CERTIFICATE OF ANALYSIS

PRODUCT NAME:	CBD Tincture - Natural
PRODUCT STRENGTH:	450 mg
LOT NUMBER:	20LL039k11
BEST BY DATE:	6/1/21
HEMP EXTRACT LOT	<u>92519</u>

Click on the links to view third party reports!					
		Physical Atttributes			
Test	Method	Specification	Results		
Color	SOP-100	Golden to Amber	PASS		
Odor	SOP-100	Characteristic - olive oil and hemp	PASS		
Appearance	SOP-100	Golden to Amber oil in brown glass bottle with droppe	PASS		
Primary Package Eval.	SOP-132	Container clean and free of filth. Container caps tight a shrink bands intact	PASS		
Secondary Package Eval.	SOP-132	Labeling Compliance Checked, Cartons sturdy and clea Sufficient cushion material exists. Box taped and secur	DAGG		

Panel	Method	Specification	Results	Pass/Fail
Potency - Total CBD	SOP-111	427.5-562.2 mg CBD LOQ**: 10 PPM† (0.001%)	<u>481mg</u>	PASS
Potency - D9-THC	SOP-111	None Detected LOQ: 10 PPM (0.001%)	ND	PASS
FL Compliant Pesticide Panel	SOP-111	Florida State Hemp Program Rule 5B-57.014: Action Limits for Pesticides	ND	PASS
Microbial - Stec E.Coli	SOP-111	Complies with USP 61/62	Below LOD	PASS
Microbial - Salmonella	SOP-111	Complies with USP 61/62	Below LOD	PASS
Microbial - Aspergillus	SOP-111	Complies with USP 61/62	Below LOD	PASS
CA Compliant Heavy Metal Panel	SOP-111	Arsenic (As): ≤1.5 PPM Cadmium (Cd): ≤0.5 PPM Mercury (Hg): ≤1.0 PPM Lead (Pb): ≤0.5 PPM	Below LOQ	PASS

* Level of Quantitation, † Parts Per Million

Quality Certified by:

Darcie Moran

02.26.2020

Darcie Moran Manager of Quality

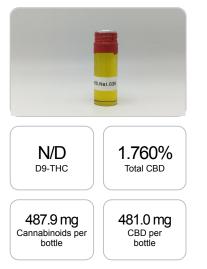
Date



Order #: 49154 Order Name: 450.Nat.039. Batch#: 20LL039K11 Received: 02/17/2020 Completed: 02/19/2020



Sample



1 bottle = 30 ml per bottle x density (.911) x Cannabinoid concentration

Cannabinoids Test

SHIMADZU INTEGRATED UPLC-PDA

GSL SOP 400	UPLOADED: 02/18/2020 10:35			
Cannabinoids	LOQ	weight(%)	mg/g	mg/bottle
D9-THC	10 PPM	N/D	N/D	N/D
THCA	10 PPM	N/D	N/D	N/D
CBD	10 PPM	1.760%	17.600	481.0
CBDA	20 PPM	N/D	N/D	N/D
CBDV	20 PPM	N/D	N/D	N/D
CBC	10 PPM	N/D	N/D	N/D
CBN	10 PPM	N/D	N/D	N/D
CBG	10 PPM	0.025%	0.251	6.9
CBGA	20 PPM	N/D	N/D	N/D
D8-THC	10 PPM	N/D	N/D	N/D
THCV	10 PPM	N/D	N/D	N/D
TOTAL D9-THC		N/D	N/D	N/D
TOTAL CBD*		1.760%	17.600	481.0
TOTAL CANNABINOIDS		1.785%	17.851	487.9

Cannabinoid Weight(%) 2.0 1.5 1.0 0.5 0-CBDV CBDA CBGA CBG CBD THCV CBN D9-THC D8-THC CBC THCA

Reporting Limit 10 ppm *Total CBD = CBD + CBDA x 0.877

N/D - Not Detected, B/LOQ - Below Limit of Quantification

Dr. Andrew Hall, Ph.D., Chief Scientific Officer

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Ben Witten, MS, MT., Lab Director

