CERTIFICATE OF ANALYSIS

PRODUCT NAME:	CBD Tincture - Natural
PRODUCT STRENGTH:	450 mg
LOT NUMBER:	20LL112K12
BEST BY DATE:	10/20/21
HEMP EXTRACT LOT	110419

Click on the links to view third-party reports

Physical Atttributes

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 clean. Sufficient cushion material exists. Box taped and secure.	PASS

Review of Third-Party Analysis

Panel	Method	Specification	Results	Pass/Fail
Potency - Total CBD	SOP-111	427.5-562.2 mg CBD LOQ**: 10 PPM† (0.001%)	480mg	PASS
Potency - D9-THC	SOP-111	None Detected LOQ: 10 PPM (0.001%)	ND	PASS
FL Compliant Pesticide Panel	SOP-111	Employ Orgeong Action Limits for Pesticides on Cannabis	ND	PASS
Microbial - Stec E.Coli	SOP-111	Complies with USP 61/62	Below LOD	PASS
Microbial - Salmonella	SOP-111	Complies with USP 61/62	Below LOD	PASS
Microbial - Aspergillus	SOP-111	Complies with USP 61/62	Below LOD	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	ND	PASS

* Level of Quantitation, † Parts Per Million

Quality Certified by: Darcie Moran 05.05.2020

Darcie Moran — Date

Manager of Quality Assurance

Natural 450mg 20LL112K12

Certificate of Analysis

total cannabinoids
501 mg
per
30mL

Δ9-THC	THCa	total THC
0 mg	0 mg	0 mg

CBD	CBDa	total CBD
480 mg	0 mg	480 mg

ISO/IEC 17025:2017
Certificate #4961.01
https://portal.a2la.org/scopepdf/4961-01.pdf

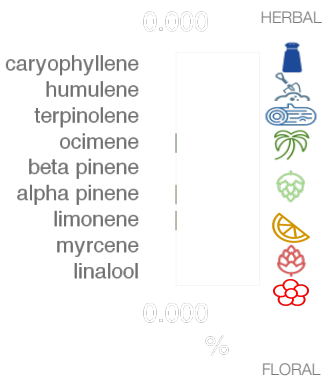
Stillwater Laboratories

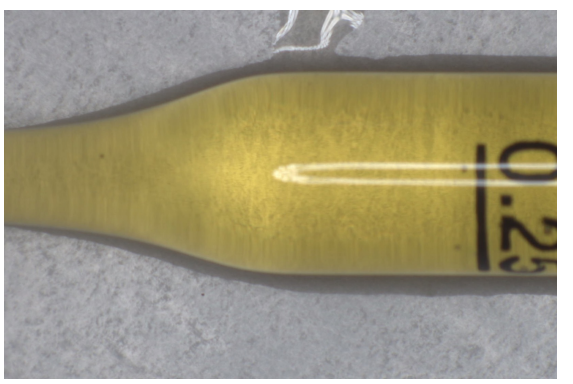
Sample Handling

test ID		sample wt	
type		order	**7161**
lab ID	**0DY75**	sample date	
unit	30mL	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





Potency

per 30mL			estimated error
tetrahydrocannabolic 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)	1.74%	480 mg	± 10.40 mg
cannabidivarin (CBDv)	.01%	2 mg	± 0.76 mg
cannabigerolic acid (CBGa)	0%	0 mg	± 0.45 mg
cannabigerol (CBG)	.07%	19 mg	± 2.13 mg
cannabinol (CBN)	0%	0 mg	± 0.45 mg
cannabichromene (CBC)	0%	0 mg	± 0.45 mg

Terpenes

	%	estimated error		%	estimated error		%	estimated error
ß-myrcene	0.000%	± 0.0016%	camphene	0.000%	± 0.0016%	guaiol	0.000%	± 0.0017%
ß-caryophyllene	0.000%	± 0.0016%	Δ3-carene	0.000%	± 0.0016%	ß-bisabolol	0.000%	± 0.0016%
alpha-pinene	0.000%	± 0.0016%	a-terpenine	0.000%	± 0.0016%	eucalyptol	0.000%	± 0.0016%
ß-pinene	0.000%	± 0.0016%	para-cymene	0.000%	± 0.0017%			
D-limonene	0.001%	± 0.0017%	g-terpenine	0.000%	± 0.0016%			
linalool	0.000%	± 0.0016%	(-)-isopulegol	0.000%	± 0.0016%			
ocimene	0.001%	± 0.0033%	geraniol	0.000%	± 0.0016%			
terpinolene	0.000%	± 0.0016%	cis-nerolidol	0.000%	± 0.0017%			
alpha-humulene	0.000%	± 0.0016%	trans-nerolidol	0.000%	± 0.0016%			

total terpenes
0.00%

Solvents

	MT limit	0DY75	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	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

