

CERTIFICATE OF ANALYSIS

ISO/IEC 17025:2017 ACCREDITATION #103104



Order #: 45583
 Order Name: Peppermint
 Tincture
 Batch#: 1&2
 Received: 01/08/2020
 Completed: 01/14/2020

Leafwell Botanicals, Inc.
 2535 Copper Ridge Dr. Unit B
 Steamboat Springs Colorado, 80487
 (954) 822-4818
 abe@leafwellbotanicals.com



PESTICIDE ANALYSIS:

GSL SOP 401

PREPARED: 01/08/2020 16:56:07

UPLOADED: 01/10/2020 08:11:27

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 (ppm)	Results (ppm)	LOQ (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
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 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 (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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 1-833 TEST CBD



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RESIDUAL SOLVENTS:

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

GSL SOP 405

Prepared: 01/08/2020 17:21:18

Uploaded: 01/09/2020 09:19:16

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
ISOPROPYL 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
TRICHLOROETHENE	1	N/D	0	0
XYLENES	2,170	N/D	130	20

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Microbial Analysis:

Microbial Analysis GSL SOP 406

Uploaded: 01/13/2020 18:15:43

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

† 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

*** Flavus = 2 Copies of DNA / Fumigatis = 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

Uploaded: 01/09/2020 15:41:28

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

LOQ is 4ppb, LOD is 1ppb

Water Activity:

HD-3A Water Activity Meter - GSL SOP 407

Uploaded: 01/09/2020 09:54:45

Water

0.53

Filth and Foreign Materials Analysis:

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

Uploaded: 01/09/2020 09:52:15

Pass: No Foreign Materials Detected

Heavy Metals Analysis:

ICP-MS - Shimadzu ICPMS-2030
GSL SOP 403

Uploaded: 01/09/2020 18:21:19

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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