Green Scientific Labs info@greenscientificlabs.com 1-833 TEST CBD





Order #: 49154 Order Name: 450.Nat.039. Batch#: 20LL039K11 Received: 02/17/2020 Completed: 02/19/2020



PESTICIDE ANALYSIS:

GSL SOP 401

PREPARED: 02/17/2020 16:22:31

UPLOADED: 02/18/2020 12:10:59

GCMS-MS - Shimadzu GCMS-TQ8040

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
CAPTAN	0.700	N/D	0.003	0.001
CHLORDANE	0.100	N/D	0.003	0.001
CHLORFENAPYR	0.100	N/D	0.003	0.001
COUMAPHOS	0.100	N/D	0.003	0.001
CYFLUTHRIN	2.000	N/D	0.003	0.001

Pesticide	Action Leve (ppm)	l Results (ppm)		LOD (ppm)
CYPERMETHRIN	1.000	N/D	0.003	0.001
FIPRONIL	0.100	N/D	0.003	0.001
FLUDIOXONIL	0.100	N/D	0.003	0.001
PARATHION-METHYL	0.100	N/D	0.003	0.001
PENTACHLORONITROBENZENE	0.100	N/D	0.003	0.001

LCMS-MS - Shimadzu LCMS-8060

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
ABAMECTIN B1A	0.100	N/D	0.005	0.001
ACEPHATE	0.100	N/D	0.001	0.001
ACEQUINOCYL	0.100	N/D	0.001	0.001
ACETAMIPRID	0.100	N/D	0.005	0.001
ALDICARB	0.100	N/D	0.005	0.001
AZOXYSTROBIN	0.100	N/D	0.001	0.001
BIFENAZATE	0.100	N/D	0.005	0.001
BIFENTHRIN	3.000	N/D	0.005	0.001
BOSCALID	0.100	N/D	0.005	0.001
CARBARYL	0.500	N/D	0.003	0.001
CARBOFURAN	0.100	N/D	0.001	0.001
CHLORANTRANILIPROLE	10.000	N/D	0.005	0.005
CHLORPYRIFOS	0.100	N/D	0.001	0.001
CLOFENTEZINE	0.100	N/D	0.001	0.001
DAMINOZIDE	0.100	N/D	0.005	0.001
DIAZINON	0.100	N/D	0.001	0.001
DICHLORVOS	0.100	N/D	0.005	0.001
DIMETHOATE	0.100	N/D	0.001	0.001
DIMETHOMORPH	2.000	N/D	0.005	0.001
ETHOPROPHOS	0.100	N/D	0.001	0.001
ETOFENPROX	0.100	N/D	0.001	0.001
ETOXAZOLE	0.100	N/D	0.010	0.005
FENHEXAMID	0.100	N/D	0.005	0.001
FENOXYCARB	0.100	N/D	0.005	0.001
FENPYROXIMATE	0.100	N/D	0.001	0.001
FLONICAMID	0.100	N/D	0.025	0.010
HEXYTHIAZOX	0.100	N/D	0.005	0.001
IMAZALIL	0.100	N/D	0.005	0.001

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
IMIDACLOPRID	5.000	N/D	0.005	0.001
KRESOXIM-METHYL	0.100	N/D	0.010	0.005
MALATHION	0.500	N/D	0.005	0.001
METALAXYL	2.000	N/D	0.001	0.001
METHIOCARB	0.100	N/D	0.005	0.001
METHOMYL	1.000	N/D	0.001	0.001
MEVINPHOS	0.100	N/D	0.001	0.001
MYCLOBUTANIL	0.100	N/D	0.005	0.001
NALED	0.100	N/D	0.005	0.001
OXAMYL	0.500	N/D	0.001	0.001
PACLOBUTRAZOL	0.100	N/D	0.005	0.001
PERMETHRINS	0.500	N/D	0.005	0.001
PHOSMET	0.100	N/D	0.005	0.001
PIPERONYL	3.000	N/D	0.001	0.001
BUTOXIDE	0.000	N/D	0.001	0.001
PRALLETHRIN	0.100	N/D	0.005	0.005
PROPICONAZOLE	0.100	N/D	0.010	0.005
PROPOXUR	0.100	N/D	0.001	0.001
PYRETHRINS (PYRETHRIN I)	0.500	N/D	0.005	0.005
PYRIDABEN	0.100	N/D	0.005	0.001
SPINETORAM	0.100	N/D	0.001	0.001
SPINOSAD	0.100	N/D	0.001	0.001
SPIROMESIFEN	0.100	N/D	0.005	0.001
SPIROTETRAMAT	0.100	N/D	0.001	0.001
SPIROXAMINE	0.100	N/D	0.001	0.001
TEBUCONAZOLE	0.100	N/D	0.005	0.001
THIACLOPRID	0.100	N/D	0.001	0.001
THIAMETHOXAM	5.000	N/D	0.001	0.001
TRIFLOXYSTROBIN	0.100	N/D	0.001	0.001

