

# CERTIFICATE OF ANALYSIS

**PRODUCT NAME:** CBD Tincture - Mint  
**PRODUCT STRENGTH:** 1350 mg  
**LOT NUMBER:** 20LL110K12  
**BEST BY DATE:** 10/20/20  
**HEMP EXTRACT LOT** [110419](#)

**\*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, minty	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
<b>Potency - Total CBD</b>	SOP-111	1282.5-1687.5 mg CBD LOQ** : 10 PPM† (0.001%)	<a href="#">1436mg</a>	PASS
<b>Potency - D9-THC</b>	SOP-111	None Detected LOQ: 10 PPM (0.001%)	<a href="#">ND</a>	PASS
<b>Compliant Pesticide Panel</b>	SOP-111	WIP-100008 : Product specification for Tincture, Oregon Action limits apply	<a href="#">ND</a>	PASS
<b>Microbial - Stec E.Coli</b>	SOP-111	Complies with USP 61/62	<a href="#">Below LOD</a>	PASS
<b>Microbial - Salmonella</b>	SOP-111	Complies with USP 61/62	<a href="#">Below LOD</a>	PASS
<b>Microbial - Yeast and Mold</b>	SOP-111	Complies with USP 61/62	<a href="#">Below LOD</a>	PASS
<b>CA Compliant Heavy Metal Panel</b>	SOP-111	Arsenic (As): ≤1.5 PPM Cadmium (Cd): ≤0.5 PPM Mercury (Hg): ≤1.0 PPM Lead (Pb): ≤0.5 PPM	<a href="#">ND</a>	PASS

\* Level of Quantitation, † Parts Per Million

Quality Certified by:

*Darcie Moran*

05.05.2020

Darcie Moran

Date

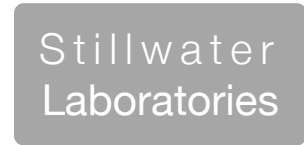
Manager of Quality Assurance



total cannabinoids  
**1498 mg**  
 per  
**30mL**

$\Delta^9$ -THC 0 mg  
 THCa 0 mg  
 total THC 0 mg

CBD 1435 mg  
 CBDa 1 mg  
 total CBD 1436 mg



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

Sample Handling

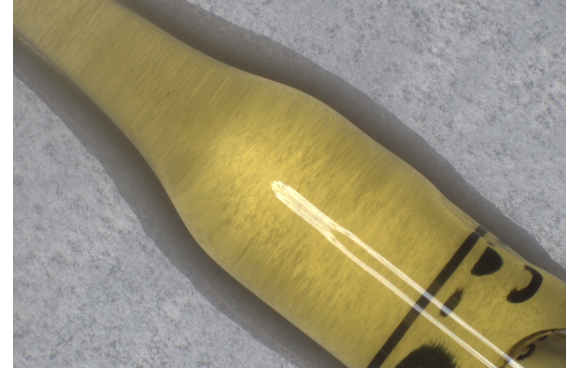
test ID sample wt 0.9 g  
 type tincture order 7171  
 lab ID **0DZ70** sample date 4/30/2020  
 unit 30mL unit weight **27.7 g**

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



Potency	per 30mL	estimated error	Terpenes	%	estimated error	%	estimated error	%	estimated error		
tetrahydrocannabinolic acid (THCa)	0%	0 mg ± 0.46 mg	β-myrcene	0.000%	± 0.0017%	camphene	0.000%	± 0.0016%	guaiaol	0.001%	± 0.0017%
Δ <sup>9</sup> -tetrahydrocannabinol (Δ <sup>9</sup> THC)	0%	0 mg ± 0.46 mg	β-caryophyllene	0.001%	± 0.0017%	Δ <sup>3</sup> -carene	0.000%	± 0.0016%	β-bisabolol	0.000%	± 0.0017%
Δ <sup>8</sup> -tetrahydrocannabinol (Δ <sup>8</sup> THC)	0%	0 mg ± 0.46 mg	alpha-pinene	0.004%	± 0.0020%	a-terpinene	0.000%	± 0.0016%	eucalyptol	0.014%	± 0.0026%
tetrahydrocannabivarin (THCv)	0%	0 mg ± 0.46 mg	β-pinene	0.003%	± 0.0019%	para-cymene	0.000%	± 0.0016%			
cannabidiolic acid (CBDA)	0%	1 mg ± 0.72 mg	D-limonene	0.012%	± 0.0025%	g-terpinene	0.001%	± 0.0017%			
cannabidiol (CBD)	5.19%	1435 mg ± 19.39 mg	linalool	0.000%	± 0.0017%	(-)-isopulegol	0.000%	± 0.0016%			total terpenes
cannabidivarin (CBDv)	.02%	5 mg ± 1.18 mg	ocimene	0.005%	± 0.0037%	geraniol	0.000%	± 0.0016%			0.04%
cannabigerolic acid (CBGa)	0%	0 mg ± 0.46 mg	terpinolene	0.000%	± 0.0017%	cis-nerolidol	0.000%	± 0.0016%			
cannabigerol (CBG)	.2%	56 mg ± 3.86 mg	alpha-humulene	0.000%	± 0.0016%	trans-nerolidol	0.000%	± 0.0016%			
cannabinol (CBN)	0%	1 mg ± 0.69 mg									
cannabichromene (CBC)	0%	0 mg ± 0.46 mg									

