

CERTIFICATE OF ANALYSIS

PRODUCT NAME: CBD Tincture - Natural
PRODUCT STRENGTH: 225 mg
LOT NUMBER: 20LL111K12
BEST BY DATE: 10/20/2021
HEMP EXTRACT LOT 112619

[*Click on the links to view third-party reports*](#)

Physical Attributes

Test	Method	Specification	Results
Color	SOP-100	Golden to Amber	PASS
Odor	SOP-100	Characteristic - Olive and hemp	PASS
Appearance	SOP-100	Golden to Amber oil in brown glass bottle with dropper	PASS
Primary Package Eval.	SOP-132	Container clean and free of filth. Container caps tight and shrink bands intact	PASS
Secondary Package Eval.	SOP-132	Labeling Compliance Checked, Cartons sturdy and clear	PASS

Review of Third-Party Analysis

Panel	Method	Specification	Results	Pass/Fail
Potency - Total CBD	SOP-111	213.75-281.25 mg CBD LOQ*: 10 PPM† (0.001%)	233mg	PASS
Potency - D9-THC	SOP-111	None Detected LOQ: 10 PPM (0.001%)	ND	PASS
Compliant Pesticide Panel	SOP-111	Florida State Hemp Program Rule 5B-57.014: Action Limits for Pesticides	ND	PASS
Microbial - Stec E.Coli	SOP-111	Complies with USP 61/62	Below LOQ	PASS
Microbial - Salmonella	SOP-111	Complies with USP 61/62	Below LOQ	PASS
Microbial - Mold	SOP-111	Complies with USP 61/62	Below LOQ	PASS
CA Compliant Heavy Metal Panel	SOP-111	Arsenic (As): ≤1.5 PPM Cadmium (Cd): ≤0.5 PPM Mercury (Hg): ≤1.0 PPM Lead (Pb): ≤0.5 PPM	Below LOQ	PASS

* Level of Quantitation, † Parts Per Million

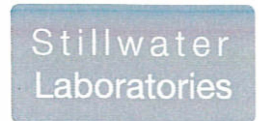
Quality Certified by: *Darcie Moran* 04/22/2020
 Darcie Moran Manager of Quality Assurance Date

Natural 225mg 20LL111K12

Certificate of Analysis



total cannabinoids	Δ9-THC	THCa	total THC
244 mg	0 mg	0 mg	0 mg
per	CBD	CBDa	total CBD
30mL	233 mg	0 mg	233 mg



<https://portal.a2la.org/scopepdf/4961-01.pdf>

Sample Handling

test ID	sample wt	0.9 g
type	order	7171
lab ID	sample date	4/30/2020
unit	unit weight	27.5 g

Methods

method	equipment
weights	MSP-7.3.1.3 AUX120.1
potency	MSP-7.5.1.5 LC-2030
terpenes	MSP-7.5.1.7 QP2020/HS20
pesticides	MSP-7.5.1.8 LC-8060
mycotoxins	MSP-7.5.1.8 LC-8060
microbial	MSP-7.5.1.9 Hardy Diag
solvents	MSP-7.5.1.6 QP2020/HS20
metals	MSP-7.5.1.1 ICPMS2030

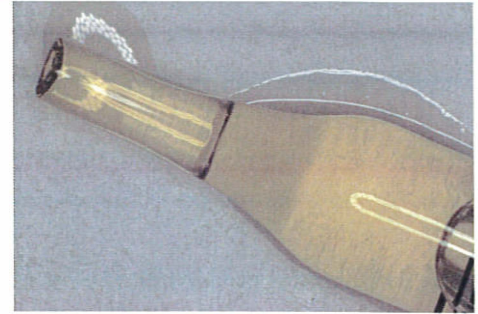
tincture

HERBAL

- caryophyllene
- humulene
- terpinolene
- ocimene
- beta pinene
- alpha pinene
- limonene
- myrcene
- linalool



