Cannabinoids Test SHIMADZU INTEGRATED UPLC-PDA



Order #: 46653 Order Name: Original Hemp -Sleep Capsule Batch#: 46481 Received: 01/17/2020 Completed: 01/27/2020

Arise Bioscience 4855 Technology Way, Suite 500 Boca Raton FL, 33431 (866) 407-1164



LIDI OADED: 01/20/2020 14:10:52

Sample



1 capsule = 0.735 grams per capsule x Cannabinoid concentration

GSL SOP 400	PREPARED: 01/17/2020 17:57:58		UPLOADED: 01/20/2020 14:	
Cannabinoids	LOQ	weight(%)	mg/g	mg/capsule
D9-THC	10 PPM	0.046%	0.459	0.3
THCA	10 PPM	N/D	N/D	N/D
CBD	10 PPM	1.949%	19.489	14.3
CBDA	20 PPM	0.016%	0.160	0.1
CBDV	20 PPM	0.013%	0.127	0.1
CBC	10 PPM	0.119%	1.194	0.9
CBN	10 PPM	0.013%	0.126	0.1
CBG	10 PPM	N/D	N/D	N/D
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		0.046%	0.046%	0.3
TOTAL CBD*		1.963%	19.629	14.4
TOTAL CANNABINOIDS		2.156%	21.555	15.8

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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

Blu

Ben Witten, MS, MT., Lab Director

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(ppm) (ppm) (ppm)

0.003

0.003

0.003

0.003

0.003

0.001

0.001

0.001

0.001

0.001

PESTICIDE ANALYSIS:

GSL SOP 401

PREPARED: 01/17/2020 18:03:53

UPLOADED: 01/21/2020 08:36:07

(ppm)

1.000

0.100

Action Level Results LOQ LOD

N/D

N/D

N/D

N/D

N/D

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

0.001	FLUDIOXONIL	0.100
0.001	PARATHION-METHYL	0.100
0.001	PENTACHLORONITROBENZENE	0.100

Pesticide

FIPRONIL

CYPERMETHRIN

LCMS-MS - Shimadzu LCMS-8060

Pesticide	Action Level	Results	LOQ	LOD
	(ppm)	(ppm)	(ppm)	(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
DIAZANON	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	3.000	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	0.500	N/D	0.005	0.005
(PYRETHRIN I)	0.500	IN/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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RESIDUAL SOLVENTS:

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

GSL SOP 405 Prepared: 01/17/2020 18:49:58 Uploaded: 01/20/2020 18:09:10

Residual Solvent	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
ACETONE	5,000	B/LOQ	140	20
ACETONITRILE	410	N/D	25	1
BENZENE	1	N/D	1	0.5
UTANE	5,000	N/D	50	10
HLOROFORM	1	N/D	1	0.5
ICHLOROETHANE	1	N/D	1	0.5
DICHLOROMETHANE	1	N/D	1	0.5
THANOL	5,000	182	140	20
THYL ACETATE	5,000	N/D	140	20
THYL ETHER	5,000	N/D	140	20
SOPROPYL ALCOHOL	5,000	B/LOQ	140	20
/IETHANOL	3,000	N/D	100	20
I-HEPTANE	5,000	N/D	140	20
I-HEXANE	290	N/D	18	10
PENTANE	5,000	N/D	140	20
PROPANE	5,000	N/D	20	1
OLUENE	890	N/D	53	1
RICHLOROETHENE	1	N/D	0	0
YLENES	2,170	N/D	130	20

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Microbial Analysis:

Microbial Analysis GSL SOP 406

Uploaded: 01/25/2020 19:50:14

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

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Result (ppb)

B/LOQ

B/LOQ

B/LOQ

B/LOQ

Mycotoxin Analysis:

LC-MS - Shimadzu LCMS-8060 GSL SOP 401

Uploaded: 01/21/2020 08:36:06

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

MetalAction Level (ppb)ARSENIC (AS)200CADMIUM (CD)200MERCURY (HG)100

500

Lower Limit of Quantitation (LOQ) is 75 ppb

Heavy Metals Analysis:

ICP-MS - Shimadzu ICPMS-2030

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GSL SOP 403

LEAD (PB)

LOQ is 4ppb, LOD is 1ppb

Water Activity:

HD-3A Water Activity Meter - GSL SOP 407

Uploaded: 01/20/2020 11:01:44

Water 0.61

Filth and Foreign Materials Analysis:

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

Uploaded: 01/20/2020 11:23:27

Pass: No Foreign Materials Detected

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