

Certificate of Analysis

Order #: BAL191230-020012 Order Date: 2019-12-30 Collection Date: 2019-12-31 Report Date: 2020-01-04

Batch #: 0119351F4 Initial Gross Weight: 57647mg
 Sample #: AAAA842 Net Weight: 6.577mg
 Specimen Type: CBD/HEMP Derivative Products (Ingestion) Density: 0.9506mg
 Extracted From: Industrial Hemp Method: SOP-3
 Description: 83mg/ml Full Spectrum CBD Oil Tincture


Potency Tested	Residual Solvents Passed	Heavy Metals Passed
Mycotoxins Passed	Water Activity Passed	Microbiology Petrifilm Tested
Terpenes Tested	Pesticides Passed	


CBD Total 9.422% 0.620mg	THC Total 0.224% 0.015mg	CBG Total 0.063% 0.004mg
CBN Total 0.015% 0.001mg	Other Cannabinoids Total 0.198% 0.013mg	Total Detected Cannabinoids 9.921% 0.652mg

Potency - 11 (Tested) (HPLC)

Analyte	Result (mg/ml)	(%)	LOQ (%)	Analyte	Result (mg/ml)	(%)	LOQ (%)	Analyte	Result (mg/ml)	(%)	LOQ (%)
CBC	1.362	0.143	0.001	CBD	89.566	9.422	0.001	CBDA	<LOQ		0.001
CBDV	0.518	0.054	0.001	CBG	0.595	0.063	0.001	CBGA	<LOQ		0.001
CBN	0.142	0.015	0.001	Delta-8-THC	<LOQ		0.001	Delta-9-THC	2.126	0.224	0.001
THCA-A	<LOQ		0.001	THCV	<LOQ		0.001	Total CBD	89.566	9.422	0.001
Total THC	2.126	0.224	0.001								

*Total CBD = CBD + (CBD-A * 0.877), *Total THC = THCA-A * 0.877 + Delta 9 THC, *CBG Total = (CBGA * 0.877) + CBG, *CBN Total = (CBNA * 0.877) + CBN, *Other Cannabinoids Total = CBC + CBDV + THCV + THCV-A, *Total Detected Cannabinoids = CBD Total + CBG Total + CBN Total + THC Total + CBC + CBDV + THCV + THCV-A, *Total (mg) = Total (%) ÷ 100 * Net Weight(mg) (mg/ml) = Milligrams per Milliliter, LOQ = Limit of Quantitation


 Xueli Gao Lab Toxicologist
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 Aixia Sun Principal Scientist
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Residual Solvents - FL (Passed) **(GC/GCMS)**

Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)	Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)	Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)
1,1-Dichloroethen-e	8	<LOQ	0.132	1,2-dichloroethan-e	5	<LOQ	0.032	Acetone	5000	<LOQ	12
Benzene	2	<LOQ	0.016	Butanes	2000	<LOQ	13.32	Acetonitrile	410	<LOQ	0.96
Ethanol	5000	<LOQ	16	Ethyl Acetate	5000	<LOQ	6.4	Chloroform	60	<LOQ	0.032
Ethylene Oxide	5	<LOQ	0.32	Heptane	5000	<LOQ	8	Ethyl Ether	5000	<LOQ	8
Isopropyl alcohol	500	<LOQ	8	Methanol	3000	<LOQ	4	Hexane	290	<LOQ	0.8
Pentane	5000	<LOQ	12	Propane	2100	<LOQ	26.668	Methylene chloride	600	<LOQ	2
Total Xylenes	2170	<LOQ	7.2	Trichloroethene	80	<LOQ	0.4	Toluene	890	<LOQ	2.4

(ppm) = Parts per Million, (ppm) = (µg/g), , LOQ = Limit of Quantitation

Heavy Metals (Passed) **(ICP-MS)**

Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)
Arsenic (As)	1500	<LOQ	100	Cadmium (Cd)	500	<LOQ	100	Lead (Pb)	500	<LOQ	100
Mercury (Hg)	3000	<LOQ	100								

(ppb) = Parts per Billion, (ppb) = (µg/kg), , LOQ = Limit of Quantitation

Mycotoxins (Passed) **(LCMS/MS)**

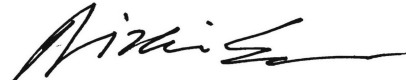
Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)
Aflatoxin B1		<LOQ	6	Aflatoxin B2		<LOQ	6	Aflatoxin G1		<LOQ	6
Aflatoxin G2		<LOQ	6	Aflatoxin Total	20	<LOQ	6	Ochratoxin A	20	<LOQ	12

(ppb) = Parts per Billion, (ppb) = (µg/kg), , LOQ = Limit of Quantitation



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<p>Batch #: 0119351F4 Sample #: AAAA842 Specimen Type: CBD/HEMP Derivative Products (Ingestion) Extracted From: Industrial Hemp Description: 83mg/ml Full Spectrum CBD Oil Tincture</p>	<p>Initial Gross Weight: 57647mg Net Weight: 6.577mg Density: 0.9506mg Method: SOP-3</p>	
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Water Activity (Passed)

(AquaLab
4TE)

Analyte	Action Level (aw)	Result (aw)
Water Activity	0.65	0.285

(aw) = aw

Microbiology #5 (Petrifilm/Plating) (Tested)

(Petrifilm)

