Cannabinoids Test SHIMADZU INTEGRATED UPLC-PDA

GSL SOP 400



Order #: 50315 Order Name: Original Hemp 2000mg Vanilla Batch#: 46828 Received: 03/04/2020 Completed: 03/09/2020 Arise Bioscience

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



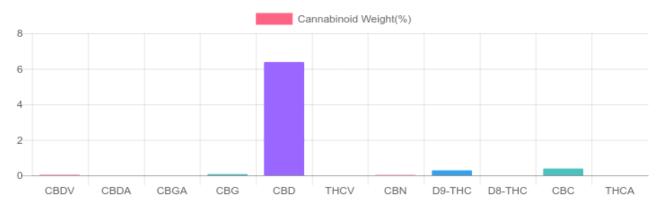
Sample



Cannabinoids LOQ mg/bottle weight(%) mg/g D9-THC 10 PPM 0.280% 2.800 79.4 THCA 10 PPM N/D N/D N/D CBD 10 PPM 6.382% 63.820 1,809.3 CBDA 20 PPM N/D N/D N/D CBDV 20 PPM 0.029% 0.293 8.3 СВС 10 PPM 0.379% 3.786 107.3 CBN 10 PPM 0.017% 0.173 4.9 CBG 10 PPM 0.071% 0.706 20.0 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 0.280% 0.280% 79.4 TOTAL CBD* 6.382% 63.820 1,809.3 TOTAL CANNABINOIDS 7.158% 71.578 2,029.2

PREPARED: 03/04/2020 15:44:42

1 bottle = 30 ml per bottle x density (0.945) x Cannabinoid concentration



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

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PREPARED: 03/04/2020 15:53:32



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PESTICIDE ANALYSIS:

GSL SOP 401

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 Level Results			LOD
Festicide	(ppm)	(ppm)	(ppm)	(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				
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

Bul

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: 03/04/2020 16:23:12

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
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: 03/06/2020 17:53:26

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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Mycotoxin Analysis:

LC-MS - Shimadzu LCMS-8060 GSL SOP 401

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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

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

Heavy Metals Analysis:

ICP-MS - Shimadzu ICPMS-2030

Uploaded: 03/05/2020 16:39:52

GSL SOP 403

LOQ is 4ppb, LOD is 1ppb

Water Activity:

HD-3A Water Activity Meter - GSL SOP 407

Uploaded: 03/04/2020 13:50:06

Water 0.66

Filth and Foreign Materials Analysis:

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

Uploaded: 03/04/2020 13:51:13

Pass: No Foreign Materials Detected

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