

Order #: 49585 Order Name: Koi Naturals Peppermint 500mg Batch#: 01335PM500 Received: 02/21/2020 Completed: 02/25/2020



Koi CBD LLC 14631 Best Ave Norwalk California, 90650 (877) 774-4779 morgan@koicbd.com



Sample



N/D D9-THC 1.661% Total CBD

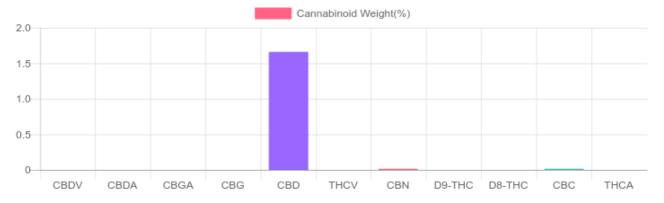
479.4 mg Cannabinoids per unit 470.8 mg CBD per unit

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

Cannabinoids Test

SHIMADZU INTEGRATED UPLC-PDA

GSL SOP 400	PREPARED: 02/	/21/2020 14:56:31	UPLOADED: 02/22/2020 08:20:34		
Cannabinoids	LOQ	weight(%)	mg/g	mg/unit	
D9-THC	10 PPM	N/D	N/D	N/D	
THCA	10 PPM	N/D	N/D	N/D	
CBD	10 PPM	1.661%	16.606	470.8	
CBDA	20 PPM	N/D	N/D	N/D	
CBDV	20 PPM	N/D	N/D	N/D	
CBC	10 PPM	0.016%	0.155	4.4	
CBN	10 PPM	0.015%	0.149	4.2	
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		N/D	N/D	N/D	
TOTAL CBD*		1.661%	16.606	470.8	
TOTAL CANNABINOIDS		1.692%	16.910	479.4	



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

Ben Witten, MS, MT., Lab Director

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GSL SOP 404

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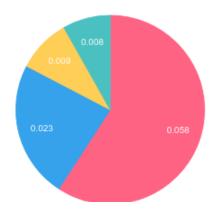
TERPENES: TOTAL (0.118%)

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

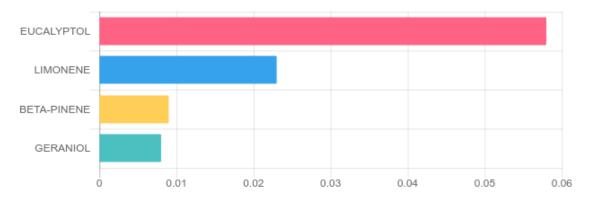
Terpene	Results (%)	LOQ (%)	LOD (%)
ALPHA-PINENE	B/LOQ	0.0067%	0.0063%
BETA-MYRCENE	B/LOQ	0.0067%	0.0063%
BETA-PINENE	0.009%	0.0067%	0.0063%
CARYOPHYLLENE	B/LOQ	0.0067%	0.0063%
EUCALYPTOL	0.058%	0.0067%	0.0063%
GERANIOL	0.008%	0.0067%	0.0063%
LIMONENE	0.023%	0.0067%	0.0063%
TRANS-BETA-OCIMENE	B/LOQ	0.0067%	0.0031%

Terpenes Breakdown

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Top Terpenes Results:



Tested for but not present:

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

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PESTICIDE ANALYSIS:

GSL SOP 401 PREPARED: 02/21/2020 18:37:19 UPLOADED: 02/23/2020 19:52:57

GCMS-MS - Shimadzu GCMS-TQ8040

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

Pesticide	Action Leve	LOQ	LOD	
resticide	(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
PENTACHLORONITROBENZEN	E 0.100	N/D	0.003	0.001

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	IMIDACLOPRID	5.000	N/D	0.005	0.001
ACEPHATE	0.100	N/D	0.001	0.001	KRESOXIM-METHYL	0.100	N/D	0.010	0.005
ACEQUINOCYL	0.100	N/D	0.001	0.001	MALATHION	0.500	N/D	0.005	0.001
ACETAMIPRID	0.100	N/D	0.005	0.001	METALAXYL	2.000	N/D	0.001	0.001
ALDICARB	0.100	N/D	0.005	0.001	METHIOCARB	0.100	N/D	0.005	0.001
AZOXYSTROBIN	0.100	N/D	0.001	0.001	METHOMYL	1.000	N/D	0.001	0.001
BIFENAZATE	0.100	N/D	0.005	0.001	MEVINPHOS	0.100	N/D	0.001	0.001
BIFENTHRIN	3.000	N/D	0.005	0.001	MYCLOBUTANIL	0.100	N/D	0.005	0.001
BOSCALID	0.100	N/D	0.005	0.001	NALED	0.100	N/D	0.005	0.001
CARBARYL	0.500	N/D	0.003	0.001	OXAMYL	0.500	N/D	0.001	0.001
CARBOFURAN	0.100	N/D	0.001	0.001	PACLOBUTRAZOL	0.100	N/D	0.005	0.001
CHLORANTRANILIPROLE	10.000	N/D	0.005	0.005	PERMETHRINS	0.500	N/D	0.005	0.001
CHLORPYRIFOS	0.100	N/D	0.001	0.001	PHOSMET	0.100	N/D	0.005	0.001
CLOFENTEZINE	0.100	N/D	0.001	0.001	PIPERONYL	3.000	N/D	0.004	0.004
DAMINOZIDE	0.100	N/D	0.005	0.001	BUTOXIDE	3.000	N/D	0.001	0.001
DIAZINON	0.100	N/D	0.001	0.001	PRALLETHRIN	0.100	N/D	0.005	0.005
DICHLORVOS	0.100	N/D	0.005	0.001	PROPICONAZOLE	0.100	N/D	0.010	0.005
DIMETHOATE	0.100	N/D	0.001	0.001	PROPOXUR	0.100	N/D	0.001	0.001
DIMETHOMORPH	2.000	N/D	0.005	0.001	PYRETHRINS	0.500	N/D	0.005	0.005
ETHOPROPHOS	0.100	N/D	0.001	0.001	(PYRETHRIN I)	0.500	IN/D	0.005	0.005
ETOFENPROX	0.100	N/D	0.001	0.001	PYRIDABEN	0.100	N/D	0.005	0.001
ETOXAZOLE	0.100	N/D	0.010	0.005	SPINETORAM	0.100	N/D	0.001	0.001
FENHEXAMID	0.100	N/D	0.005	0.001	SPINOSAD	0.100	N/D	0.001	0.001
FENOXYCARB	0.100	N/D	0.005	0.001	SPIROMESIFEN	0.100	N/D	0.005	0.001
FENPYROXIMATE	0.100	N/D	0.001	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
HEXYTHIAZOX	0.100	N/D	0.005	0.001	TEBUCONAZOLE	0.100	N/D	0.005	0.001
IMAZALIL	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

 ${\sf N/D} = {\sf Not\ Detected},\ {\sf A/LOQ} = {\sf Above\ LOQ\ Level},\ {\sf B/LOQ} = {\sf Below\ LOQ\ Level},\ {\sf B/LOD} = {\sf Below\ LOD\ Level}$

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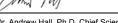
RESIDUAL SOLVENTS:

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

GSL SOP 405

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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
THYL 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
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

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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

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^{**} 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 LvI (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

Heavy Metals Analysis:

ICP-MS - Shimadzu ICPMS-2030

GSL SOP 403

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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

Water Activity:

HD-3A Water Activity Meter - GSL SOP 407

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Water

0.49

Filth and Foreign Materials Analysis:

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

Uploaded: 02/21/2020 18:33:28

Pass: No Foreign Materials Detected

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