Analyte	Result (cfu/g)	LOQ (cfu/g)	Analyte	Result (cfu/g)	LOQ (cfu/g)	Analyte	Result (cfu/g)	LOQ (cfu/g)
Aerobic Bacteria	<10	10	E. Coli / Coliform	<10	10	Yeast/Mold	<10	10

(cfu/g) = Colony Forming Unit per Gram, , LOQ = Limit of Quantitation



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Terpenes - FL (Tested)

(GC/GCMS)

Analyte	Result (mg/g)	(%)	LOQ (%)	Analyte	Result (mg/g)	(%)	LOQ (%)	Analyte	Result (mg/g)	(%)	LOQ (%)
(+)-Cedrol	<LOQ		0.001	(R)-(+)-Limonene	0.033	0.003	0.001	3-Carene	<LOQ		0.001
Alpha-Bisabolol	0.115	0.011	0.001	alpha-Cedrene	<LOQ		0.001	alpha-Humulene	0.107	0.011	0.001
alpha-Phellandren-e	<LOQ		0.001	alpha-Pinene	0.045	0.004	0.001	alpha-Terpinene	<LOQ		0.001
Borneol	<LOQ		0.001	beta-Myrcene	0.365	0.036	0.001	beta-Pinene	<LOQ		0.001
Caryophyllene oxide	<LOQ		0.001	Camphene	<LOQ		0.001	Camphors	<LOQ		0.001
Fenchyl Alcohol	<LOQ		0.001	cis-Nerolidol	<LOQ		0.001	Eucalyptol	<LOQ		0.001
Guaiol	0.035	0.004	0.001	Farnesene	0.415	0.041	0.001	Fenchone	<LOQ		0.001
Isopulegol	<LOQ		0.001	gamma-Terpinene	<LOQ		0.001	Geraniol	<LOQ		0.001
Ocimene	<LOQ		0.001	Hexahydrothymol	<LOQ		0.001	Geranyl acetate	<LOQ		0.001
Sabinene Hydrate	<LOQ		0.001	Linalool	<LOQ		0.001	Isoborneol	<LOQ		0.001
trans-beta-Ocimen-e	<LOQ		0.001	Pulegone	<LOQ		0.001	Nerol	<LOQ		0.001
				Terpineol	<LOQ		0.001	Sabinene	<LOQ		0.001
				trans-Caryophylle-ne	0.282	0.028	0.001	Terpinolene	<LOQ		0.001
								trans-Nerolidol	<LOQ		0.001
								Valencene	<LOQ		0.001

(mg/g) = Milligram per Gram, , LOQ = Limit of Quantitation



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Pesticides (Passed) (LCMS/MS)

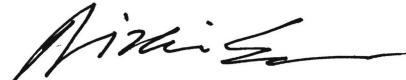
Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)
Abamectin	300	<LOQ	28.23	Acephate	3000	<LOQ	30	Acequinocyl	2000	<LOQ	48
Acetamiprid	3000	<LOQ	30	Aldicarb	100	<LOQ	30	Azoxystrobin	3000	<LOQ	10
Bifentazate	3000	<LOQ	30	Bifenthrin	500	<LOQ	30	Chlorfenapyr	100	<LOQ	48
Chlorpyrifos	100	<LOQ	30	Clofentezine	500	<LOQ	30	Coumaphos	100	<LOQ	30
Cyfluthrin	1000	<LOQ	30	Cypermethrin	1000	<LOQ	30	Daminozide	100	<LOQ	30
DDVP(Dichlorvos)	100	<LOQ	30	Diazinon	200	<LOQ	30	Dimethoate	100	<LOQ	30
Dimethomorph	3000	<LOQ	30	Ethoprop(hos)	100	<LOQ	30	Etofenprox	100	<LOQ	30
Etoazole	1500	<LOQ	30	Fenhexamid	3000	<LOQ	30	Fenoxycarb	100	<LOQ	30
Fipronil	100	<LOQ	30	Fonicamid	2000	<LOQ	30	Fludioxonil	3000	<LOQ	30
Hexythiazox	2000	<LOQ	30	Imazalil	100	<LOQ	30	Imidacloprid	3000	<LOQ	30
Kresoxim Methyl	1000	<LOQ	30	Malathion A	2000	<LOQ	30	Metalaxyl	3000	<LOQ	10
Methiocarb	100	<LOQ	30	Methomyl	100	<LOQ	30	Mevinphos	100	<LOQ	30
Myclobutanil	3000	<LOQ	30	Naled	500	<LOQ	30	Oxamyl	500	<LOQ	30
Paclobutrazol	100	<LOQ	30	Parathion-methyl	100	<LOQ	48	Pentachloronitrobenzene	200	<LOQ	30
Permethrin	1000	<LOQ	30	Phosmet	200	<LOQ	30	Piperonylbutoxide	3000	<LOQ	30
Prallethrin	400	<LOQ	30	Propiconazole	1000	<LOQ	30	Propoxur	100	<LOQ	30
Pyrethrins	1000	<LOQ	30	Pyridaben	3000	<LOQ	30	Spinetoram	3000	<LOQ	30
Spinosyn A	3000	<LOQ	30	Spinosyn D	3000	<LOQ	30	Spiromesifen	3000	<LOQ	30
Spirotetramat	3000	<LOQ	30	Spiroxamine	100	<LOQ	30	Tebuconazole	1000	<LOQ	30
Thiacloprid	100	<LOQ	30	Thiamethoxam	1000	<LOQ	30	Trifloxystrobin	3000	<LOQ	30

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