchase Order: P1605022

Project Manager: Paul Pope

## Analytical Results

Sample ID: <b>Vaporizer</b>	Collected: 10/25/2016		
Lab ID: 1632229001	Received: 11/17/2016		
Method: NIOSH 7300, MCE	Media: MCE Filter		
Sampling Location: P1605022	Prepared: 11/21/2016		
Sampling Parameter: Air Volume Not Provided	Analyzed: 11/21/2016		
Analyte	Result (ug/sample)	Result (mg/m <sup>3</sup> )	RL (ug/sample)
Zirconium	<0.50	NA	0.50

Sample ID: <b>Blank</b>	Collected: 10/25/2016		
Lab ID: 1632229002	Received: 11/17/2016		
Method: NIOSH 7300, MCE	Media: MCE Filter		
Sampling Location: P1605022	Prepared: 11/21/2016		
Sampling Parameter: Air Volume Not Applicable	Analyzed: 11/21/2016		
Analyte	Result (ug/sample)	Result (mg/m <sup>3</sup> )	RL (ug/sample)
Aluminum	<5.0	NA	5.0
Arsenic	<2.5	NA	2.5
Beryllium	<0.013	NA	0.013
Cadmium	<0.075	NA	0.075
Calcium	<15	NA	15
Chromium	<1.3	NA	1.3
Cobalt	<0.075	NA	0.075
Copper	<1.2	NA	1.2
Iron	<5.0	NA	5.0
Lead	<1.3	NA	1.3
Lithium	<0.50	NA	0.50
Magnesium	<1.3	NA	1.3
Manganese	<0.31	NA	0.31
Molybdenum	<0.38	NA	0.38
Nickel	<0.34	NA	0.34
Phosphorus	<5.0	NA	5.0
Platinum	<3.8	NA	3.8
Selenium	<2.5	NA	2.5
Silver	<0.25	NA	0.25
Sodium	<5.1	NA	5.1
Tellurium	<1.3	NA	1.3
Thallium	<1.3	NA	1.3
Titanium	<0.075	NA	0.075
Vanadium	<b>0.080</b>	NA	0.075
Yttrium	<0.075	NA	0.075
Zinc	<0.50	NA	0.50
Zirconium	<0.50	NA	0.50



# ANALYTICAL REPORT

Workorder: **34-1632229**

Client Project ID: P1605022 111716

Purchase Order: P1605022

Project Manager: Paul Pope

## Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
NIOSH 7300, MCE	/S/ Peter P. Steen 11/22/2016 09:31	/S/ Lauren Jones 11/22/2016 10:54

## Laboratory Contact Information

ALS Environmental  
960 W Levoy Drive  
Salt Lake City, Utah 84123

Phone: (801) 266-7700  
Email: als@alst.global.com  
Web: www.alssl.com

## General Lab Comments

The results provided in this report relate only to the items tested.  
Samples were received in acceptable condition unless otherwise noted.  
Samples have not been blank corrected unless otherwise noted.  
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ANAB (DoD ELAP)	ADE-1420	<a href="http://www.anab.org/accredited-organizations/">http://www.anab.org/accredited-organizations/</a>
	Utah (NELAC)	DATA1	<a href="http://health.utah.gov/lab/labimp/">http://health.utah.gov/lab/labimp/</a>
	Nevada	UT00009	<a href="http://ndep.nv.gov/bsdwlabservice.htm">http://ndep.nv.gov/bsdwlabservice.htm</a>
	Oklahoma	UT00009	<a href="http://www.deq.state.ok.us/CSDnew/">http://www.deq.state.ok.us/CSDnew/</a>
	Iowa	IA# 376	<a href="http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx">http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx</a>
	Texas (TNI)	T104704456-11-1	<a href="http://www.tceq.texas.gov/field/qa/lab_accred_certif.html">http://www.tceq.texas.gov/field/qa/lab_accred_certif.html</a>
	Washington	C596-16	<a href="http://www.ecy.wa.gov/programs/eap/labs/index.html">http://www.ecy.wa.gov/programs/eap/labs/index.html</a>
Industrial Hygiene	Kansas	E-10416	<a href="http://www.kdheks.gov/lipo/index.html">http://www.kdheks.gov/lipo/index.html</a>
	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	<a href="http://www.aihaaccreditedlabs.org">http://www.aihaaccreditedlabs.org</a>
Lead Testing:	Washington	C596-16	<a href="http://www.ecy.wa.gov/programs/eap/labs/index.html">http://www.ecy.wa.gov/programs/eap/labs/index.html</a>
	CPSC	AIHA LAP LLC (ISO 17025, CPSC)	ADE-1420
Soil, Dust, Paint, Air	AIHA LAP LLC (ISO 17025 & IHLAP/ELLAP)	101574	<a href="http://www.aihaaccreditedlabs.org">http://www.aihaaccreditedlabs.org</a>
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	<a href="http://www.aiclasscorp.com">http://www.aiclasscorp.com</a>