Toxic Metals

	MT limit	0DY75	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

REVISED: CHCl3 changed to "not detected" - below S/N threshold. Extraction using MSP-7.5.1.2b.concentrate

Pesticides (MT)

	MT limit	0DY75	LOQ
abamectin		0.00 ppm	<10ppb
acequinocyl		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
diaminozide		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

Microbial

	MT limit	0DY75	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
Aflatoxin B1,B2,G1,G2	20 ppb	0 ppb	<20 ppb
Ochratoxin A	20 ppb	0 ppb	<20 ppb

Pesticides (other)

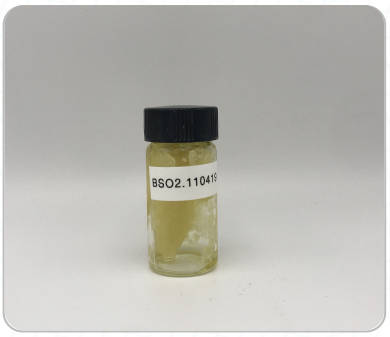
	0DY75	LOQ
acephate	0.00 ppm	<10ppb
acetamiprid	0.00 ppm	<10ppb
aldicarb	0.00 ppm	<10ppb
azoxystrobin	0.00 ppm	<10ppb
boscalid	0.00 ppm	<10ppb
carbaryl	0.00 ppm	<10ppb
carbofuran	0.00 ppm	<10ppb
chloantraniliprole	0.00 ppm	<10ppb
chlorpyrifos	0.00 ppm	<10ppb
clofentezine	0.00 ppm	<10ppb
cypermethrin	0.00 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
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
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

• All testing was completed onsite at 6073 US93N, Olney MT •• Potency (cannabinoid concentration) is calcuated from the equation: [cannabioid] = $[\text{cannabinoid}]_{HPLC} \times \text{volume}_{dilution}/m_{dry}$. Terpene concentration is calcuated from the equation: [terpene] = $(\text{terpene mass})_{GCMS} / m_{dry}$. ••• Decarboxyted cannabinoid concentration is calculated from the equation $XXX_{total} = 0.877 \times XXXa + XXX$ •••• 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 $s_g^2 = \sum(\partial f/\partial i)^2 s_i^2$ where i is the contributor to error. The 95% confidence range is calculated from the equation: (concentration) $\pm t_{CL90} \times s_g$. Sampling error is not

Certified by:

Ron Brost, PhD PEng (Chem)
Director
6073 US93N, Olney MT 59927
406-881-2019 rdb@stwlabs.com

Order #: 40909
Order Name: BSO2.110419
Batch #: BSO2.110419
Complete: 11/08/2019



N/D	83.965%
D9-THC	Total CBD

- Delta-9-Tetrahydrocannabinol 0%
- Tetrahydrocannabinolic Acid 0%
- Cannabidiol 84%
- Cannabidiolic Acid 0%
- Cannabidivarin 1%
- Cannabichromene 0%
- Cannabinol 0%
- Cannabigerol 4%
- Cannabigerolic Acid 0%
- Delta-8-Tetrahydrocannabinol 0%
- Tetrahydrocannabivarin 0%

Cannabinoids

	LOQ	weight(%)	mg/g
D9-THC	< 0.05%	N/D	N/D
THCA	< 0.05%	N/D	N/D
CBD	< 0.05%	< 83.96%	< 839.65
CBDA	< 0.01%	N/D	N/D
CBDV	< 0.01%	< 0.23%	< 2.30
CBC	< 0.01%	N/D	N/D
CBN	< 0.01%	N/D	N/D
CBG	< 0.01%	< 3.41%	< 34.09
CBGA	< 0.01%	N/D	N/D
D8-THC	< 0.05%	N/D	N/D
THCV	< 0.05%	N/D	N/D
TOTAL D9-THC	N/A	< N/D	< N/D
TOTAL CBD*	N/A	< 83.965%	< 839.655
TOTAL CANNABINOIDS	N/A	< 87.606%	< 876.056

Metal

	Action Level	Result
ARSENIC (AS)	200	B/LOQ
CADMIUM (CD)	200	B/LOQ
MERCURY (HG)	100	B/LOQ
LEAD (PB)	500	B/LOQ