N/D = Not Detected, A/LOQ = Above LOQ Level, B/LOQ = Below LOQ Level, B/LOD = Below LOD Level



Dr. Andrew Hall, Ph.D., Chief Scientific Officer

Ben Witten, MS, MT., Lab Director

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Order #: 49154 Order Name: 450.Nat.039. Batch#: 20LL039K11 Received: 02/17/2020 Completed: 02/19/2020



RESIDUAL SOLVENTS:

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

GSL SOP 405 Prepared: 02/17/2020 18:04:23 Uploaded: 02/18/2020 09:06:54

Residual Solvent	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
ACETONE	5,000	N/D	140	20
ACETONITRILE	410	N/D	25	1
BENZENE	1	N/D	1	0.5
BUTANE	5,000	N/D	50	10
CHLOROFORM	1	N/D	1	0.5
DICHLOROETHANE	1	N/D	1	0.5
DICHLOROMETHANE	1	N/D	1	0.5
ETHANOL	5,000	B/LOQ	140	20
ETHYL ACETATE	5,000	N/D	140	20
ETHYL ETHER	5,000	N/D	140	20
SOPROPYL ALCOHOL	5,000	N/D	140	20
METHANOL	3,000	N/D	100	20
N-HEPTANE	5,000	N/D	140	20
N-HEXANE	290	N/D	18	10
PENTANE	5,000	N/D	140	20
PROPANE	5,000	N/D	20	1
TOLUENE	890	N/D	53	1
RICHLOROETHENE	1	N/D	0	0
KYLENES	2,170	N/D	130	20

Dr. Andrew Hall, Ph.D., Chief Scientific Officer

Ben Witten, MS, MT., Lab Director

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Order #: 49154 Order Name: 450.Nat.039. Batch#: 20LL039K11 Received: 02/17/2020 Completed: 02/19/2020



Microbial Analysis:

Microbial Analysis GSL SOP 406

Uploaded: 02/18/2020 17:49:14

PCR - Agilent AriaMX Test	Test Method Used	Device Used	LOD	Allowable Criteria	Actual Result	Pass/Fail
STEC E.COLI*	USP 61/62†	ARIAMX PCR	2 COPIES OF DNA	PRESENCE / ABSENT	BELOW LOD	PASS
SALMONELLA*	USP 61/62†	ARIAMX PCR	5 COPIES OF DNA	PRESENCE / ABSENT	BELOW LOD	PASS
ASPERGILLUS	USP 61/62†	ARIAMX PCR	ASP_LOD***	PRESENCE / ABSENT	BELOW LOD	PASS
YEAST AND MOLD	USP 61/62†	ARIAMX PCR	363.05518 CFU/G**	1,000	BELOW THRESHOLD	PASS
TOTAL AEROBIC BACTERIA	USP 61/62†	ARIAMX PCR	0.25316 CFU/G**	10,000	BELOW THRESHOLD	PASS
COLIFORM	USP 61/62†	ARIAMX PCR	3.41539 CFU/G**	100	BELOW THRESHOLD	PASS
ENTEROBACTERIACEAE	USP 61/62†	ARIAMX PCR	0.32951 CFU/G**	100	BELOW THRESHOLD	PASS