Solvents	MT limit	0DZ70	LOQ	Pesticides (MT)	MT limit	0DZ70	LOQ	Pesticides (other)	0DZ70	LOQ
propane	5,000	0 ppm	<10ppm	abamectin		0.00 ppm	<10ppb	acephate	0.00 ppm	<10ppb
butanes	5,000	0 ppm	<10ppm	acequinocyl		0.00 ppm	<10ppb	acetamiprid	0.00 ppm	<10ppb
pentanes	5,000	0 ppm	<10ppm	bifenazate		0.00 ppm	<10ppb	aldicarb	0.00 ppm	<10ppb
hexanes	290	0 ppm	<10ppm	bifenthrin		0.00 ppm	<10ppb	azoxystrobin	0.00 ppm	<10ppb
cyclohexane	3,880	0 ppm	<10ppm	chlormequat cl.		0.00 ppm	<10ppb	boscalid	0.00 ppm	<10ppb
heptanes	5,000	0 ppm	<10ppm	cyfluthrin		0.00 ppm	<80ppb	carbaryl	0.00 ppm	<10ppb
methanol	3,000	36 ppm	<10ppm	diaminozide		0.00 ppm	<10ppb	carbofuran	0.00 ppm	<10ppb
isopropanol	5,000	0 ppm	<10ppm	etoxazole		0.00 ppm	<10ppb	chloantraniliprole	0.00 ppm	<10ppb
acetone	5,000	0 ppm	<10ppm	fenoxycarb		0.00 ppm	<10ppb	chlorpyrifos	0.00 ppm	<10ppb
ethyl acetate	5,000	0 ppm	<10ppm	imazalil		0.00 ppm	<10ppb	clofentezine	0.00 ppm	<10ppb
benzene	2	0 ppm	<0.2ppm	imidacloprid		0.00 ppm	<10ppb	cypermethrin	0.00 ppm	<10ppb
toluene	890	0 ppm	<10ppm	myclobutanil		0.00 ppm	<10ppb	diazinon	0.00 ppm	<10ppb
xylenes	2,170	0 ppm	<10ppm	paclobutrazol		0.00 ppm	<10ppb	dichlorvos	0.00 ppm	<10ppb
chloroform	2	0 ppm	<0.2ppm	pyrethrins		0.00 ppm	<10ppb	dimethoate	0.00 ppm	<10ppb
dichloromethane	600	0 ppm	<10ppm	spinosad		0.00 ppm	<10ppb	etofenprox	0.00 ppm	<10ppb
				spiromesifen		0.00 ppm	<10ppb	fenpyroximate	0.00 ppm	<10ppb
				spirotetramat		0.00 ppm	<10ppb	fipronil	0.00 ppm	<10ppb
				trifloxystrobin		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

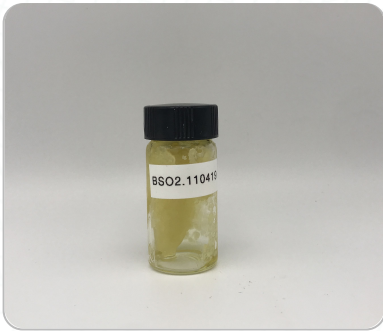
MT limit	0DZ70	LOQ
arsenic	2 ppm	0.0 ppm <10ppb
cadmium	4.1 ppm	0.0 ppm <10ppb
lead	1.2 ppm	0.0 ppm <10ppb
mercury	0.4 ppm	0.0 ppm <10ppb

REVISID: CHCl3 changed to "not detected" Terpene analysis also found isomenthol, menthone (not quantified), Extraction using MSP-7.5.1.2b.concentrate

• All testing was completed onsite at 6073 US93N, Olney MT •• Potency (cannabinoid concentration) is calculated from the equation: [cannabinoid] = [cannabinoid]<sub>HPLC</sub> x volume<sub>dilution</sub>/m<sub>dry</sub>. Terpene concentration is calculated from the equation: [terpene] = (terpene mass)<sub>GCMS</sub> / m<sub>dry</sub>. ••• Decarboxyted cannabinoid concentration is calculated from the equation XXX<sub>total</sub> = 0.877 x XXX<sub>a</sub> + 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<sub>g</sub><sup>2</sup> = Σ (∂f/∂i)<sup>2</sup>s<sub>i</sub><sup>2</sup> where i is the contributor to error. The 95% confidence range is calculated from the equation: (concentration) ± t<sub>CL90</sub> x s<sub>g</sub>. 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  
 D9-THC

83.965%  
 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