## ANALYTICAL REPORT

Workorder: **34-1632229**

Client Project ID: P1605022 111716

Purchase Order: P1605022

Project Manager: Paul Pope

### Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.

LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.

ND = Not Detected, Testing result not detected above the LOD or LOQ.

NA = Not Applicable.

\*\* No result could be reported, see sample comments for details.

< This testing result is less than the numerical value.

() This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1632229

**Limits:** Historical/Performance

**Basis:** ALS Laboratory Group

**Preparation:** IH Metals, MCE Prep

**Batch:** IIPX/20656 (HBN: 181049)

**Prepared By:** Jacob Knudson

**Analysis:** IH Metals, MCE QC

**Batch:** IICP/13014 (HBN: 181104)

**Analyzed By:** Peter P. Steen

## Blank

**LRB:** 528002

**Analyzed:** 11/21/2016 16:29

**Units:** ug/sample

Analyte	Result	MDL	RL
Aluminum	ND	1.5	5.00
Arsenic	ND	0.75	2.50
Beryllium	ND	0.00375	0.0125
Cadmium	ND	0.0225	0.0750
Calcium	ND	4.5	15.0
Chromium	ND	0.375	1.25
Cobalt	ND	0.0225	0.0750
Copper	ND	0.373	1.24
Iron	ND	1.5	5.00
Lead	ND	0.375	1.25
Lithium	ND	0.15	0.500
Magnesium	ND	0.375	1.25
Manganese	ND	0.0938	0.313
Molybdenum	ND	0.113	0.375
Nickel	ND	0.101	0.338
Phosphorus	ND	1.5	5.00
Platinum	ND	1.13	3.75
Selenium	ND	0.75	2.50
Silver	ND	0.075	0.250
Sodium	ND	1.54	5.13
Tellurium	ND	0.375	1.25
Thallium	ND	0.375	1.25
Titanium	ND	0.0225	0.0750
Vanadium	ND	0.0225	0.0750
Yttrium	ND	0.0225	0.0750
Zinc	ND	0.15	0.500
Zirconium	ND	0.15	0.500

**LMB:** 528003

**Analyzed:** 11/21/2016 16:32

**Units:** ug/sample

Analyte	Result	MDL	RL
Aluminum	ND	1.5	5.00
Arsenic	ND	0.75	2.50
Beryllium	ND	0.00375	0.0125
Cadmium	ND	0.0225	0.0750
Calcium	ND	4.5	15.0



# Quality Control Sample Batch Report

## Analysis Information

**Workorder:** 1632229

**Limits:** Historical/Performance

**Basis:** ALS Laboratory Group

**Preparation:** IH Metals, MCE Prep

**Batch:** IIPX/20656 (HBN: 181049)

**Prepared By:** Jacob Knudson

**Analysis:** IH Metals, MCE QC

**Batch:** IICP/13014 (HBN: 181104)

**Analyzed By:** Peter P. Steen

## Blank

**LMB:** 528003

**Analyzed:** 11/21/2016 16:32

**Units:** ug/sample

Analyte	Result	MDL	RL
Chromium	ND	0.375	1.25
Cobalt	ND	0.0225	0.0750
Copper	ND	0.373	1.24
Iron	ND	1.5	5.00
Lead	ND	0.375	1.25
Lithium	ND	0.15	0.500
Magnesium	ND	0.375	1.25
Manganese	ND	0.0938	0.313
Molybdenum	ND	0.113	0.375
Nickel	ND	0.101	0.338
Phosphorus	ND	1.5	5.00
Platinum	ND	1.13	3.75
Selenium	ND	0.75	2.50
Silver	ND	0.075	0.250
Sodium	ND	1.54	5.13
Tellurium	ND	0.375	1.25
Thallium	ND	0.375	1.25
Titanium	ND	0.0225	0.0750
Vanadium	ND	0.0225	0.0750
Yttrium	ND	0.0225	0.0750
Zinc	ND	0.15	0.500
Zirconium	ND	0.15	0.500