† USP 61 (enumeration of bacteria TAC, TYM, and ENT/Coliform), USP 62 (identifying specific species E.coli Aspergillus etc) * STEC and Salmonella run as Multiplex

** CFU/g Calculation based on Select Category Type Gummy MIP/Extract Flower matrix

*** Flavus = 2 Copies of DNA / Furnigatis = 2 Copies of DNA Niger = 20 Copies of DNA / Terrus = 10 copies of DNA

Dr. Andrew Hall, Ph.D., Chief Scientific Officer

Ben Witten, MS, MT., Lab Director

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Order #: 49154 Order Name: 450.Nat.039. Batch#: 20LL039K11 Received: 02/17/2020 Completed: 02/19/2020



Mycotoxin Analysis:

LC-MS - Shimadzu LCMS-8060 GSL SOP 401

Uploaded: 02/18/2020 12:10:58

Analyte	Action Lvl (ppb)	Results (ppb)
AFLATOXIN B1	20	N/D
AFLATOXIN B2	20	N/D
AFLATOXIN G1	20	N/D
AFLATOXIN G2	20	N/D
OCHRATOXIN A	20	N/D

Heavy Metals Analysis:

ICP-MS - Shimadzu ICPMS-2030 GSL SOP 403

Uploaded: 02/17/2020 17:35:00

Metal	Action Level (ppb)	Result (ppb)
ARSENIC (AS)	200	B/LOQ
CADMIUM (CD)	200	B/LOQ
MERCURY (HG)	100	B/LOQ
LEAD (PB)	500	B/LOQ

Lower Limit of Quantitation (LOQ) is 75 ppb

LOQ is 4ppb, LOD is 1ppb

Water Activity:

HD-3A Water Activity Meter - GSL SOP 407

Uploaded: 02/18/2020 11:06:51

Water 0.65

Filth and Foreign Materials Analysis:

Microscope - Amscope Simul-Focal Trinocular Stereo Zoom Microscope - GSL SOP 409

Uploaded: 02/18/2020 11:02:19

Pass: No Foreign Materials Detected

Dr. Andrew Hall, Ph.D., Chief Scientific Officer

Ben Witten, MS, MT., Lab Director

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Cannabinoids Test



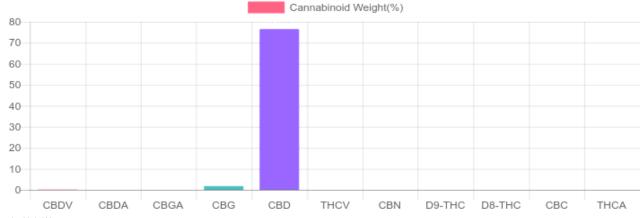
Order #: 37180 Order Name: BSO2.092519.A Batch#: BSO2.092519.A Received: 09/27/2019 Completed: 10/01/2019

Sample





GSL SOP 400	PREPARED: 09/27/20 ⁻	19 22:34:39 UPLOADED	: 09/30/2019 12:49:03
Cannabinoids	LOQ	weight(%)	mg/g
D9-THC	10 PPM	N/D	N/D
THCA	10 PPM	N/D	N/D
CBD	10 PPM	76.48%	764.84
CBDA	20 PPM	N/D	N/D
CBDV	20 PPM	0.11%	1.10
CBC	10 PPM	N/D	N/D
CBN	10 PPM	N/D	N/D
CBG	10 PPM	1.79%	17.90
CBGA	20 PPM	N/D	N/D
D8-THC	10 PPM	N/D	N/D
THCV	10 PPM	N/D	N/D
TOTAL D9-THC		N/D	N/D
TOTAL CBD*		76.48%	764.84
TOTAL CANNABINOID	S	78.38%	783.84



Reporting Limit 100 ppm

*Total CBD = CBD + CBDA x 0.877

N/D - Not Detected, B/LOQ - Below Limit of Quantification



4001 SW 47th Avenue Suite 208 Davie, FL 33314 1-833-TEST-CBD info@greenscientificlabs.com



Dr. Andrew Hall, Ph.D., CSO & Lab Director





Terpene

GERANIOL

Order #: 37180 Order Name: BSO2.092519.A Batch#: BSO2.092519.A Received: 09/27/2019 Completed: 10/01/2019

