



# JOY ORGANICS

## CERTIFICATE OF ANALYSIS

**PRODUCT NAME:** Joy Organics CBD 1 oz Salve  
**PRODUCT STRENGTH:** 500 mg  
**LOT NUMBER:** 20LL129  
**BEST BY DATE:** 11/18/2021  
**HEMP EXTRACT LOT** [112619](#)

*\*Click on the links to view third-party reports\**

### Physical Attributes

Test	Method	Specification	Results
Color	SOP-100	Light off white to yellow opaque, hint of green	PASS
Odor	SOP-100	Lavender, eucalyptus, hint of beeswax and coconut	PASS
Appearance	SOP-100	Firm, semi-waxy salve in container with screw lid	PASS
Primary Package Eval.	SOP-132	Container clean and free of filth. Container caps tight and pressure seal 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	475-625 mg CBD LOQ**: 10 PPM† (0.001%)	<a href="#">490mg</a>	PASS
<b>Potency - D9-THC</b>	SOP-111	None Detected LOQ: 10 PPM (0.001%)	<a href="#">ND</a>	PASS
<b>FL Compliant Pesticide Panel</b>	SOP-111	Florida State Hemp Program Rule 5B-57.014: Action Limits for Pesticides	<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 - Aspergillus</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="#">Below LOQ</a>	PASS
<b>MT Compliant Residual Solvents Panel</b>	SOP-111	Montana Public Health and Human Services Rule 37.107.316	<a href="#">ND</a>	PASS

\*Level of Quantitation, † Parts Per Million

Quality Certified

*Darcie Moran*

06/29/2020

Darcie Moran  
 Manager of Quality Assurance

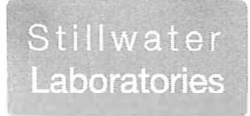
Date

# Hemp Balm 500mg 20LL129

# Certificate of Analysis



total cannabinoids	Δ9-THC	THCa	total THC
<b>513 mg</b>	0 mg	0 mg	0 mg
per ounce	CBD	CBDa	total CBD
	490 mg	3 mg	492 mg



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

## Sample Handling

test ID	sample wt
type	order <b>7392</b>
lab ID <b>0EU92</b>	sample date
unit ounce	unit weight <b>28.4 g</b>

## Methods

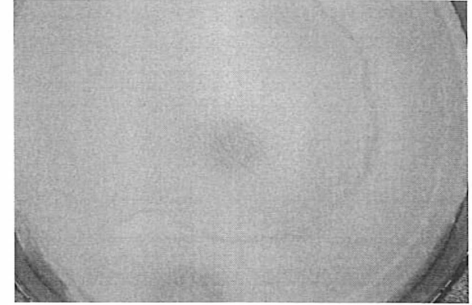
method	equipment
weights	MSP-7.3.1.3 AUX120.1
potency	MSP-7.5.1.5 LC-2030
terpenes	MSP-7.5.1.7 QP2020/HS20
pesticides	MSP-7.5.1.8 LC-8060
mycotoxins	MSP-7.5.1.8 LC-8060
microbial	MSP-7.5.1.9 Hardy Diag
solvents	MSP-7.5.1.6 QP2020/HS20
metals	MSP-7.5.1.1 ICPMS2030