## Laboratory Control Sample - Laboratory Control Sample Duplicate

**LCS:** 528004

**Analyzed:** 11/21/2016 16:36

**Dilution:** 1

**Units:** ug/sample

**LCSD:** 528005

**Analyzed:** 11/21/2016 16:39

**Dilution:** 1

**Units:** ug/sample

Analyte	Result	Target	% Rec	QC Limits	Result	% Rec	RPD	QC Limits
Aluminum	102	100	102	86.6 116.0	101	101	0.572	0.0 15.0
Arsenic	97.0	100	97.0	88.4 107.7	96.4	96.4	0.617	0.0 15.0
Beryllium	10.4	10.0	104	90.4 116.1	10.3	103	0.318	0.0 15.0
Calcium	111	100	111	90.2 126.8	110	110	1.07	0.0 15.0
Cadmium	10.3	10.0	103	91.7 114.3	10.1	101	1.48	0.0 15.0
Cobalt	10.4	10.0	104	95.8 117.8	10.3	103	0.465	0.0 15.0
Chromium	105	100	105	90.9 117.0	104	104	0.335	0.0 15.0
Copper	11.2	10.0	112	94.8 122.2	10.9	109	2.70	0.0 15.0
Iron	106	100	106	92.8 116.4	105	105	0.951	0.0 15.0





## Quality Control Sample Batch Report

### Analysis Information

**Workorder:** 1632229

**Limits:** Historical/Performance  
**Basis:** ALS Laboratory Group

**Preparation:** IH Metals, MCE Prep  
**Batch:** IIPX/20656 (HBN: 181049)  
**Prepared By:** Jacob Knudson

**Analysis:** IH Metals, MCE QC  
**Batch:** IICP/13014 (HBN: 181104)  
**Analyzed By:** Peter P. Steen

### Laboratory Control Sample - Laboratory Control Sample Duplicate

LCS: 528004 Analyzed: 11/21/2016 16:36 Dilution: 1 Units: ug/sample					LCSD: 528005 Analyzed: 11/21/2016 16:39 Dilution: 1 Units: ug/sample					
Analyte	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
Lithium	101	100	101	88.7	115.5	100	100	0.109	0.0	15.0
Magnesium	103	100	103	90.4	113.1	101	101	2.11	0.0	15.0
Manganese	108	100	108	93.4	113.0	107	107	0.307	0.0	15.0
Nickel	10.4	10.0	104	97.0	120.8	10.2	102	1.51	0.0	15.0
Lead	108	100	108	92.4	116.7	106	106	1.70	0.0	15.0
Selenium	101	100	101	90.0	110.1	101	101	0.365	0.0	15.0
Silver	101	100	101	80.0	118.0	99.8	99.8	1.15	0.0	15.0
Sodium	103	100	103	92.9	116.4	104	104	0.435	0.0	15.0
Thallium	107	100	107	87.7	114.5	107	107	0.337	0.0	15.0
Vanadium	110	100	110	92.8	115.3	109	109	0.329	0.0	15.0
Yttrium	10.7	10.0	107	93.9	113.8	10.6	106	0.413	0.0	15.0
Zinc	107	100	107	95.2	117.5	105	105	1.21	0.0	15.0
Molybdenum	10.7	10.0	107	91.1	121.2	10.7	107	0.243	0.0	15.0
Phosphorus	96.1	100	96.1	86.7	118.1	95.4	95.4	0.765	0.0	15.0
Tellurium	103	100	103	90.3	115.5	101	101	1.35	0.0	15.0
Titanium	10.3	10.0	103	90.1	115.3	10.1	101	1.10	0.0	15.0
Zirconium	102	100	102	88.8	114.2	102	102	0.382	0.0	15.0

### QC Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Analyst	Peer Review
/S/ Peter P. Steen 11/22/2016 09:31	/S/ Lauren Jones 11/22/2016 10:54

### Symbols and Definitions

- \* - Analyte above reporting limit or outside of control limits
- ▲ - Sample result is greater than 4 times the spike added
- - Sample and Matrix Duplicate less than 5 times the reporting limit
- - Result is above the calibration range

- RPD - Relative % Difference (Spike / Spike Duplicate)
- ND - Not Detected (U - Qualifier also flags analyte as not detected)
- NA - Not Applicable
- QC results are not adjusted for moisture correction, where applicable