FLORAL



Potency

ppm	30mL	estimated error
tetrahydrocannabinolic acid (THCa)	0%	0 mg ± 0.45 mg
Δ ⁹ -tetrahydrocannabinol (Δ ⁹ THC)	0%	0 mg ± 0.45 mg
Δ ⁸ -tetrahydrocannabinol (Δ ⁸ THC)	0%	0 mg ± 0.45 mg
tetrahydrocannabivarin (THCv)	0%	0 mg ± 0.45 mg
cannabidiolic acid (CBDa)	0%	0 mg ± 0.45 mg
cannabidiol (CBD)	85%	233 mg ± 8.02 mg
cannabidivarin (CBDv)	0%	1 mg ± 0.67 mg
cannabigerolic acid (CBGa)	0%	0 mg ± 0.45 mg
cannabigerol (CBG)	0.4%	10 mg ± 1.73 mg
cannabinol (CBN)	0%	0 mg ± 0.45 mg
cannabichromene (CBC)	0%	0 mg ± 0.45 mg

Terpenes

%	estimated error	%	estimated error	%	estimated error
β-myrcene	0.000% ± 0.0016%	camphene	0.000% ± 0.0016%	guaiol	0.000% ± 0.0016%
β-caryophyllene	0.000% ± 0.0016%	Δ ³ -carene	0.000% ± 0.0016%	β-bisabolol	0.000% ± 0.0016%
α-pinene	0.000% ± 0.0016%	a-terpinene	0.000% ± 0.0016%	eucalyptol	0.000% ± 0.0016%
β-pinene	0.000% ± 0.0016%	para-cymene	0.000% ± 0.0016%		
D-limonene	0.000% ± 0.0017%	g-terpinene	0.000% ± 0.0016%		
linalool	0.000% ± 0.0016%	(-)-isopulegol	0.000% ± 0.0016%		
ocimene	0.000% ± 0.0033%	geraniol	0.000% ± 0.0016%		
terpinolene	0.000% ± 0.0016%	cis-nerolidol	0.000% ± 0.0016%		
α-humulene	0.000% ± 0.0016%	trans-nerolidol	0.000% ± 0.0016%		

total terpenes
0.00%

Solvents

MT limit	0DZ72	LOQ
propane	5,000	1 ppm <10ppm
butanes	5,000	0 ppm <10ppm
pentanes	5,000	0 ppm <10ppm
hexanes	290	0 ppm <10ppm
cyclohexane	3,880	0 ppm <10ppm
heptanes	5,000	0 ppm <10ppm
methanol	3,000	9 ppm <10ppm
isopropanol	5,000	0 ppm <10ppm
acetone	5,000	0 ppm <10ppm
ethyl acetate	5,000	0 ppm <10ppm
benzene	2	0 ppm <0.2ppm
toluene	890	0 ppm <10ppm
xylenes	2,170	0 ppm <10ppm
chloroform	2	0 ppm <0.2ppm
dichloromethane	600	0 ppm <10ppm

Pesticides (MT)

MT limit	0DZ72	LOQ
abamectin	0.00 ppm	<10ppb
acacquinocyl	0.00 ppm	<10ppb
bifenazate	0.00 ppm	<10ppb
bifenthrin	0.00 ppm	<10ppb
chlormequat cl.	0.00 ppm	<10ppb
cyfluthrin	0.00 ppm	<80ppb
diaminazide	0.00 ppm	<10ppb
etoxazole	0.00 ppm	<10ppb
fenoxycarb	0.00 ppm	<10ppb
imazalil	0.00 ppm	<10ppb
imidacloprid	0.00 ppm	<10ppb
myclobutanil	0.00 ppm	<10ppb
paclobutrazol	0.00 ppm	<10ppb
pyrethrins	0.00 ppm	<10ppb
spinosad	0.00 ppm	<10ppb
spiromesifen	0.00 ppm	<10ppb
spirotetramat	0.00 ppm	<10ppb
trifloxystrobin	0.00 ppm	<10ppb

Pesticides (other)