LOQ (%) LOD (%)

0.0063%

0.0067%

Results (%)

0.027%

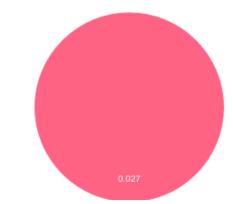


TERPENES: TOTAL (0.027%)

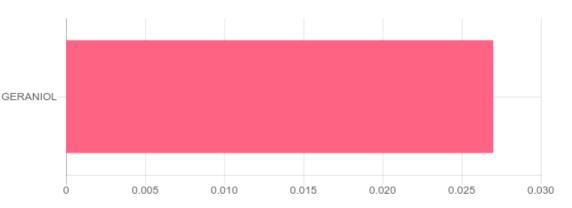
Headspace GCMS - Shimadzu GCMS QP2020 with HS20

GSL SOP 404 Prepared: 09/27/2019 22:57:12 Uploaded: 09/30/2019 17:51:50

Terpenes Breakdown



Top Terpenes Results:



Tested for but not present:

ALPHA-PINENE, CAMPHENE, BETA-MYRCENE, BETA-PINENE, 3-CARENE, ALPHA-TERPINENE, TRANS-BETA-OCIMENE, LIMONENE, P-CYMENE, CIS-BETA-OCIMENE, EUCALYPTOL, GAMMA-TERPINENE, TERPINOLENE, LINALOOL, ISOPULEGOL, CARYOPHYLLENE, HUMULENE, CIS-NEROLIDOL, TRANS-NEROLIDOL, GUAIOL, CARYOPHYLLENE OXIDE, ALPHA-BISABOLOL



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Order #: 37180 Order Name: BSO2.092519.A Batch#: BSO2.092519.A Received: 09/27/2019 Completed: 10/01/2019



PESTICIDE ANALYSIS:

GSL SOP 401

PREPARED: 09/27/2019 22:39:46

UPLOADED: 09/30/2019 20:39:11

LCMS-MS - Shimadzu LCMS-8060

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)	Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
ABAMECTIN B1A	0.100	N/D	0.005	0.001	IMAZALIL	0.100	N/D	0.005	0.001
ACEPHATE	0.100	N/D	0.001	0.001	IMIDACLOPRID	5.000	N/D	0.005	0.001
ACEQUINOCYL	0.100	N/D	0.001	0.001	KRESOXIM-METHYL	0.100	N/D	0.010	0.005
ACETAMIPRID	0.100	N/D	0.005	0.001	MALATHION	0.500	N/D	0.005	0.001
ALDICARB	0.100	N/D	0.005	0.001	METALAXYL	2.000	N/D	0.001	0.001
AZOXYSTROBIN	0.100	N/D	0.001	0.001	METHIOCARB	0.100	N/D	0.005	0.001
BIFENAZATE	0.100	N/D	0.005	0.001	METHOMYL	1.000	N/D	0.001	0.001
BIFENTHRIN	3.000	N/D	0.005	0.001	MEVINPHOS	0.100	N/D	0.001	0.001
BOSCALID	0.100	N/D	0.005	0.001	MYCLOBUTANIL	0.100	N/D	0.005	0.001
CARBARYL	0.500	N/D	0.003	0.001	NALED	0.100	N/D	0.005	0.001
CARBOFURAN	0.100	N/D	0.001	0.001	OXAMYL	0.500	N/D	0.001	0.001
CHLORANTRANILIPROLE	10.000	N/D	0.005	0.005	PACLOBUTRAZOL	0.100	N/D	0.005	0.001
CHLORPYRIFOS	0.100	N/D	0.001	0.001	PERMETHRINS	0.500	N/D	0.005	0.001
CLOFENTEZINE	0.100	N/D	0.001	0.001	PHOSMET	0.100	N/D	0.005	0.001
DAMINOZIDE	0.100	N/D	0.005	0.001	PIPERONYL	2 000	N/D	0.004	0.001
DIAZANON	0.100	N/D	0.001	0.001	BUTOXIDE	3.000	IN/D	0.001	0.001
DICHLORVOS	0.100	N/D	0.005	0.001	PRALLETHRIN	0.100	N/D	0.005	0.005
DIMETHOATE	0.100	N/D	0.001	0.001	PROPICONAZOLE	0.100	N/D	0.010	0.005
DIMETHOMORPH	2.000	N/D	0.005	0.001	PROPOXUR	0.100	N/D	0.001	0.001
ETHOPROPHOS	0.100	N/D	0.001	0.001	PYRETHRINS		N/D	0.005	0.005
ETOFENPROX	0.100	N/D	0.001	0.001	(PYRETHRIN I)	0.500			
ETOXAZOLE	0.100	N/D	0.010	0.005	PYRIDABEN	0.100	N/D	0.005	0.001
FENHEXAMID	0.100	N/D	0.005	0.001	SPINETORAM	0.100	N/D	0.001	0.001
FENOXYCARB	0.100	N/D	0.005	0.001	SPINOSAD	0.100	N/D	0.001	0.001
FENPYROXIMATE	0.100	N/D	0.001	0.001	SPIROMESIFEN	0.100	N/D	0.005	0.001
FIPRONIL	0.100	N/D	0.003	0.001	SPIROTETRAMAT	0.100	N/D	0.001	0.001
FLONICAMID	0.100	N/D	0.025	0.010	SPIROXAMINE	0.100	N/D	0.001	0.001
FLUDIOXONIL	0.100	N/D	0.003	0.001	TEBUCONAZOLE	0.100	N/D	0.005	0.001
HEXYTHIAZOX	0.100	N/D	0.005	0.001	THIACLOPRID	0.100	N/D	0.001	0.001
					THIAMETHOXAM	5.000	N/D	0.001	0.001
					TRIFLOXYSTROBIN	0.100	N/D	0.001	0.001