Limit of Quantitation (LOQ) is 85 ppb

Residual Solvents

Solvent Name	Action Level	Results	LOQ
ACETONE	5,000	N/D	280
ACETONITRILE	410	N/D	50
BENZENE	1	N/D	1
BUTANE	5,000	N/D	100
CHLOROFORM	1	N/D	1
DICHLOROETHANE	1	N/D	1
DICHLOROMETHANE	1	N/D	1
ETHANOL	5,000	N/D	280
ETHYL ACETATE	5,000	N/D	280
ETHYL ETHER	5,000	N/D	280

Solvent Name	Action Level	Results	LOQ
ISOPROPYL ALCOHOL	5,000	N/D	280
METHANOL	3,000	N/D	200
N-HEPTANE	5,000	N/D	280
N-HEXANE	290	N/D	36
PENTANE	5,000	N/D	280
PROPANE	5,000	N/D	40
TOLUENE	890	N/D	106
TRICHLOROETHENE	1	N/D	0
XYLENES	2,170	N/D	260

Pesticide

Pesticide Name	Action Level	Results	LOQ
ABAMECTIN B1A	0.100	N/D	0.02
ACEPHATE	0.100	N/D	0.004
ACEQUINOCYL	0.100	N/D	0.004
ACETAMIPRID	0.100	N/D	0.02
ALDICARB	0.100	N/D	0.02
AZOXYSTROBIN	0.100	N/D	0.004
BIFENAZATE	0.100	N/D	0.02
BIFENTHRIN	3.000	N/D	0.02
BOSCALID	0.100	N/D	0.02
CARBARYL	0.500	N/D	0.012
CARBOFURAN	0.100	N/D	0.004
CHLORANTRANILIPROLE	10.000	N/D	0.02
CHLORPYRIFOS	0.100	N/D	0.004
CLOFENTEZINE	0.100	N/D	0.004
DAMINOZIDE	0.100	N/D	0.02
DIAZANON	0.100	N/D	0.004
DICHLORVOS	0.100	N/D	0.02
DIMETHOATE	0.100	N/D	0.004
DIMETHOMORPH	2.000	N/D	0.02

Pesticide Name	Action Level	Results	LOQ
ETHOPROPHOS	0.100	N/D	0.004
ETOFENPROX	0.100	N/D	0.004
ETOXAZOLE	0.100	N/D	0.04
FENHEXAMID	0.100	N/D	0.02
FENOXYCARB	0.100	N/D	0.02
FENPYROXIMATE	0.100	N/D	0.004
FIPRONIL	0.100	N/D	0.012
FLONICAMID	0.100	N/D	0.05
FLUDIOXONIL	0.100	N/D	0.012
HEXYTHIAZOX	0.100	N/D	0.02
IMAZALIL	0.100	N/D	0.02
IMIDACLOPRID	5.000	N/D	0.02
KRESOXIM-METHYL	0.100	N/D	0.04
MALATHION	0.500	N/D	0.02
METALAXYL	2.000	N/D	0.004
METHIOCARB	0.100	N/D	0.02
METHOMYL	1.000	N/D	0.004
MEVINPHOS	0.100	N/D	0.004
MYCLOBUTANIL	0.100	N/D	0.02

Pesticide Name	Action Level	Results	LOQ
NALED	0.100	N/D	0.02
OXAMYL	0.500	N/D	0.004
PACLOBUTRAZOL	0.100	N/D	0.02
PERMETHRINS	0.500	N/D	0.02
PHOSMET	0.100	N/D	0.02
PRALLETHRIN	0.100	N/D	0.02
PROPICONAZOLE	0.100	N/D	0.04
PROPOXUR	0.100	N/D	0.004
PYRETHRINS (PYRETHRIN I)	0.500	N/D	0.02
PYRIDABEN	0.100	N/D	0.02
SPINETORAM	0.100	N/D	0.004
SPINOSAD	0.100	N/D	0.004
SPIROMESIFEN	0.100	N/D	0.02
SPIROTETRAMAT	0.100	N/D	0.004
SPIROXAMINE	0.100	N/D	0.004
TEBUCONAZOLE	0.100	B/LOQ	0.02
THIACLOPRID	0.100	N/D	0.004
THIAMETHOXAM	5.000	N/D	0.004
TRIFLOXYSTROBIN	0.100	N/D	0.004

Green Scientific Labs
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