0DZ72	LOQ
acephate	0.00 ppm <10ppb
acetamiprid	0.00 ppm <10ppb
aldicarb	0.00 ppm <10ppb
azoxystrobin	0.00 ppm <10ppb
boscalid	0.00 ppm <10ppb
carbaryl	0.00 ppm <10ppb
carboluran	0.00 ppm <10ppb
chlorantraniliprole	0.00 ppm <10ppb
chlorpyrifos	0.00 ppm <10ppb
clofentezine	0.00 ppm <10ppb
cypermethrin	0.00 ppm <10ppb
diazinon	0.00 ppm <10ppb
dichlorvos	0.00 ppm <10ppb
dimethoate	0.00 ppm <10ppb
etofenprox	0.00 ppm <10ppb
fenpyroximate	0.00 ppm <10ppb
flupyrifur	0.00 ppm <10ppb
flonicamid	0.00 ppm <10ppb
fludioxonil	0.00 ppm <10ppb
hexythiazox	0.00 ppm <10ppb
kresoxym-methyl	0.00 ppm <10ppb
malathion	0.00 ppm <10ppb
metalaxyl	0.00 ppm <10ppb
methiocarb	0.00 ppm <10ppb
methomyl	0.00 ppm <10ppb
oxamyl	0.00 ppm <10ppb
permethrins	0.00 ppm <10ppb
phosmet	0.00 ppm <10ppb
piperonyl butoxide	0.00 ppm <10ppb
prallethrin	0.00 ppm <10ppb
propiconazole	0.00 ppm <10ppb
pyridaben	0.00 ppm <10ppb
spiroxamine	0.00 ppm <10ppb
tebuconazole	0.00 ppm <10ppb
thiacloprid	0.00 ppm <10ppb
thiamethoxam	0.00 ppm <10ppb

Toxic Metals

MT limit	0DZ72	LOQ
arsenic	2 ppm	0.0 ppm <10ppb
cadmium	4.1 ppm	0.0 ppm <10ppb
lead	1.2 ppm	0.0 ppm <10ppb
mercury	0.4 ppm	0.0 ppm <10ppb

Comments

Extraction using MSP-7.5.1.2b.concentrate
Assumed density 0.9153

Microbial

MT limit	0DZ72	LOQ
E. coli	10 CFU	0 CFU <10 CFU/g
Salmonella sp.	10 CFU	0 CFU <10 CFU/g
molds	10000 CFU	0 CFU <10k CFU/g
Allatoxin B1,B2,G1,G2	20 ppb	0 ppb <20 ppb
Ochratoxin A	20 ppb	0 ppb <20 ppb

Certified by:

Ron Brost

Ron Brost, PhD PEng (Chem)

Director
6073 US93N, Olney MT 59927
406-881-2019 rdb@stlwb.com

* All testing was completed onsite at 6073 US93N, Olney MT ** Potency (cannabinoid concentration) is calculated from the equation: [cannabinoid] = [cannabinoid]_{APL} X volume_{extraction}/m_{dry}. Terpene concentration is calculated from the equation: [terpene] = (terpene mass)_{GCMS} / m_{dry}. *** Decarboxylated cannabinoid concentration is calculated from the equation XXX_{total} = 0.877 X XXX_a + XXX. Standards are used to calibrate the resulting data and estimate error using a standard estimate of error method; this is combined with error from weighing and dilution using the propagation of error formula s_p² = Σ (∂f/∂x)_i² where i is the contributor to error. The 95% confidence range is calculated from the equation: (concentration) ± t_{CL90} X s_p. Sampling error is not



total cannabinoids 84.7%
 CBD decarb total 80.7%
 Δ9-THC ND

This Product Has Been Tested and Complies with 7USC1639o(1) Definition of Hemp



Stillwater Laboratories

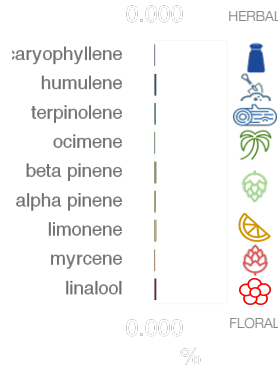
https://portal.a2la.org/scopepdf/4961-01.pdf