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

HERBAL



FLORAL



## Potency

per ounce	estimated error	Terpenes	%	estimated error	%	estimated error	%	estimated error		
tetrahydrocannabinolic acid (THCa) 0%	0 mg ± 0.47 mg	β-myrcene	0.002%	± 0.0017%	camphene	0.000%	± 0.0016%	guaiol	0.000%	± 0.0016%
Δ <sup>9</sup> -tetrahydrocannabinol (Δ <sup>9</sup> THC) 0%	0 mg ± 0.47 mg	β-caryophyllene	0.000%	± 0.0016%	Δ <sup>3</sup> -carene	0.005%	± 0.0018%	β-bisabolol	0.000%	± 0.0016%
Δ <sup>8</sup> -tetrahydrocannabinol (Δ <sup>8</sup> THC) 0%	0 mg ± 0.47 mg	alpha-pinene	0.011%	± 0.0020%	a-terpinene	0.000%	± 0.0016%	eucalyptol	0.395%	± 0.0067%
tetrahydrocannabivarin (THCv) 0%	0 mg ± 0.47 mg	β-pinene	0.000%	± 0.0016%	para-cymene	0.000%	± 0.0016%			
cannabidiolic acid (CBDa) .01%	3 mg ± 0.57 mg	D-limonene	0.036%	± 0.0025%	g-terpinene	0.000%	± 0.0016%			
cannabidiol (CBD) 1.72%	490 mg ± 4.01 mg	linalool	0.105%	± 0.0037%	(-)-isopulegol	0.000%	± 0.0016%			
cannabidivarin (CBDv) .01%	2 mg ± 0.52 mg	ocimene	0.060%	± 0.0060%	geraniol	0.003%	± 0.0017%			
cannabigerolic acid (CBGA) 0%	0 mg ± 0.47 mg	terpinolene	0.000%	± 0.0016%	cis-nerolidol	0.000%	± 0.0016%			
cannabigerol (CBG) .07%	19 mg ± 0.91 mg	alpha-humulene	0.000%	± 0.0016%	trans-nerolidol	0.000%	± 0.0016%			
cannabinol (CBN) 0%	0 mg ± 0.47 mg									
cannabichromene (CBC) 0%	0 mg ± 0.47 mg									
										<b>total terpenes 0.62%</b>

## Solvents

MT limit	0EU92	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 <0.2 ppm
toluene	890	0 ppm <10ppm
xylenes	2,170	0 ppm <10ppm
chloroform	2	0 ppm <0.2 ppm
dichloromethane	600	0 ppm <10ppm

## Pesticides (MT)

MT limit	0EU92	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
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)

0EU92	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
chloanthraniliprole	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

## Toxic Metals

MT limit	0EU92	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

## Microbial

MT limit	0EU92	LOQ
<i>E. coli</i>	10 CFU	0 CFU <10 CFU/g
<i>Salmonella</i> 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

## Comments

All testing was completed onsite at 6073 US93N, Olney MT. Potency (cannabinoid concentration) is calculated from the equation: [cannabinoid] = [cannabinoid]<sub>HP-LE</sub> x volume<sub>dilution</sub> / m<sub>dry</sub>. Terpene concentration is calculated from the equation: [terpene] = (terpene mass)<sub>GC/MS</sub> / m<sub>dry</sub>. Decarboxylated 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>y</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) ± 1.96 x s<sub>y</sub>. Sampling error is not

Certified by:

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



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



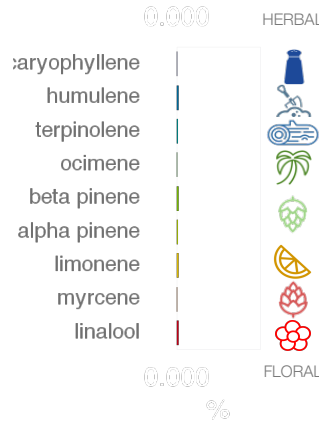
Stillwater Laboratories

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

Sample Handling

test ID 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	Terpenes	%	estimated error	%	estimated error	%	estimated error		
tetrahydrocannabinolic acid (THCa)	ND	± 0.02 %	β-myrcene	0.001%	± 0.0017%	camphene	0.002%	± 0.0017%	guaiol	0.000%	± 0.0017%
Δ <sup>9</sup> -tetrahydrocannabinol (Δ <sup>9</sup> THC)	ND	± 0.02 %	β-caryophyllene	0.001%	± 0.0017%	Δ <sup>3</sup> -carene	0.003%	± 0.0018%	β-bisabolol	0.002%	± 0.0017%
Δ <sup>8</sup> -tetrahydrocannabinol (Δ <sup>8</sup> THC)	ND	± 0.02 %	alpha-pinene	0.005%	± 0.0018%	a-terpinene	0.000%	± 0.0016%	eucalyptol	0.005%	± 0.0018%
tetrahydrocannabivarin (THCv)	ND	± 0.02 %	β-pinene	0.008%	± 0.0019%	para-cymene	0.009%	± 0.0019%			
cannabidiolic acid (CBDa)	ND	± 0.02 %	D-limonene	0.009%	± 0.0019%	g-terpinene	0.010%	± 0.0019%			
cannabidiol (CBD)	80.7%	± 0.73 %	linalool	0.008%	± 0.0019%	(-)-isopulegol	0.000%	± 0.0016%	total terpenes		0.08%
cannabidivarin (CBDv)	ND	± 0.02 %	ocimene	0.002%	± 0.0034%	geraniol	0.002%	± 0.0017%			
cannabigerolic acid (CBGa)	ND	± 0.02 %	terpinolene	0.003%	± 0.0018%	cis-nerolidol	0.000%	± 0.0016%			
cannabigerol (CBG)	4.02%	± 0.16 %	alpha-humulene	0.007%	± 0.0019%	trans-nerolidol	0.004%	± 0.0018%			
cannabinol (CBN)	ND	± 0.02 %									
cannabichromene (CBC)	ND	± 0.02 %									