N/D = Not Detected, A/LOQ = Above LOQ Level, B/LOQ = Below LOQ Level, B/LOD = Below LOD Level



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Dr. Andrew Hall, Ph.D., CSO & Lab Director



Order #: 37180 Order Name: BSO2.092519.A Batch#: BSO2.092519.A Received: 09/27/2019 Completed: 10/01/2019



RESIDUAL SOLVENTS:

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

GSL SOP 405 Prepared: 09/27/2019 22:31:38 Uploaded: 09/30/2019 18:55:54

Residual Solvent	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
ACETONE	5,000	N/D	140	20
ACETONITRILE	410	N/D	25	1
BENZENE	1	N/D	1	0.5
BUTANE	5,000	N/D	50	10
CHLOROFORM	1	N/D	1	0.5
DICHLOROETHANE	1	N/D	1	0.5
DICHLOROMETHANE	1	N/D	1	0.5
ETHANOL	5,000	N/D	140	20
ETHYL ACETATE	5,000	N/D	140	20
ETHYL ETHER	5,000	N/D	140	20
SOPROPYL ALCOHOL	5,000	N/D	140	20
METHANOL	3,000	N/D	100	20
N-HEPTANE	5,000	N/D	140	20
N-HEXANE	290	N/D	18	10
PENTANE	5,000	B/LOQ	140	20
PROPANE	5,000	N/D	20	1
TOLUENE	890	N/D	53	1
RICHLOROETHENE	1	N/D	0	0
KYLENES	2,170	N/D	130	20



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Dr. Andrew Hall, Ph.D., CSO & Lab Director



Order #: 37180 Order Name: BSO2.092519.A Batch#: BSO2.092519.A Received: 09/27/2019 Completed: 10/01/2019



Heavy Metals Analysis:

ICP-MS - Shimadzu ICPMS-2030 GSL SOP 403

Uploaded: 09/30/2019 21:50:39

Metal	Action Level (ppb)	Result (ppb)
ARSENIC (AS)	200	B/LOQ
CADMIUM (CD)	200	B/LOQ
MERCURY (HG)	100	B/LOQ
LEAD (PB)	500	B/LOQ

Lower Limit of Quantitation (LOQ) is 75 ppb



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Dr. Andrew Hall, Ph.D., CSO & Lab Director