Sample Handling

test ID 6654 sample date 2/24/20 4:49 PM
 order 6654 labID OBR66 weight
 source

Methods	method	equipment
weights	MSP-7.3.1.3	AUX120.1
potency	MSP-7.5.1.5	LC-2030
terpenes	MSP-7.5.1.7	QP2020/HS20
pesticides	MSP-7.5.1.8	LC-8060
mycotoxins	MSP-7.5.1.8	LC-8060
microbial	MSP-7.5.1.9	Hardy Diag
solvents	MSP-7.5.1.6	QP2020/HS20
metals	MSP-7.5.1.10	ICPMS2030

concentrate



Potency

	%	estimated error
tetrahydrocannabinolic acid (THCa)	ND	± 0.02 %
Δ ⁹ -tetrahydrocannabinol (Δ ⁹ THC)	ND	± 0.02 %
Δ ⁸ -tetrahydrocannabinol (Δ ⁸ THC)	ND	± 0.02 %
tetrahydrocannabivarin (THCv)	ND	± 0.02 %
cannabidiolic acid (CBDa)	ND	± 0.02 %
cannabidiol (CBD)	80.7%	± 0.73 %
cannabidivarin (CBDv)	ND	± 0.02 %
cannabigerolic acid (CBGa)	ND	± 0.02 %
cannabigerol (CBG)	4.02%	± 0.16 %
cannabinol (CBN)	ND	± 0.02 %
cannabichromene (CBC)	ND	± 0.02 %

Terpenes

	%	estimated error		%	estimated error		%	estimated error
β-myrcene	0.001%	± 0.0017%	camphene	0.002%	± 0.0017%	guaiol	0.000%	± 0.0017%
β-caryophyllene	0.001%	± 0.0017%	Δ ³ -carene	0.003%	± 0.0018%	β-bisabolol	0.002%	± 0.0017%
alpha-pinene	0.005%	± 0.0018%	a-terpinene	0.000%	± 0.0016%	eucalyptol	0.005%	± 0.0018%
β-pinene	0.008%	± 0.0019%	para-cymene	0.009%	± 0.0019%			
D-limonene	0.009%	± 0.0019%	g-terpinene	0.010%	± 0.0019%			
linalool	0.008%	± 0.0019%	(-)-isopulegol	0.000%	± 0.0016%			
ocimene	0.002%	± 0.0034%	geraniol	0.002%	± 0.0017%			
terpinolene	0.003%	± 0.0018%	cis-nerolidol	0.000%	± 0.0016%			
alpha-humulene	0.007%	± 0.0019%	trans-nerolidol	0.004%	± 0.0018%			

total terpenes 0.08%

Solvents

	MT limit	OBR66	LOQ
propane	5,000	0 ppm	<10ppm
butanes	5,000	0 ppm	<10ppm
pentanes	5,000	0 ppm	<10ppm
hexanes	290	0 ppm	<10ppm
cyclohexane	3,880	0 ppm	<10ppm
heptanes	5,000	0 ppm	<10ppm
methanol	3,000	0 ppm	<10ppm
isopropanol	5,000	0 ppm	<10ppm
acetone	5,000	0 ppm	<10ppm
ethyl acetate	5,000	0 ppm	<10ppm
benzene	2	0 ppm	<0.2ppm
toluene	890	0 ppm	<10ppm
xylenes	2,170	0 ppm	<10ppm
chloroform	2	0 ppm	<0.2ppm
dichloromethane	600	0 ppm	<10ppm

Pesticides (MT)