Solvents	MT limit	OBR66	LOQ	Pesticides (MT)	MT limit	OBR66	LOQ	Pesticides (other)	OBR66	LOQ
propane	5,000	0 ppm	<10ppm	abamectin	2.50 ppm	0.00 ppm	<10ppb	acephate	0.00 ppm	<10ppb
butanes	5,000	0 ppm	<10ppm	acequinocyl	10.00 ppm	0.00 ppm	<10ppb	acetamiprid	0.00 ppm	<10ppb
pentanes	5,000	0 ppm	<10ppm	bifenazate	1.00 ppm	0.00 ppm	<10ppb	aldicarb	0.00 ppm	<10ppb
hexanes	290	0 ppm	<10ppm	bifenthrin	1.00 ppm	0.00 ppm	<10ppb	azoxystrobin	0.00 ppm	<10ppb
cyclohexane	3,880	0 ppm	<10ppm	chlormequat cl.	5.00 ppm	0.00 ppm	<10ppb	boscalid	0.00 ppm	<10ppb
heptanes	5,000	0 ppm	<10ppm	cyfluthrin	5.00 ppm	0.00 ppm	<80ppb	carbaryl	0.00 ppm	<10ppb
methanol	3,000	0 ppm	<10ppm	diaminozide	5.00 ppm	0.00 ppm	<10ppb	carbofuran	0.00 ppm	<10ppb
isopropanol	5,000	0 ppm	<10ppm	etoxazole	1.00 ppm	0.00 ppm	<10ppb	chloantraniliprole	0.00 ppm	<10ppb
acetone	5,000	0 ppm	<10ppm	fenoxycarb	1.00 ppm	0.00 ppm	<10ppb	chlorpyrifos	0.00 ppm	<10ppb
ethyl acetate	5,000	0 ppm	<10ppm	imazalil	1.00 ppm	0.00 ppm	<10ppb	clofentezine	0.00 ppm	<10ppb
benzene	2	0 ppm	<0.2ppm	imidacloprid	2.00 ppm	0.00 ppm	<10ppb	cypermethrin	0.00 ppm	<10ppb
toluene	890	0 ppm	<10ppm	myclobutanil	0.60 ppm	0.00 ppm	<10ppb	diazinon	0.00 ppm	<10ppb
xylenes	2,170	0 ppm	<10ppm	paclobutrazol	2.00 ppm	0.00 ppm	<10ppb	dichlorvos	0.00 ppm	<10ppb
chloroform	2	0 ppm	<0.2ppm	pyrethrins	5.00 ppm	0.00 ppm	<10ppb	dimethoate	0.00 ppm	<10ppb
dichloromethane	600	0 ppm	<10ppm	spinosad	1.00 ppm	0.00 ppm	<10ppb	etofenprox	0.00 ppm	<10ppb
				spiromesifen	1.00 ppm	0.00 ppm	<10ppb	fenpyroximate	0.00 ppm	<10ppb
				spirotetramat	1.00 ppm	0.00 ppm	<10ppb	fipronil	0.00 ppm	<10ppb
				trifloxystrobin	1.00 ppm	0.00 ppm	<10ppb	flonicamid	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

Microbial	MT limit	OBR66	LOQ
<i>E. coli</i>	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

Comments

• 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>y</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>y</sub>. Sampling error is not

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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