	MT limit	OBR66	LOQ
abamectin	2.50 ppm	0.00 ppm	<10ppb
acequinocyl	10.00 ppm	0.00 ppm	<10ppb
bifenazate	1.00 ppm	0.00 ppm	<10ppb
bifenthrin	1.00 ppm	0.00 ppm	<10ppb
chlormequat cl.	5.00 ppm	0.00 ppm	<10ppb
cyfluthrin	5.00 ppm	0.00 ppm	<80ppb
diaminozide	5.00 ppm	0.00 ppm	<10ppb
etoxazole	1.00 ppm	0.00 ppm	<10ppb
fenoxycarb	1.00 ppm	0.00 ppm	<10ppb
imazalil	1.00 ppm	0.00 ppm	<10ppb
imidacloprid	2.00 ppm	0.00 ppm	<10ppb
myclobutanil	0.60 ppm	0.00 ppm	<10ppb
paclobutrazol	2.00 ppm	0.00 ppm	<10ppb
pyrethrins	5.00 ppm	0.00 ppm	<10ppb
spinosad	1.00 ppm	0.00 ppm	<10ppb
spiromesifen	1.00 ppm	0.00 ppm	<10ppb
spirotetramat	1.00 ppm	0.00 ppm	<10ppb
trifloxystrobin	1.00 ppm	0.00 ppm	<10ppb

Pesticides (other)

	OBR66	LOQ
acephate	0.00 ppm	<10ppb
acetamidiprid	0.00 ppm	<10ppb
aldicarb	0.00 ppm	<10ppb
azoxystrobin	0.00 ppm	<10ppb
boscalid	0.00 ppm	<10ppb
carbaryl	0.00 ppm	<10ppb
carbofuran	0.00 ppm	<10ppb
chlorantraniliprole	0.00 ppm	<10ppb
chlorpyrifos	0.00 ppm	<10ppb
clofentazine	0.00 ppm	<10ppb
cypermethrin	0.00 ppm	<10ppb
diazinon	0.00 ppm	<10ppb
dichlorvos	0.00 ppm	<10ppb
dimethoate	0.00 ppm	<10ppb
etofenprox	0.00 ppm	<10ppb
fenpyroximate	0.00 ppm	<10ppb
fipronil	0.00 ppm	<10ppb
flonicamid	0.00 ppm	<10ppb
fludioxonil	0.00 ppm	<10ppb
hexythiazox	0.00 ppm	<10ppb
kresoxym-methyl	0.00 ppm	<10ppb
malathion	0.00 ppm	<10ppb
metalaxyl	0.00 ppm	<10ppb
methiocarb	0.00 ppm	<10ppb
methomyl	0.00 ppm	<10ppb
oxamyl	0.00 ppm	<10ppb
permethrin	0.00 ppm	<10ppb
phosmet	0.00 ppm	<10ppb
piperonyl butoxide	0.00 ppm	<10ppb
prallethrin	0.00 ppm	<10ppb
propiconazole	0.00 ppm	<10ppb
pyridaben	0.00 ppm	<10ppb
spiroxamine	0.00 ppm	<10ppb
tebuconazole	0.00 ppm	<10ppb
thiacloprid	0.00 ppm	<10ppb
thiamethoxam	0.00 ppm	<10ppb

Toxic Metals

	MT limit	OBR66	LOQ
arsenic	2 ppm	0.0 ppm	<10ppb
cadmium	0.8 ppm	0.0 ppm	<10ppb
lead	1.2 ppm	0.0 ppm	<10ppb
mercury	0.4 ppm	0.0 ppm	<10ppb

Comments

• All testing was completed onsite at 6073 US93N, Olney MT • Potency (cannabinoid concentration) is calculated from the equation: [cannabinoid] = [cannabinoid]_{HPLC} x volume_{dilution}/m_{dry}. Terpene concentration is calculated from the equation: [terpene] = (terpene mass)_{GCMS} / m_{dry}. • Decarboxyted cannabinoid concentration is calculated from the equation XXX_{total} = 0.877 x XXX_a + XXX • Standards are used to calibrate the resulting data and estimate error using a standard estimate of error method; this is combined with error from weighing and dilution using the propagation of error formula s_g² = Σ (df/di)²s_i² where i is the contributor to error. The 95% confidence range is calculated from the equation: (concentration) ± t_{CL90} x s_g. Sampling error is not

Certified by:

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