



# JOY ORGANICS

## CERTIFICATE OF ANALYSIS

**PRODUCT NAME:** Joy Organics CBD Softgels  
**PRODUCT STRENGTH:** 25 mg  
**FILL LOT NUMBER:** [GC/ND2520-05](#)  
**SOFTGEL LOT NUMBER:** 20337A  
**BEST BY DATE:** 04/13/2022

*\*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	N/A	PASS
Appearance	SOP-100	Dry, ovoid softgel capsules in container with lid and shrinkband	PASS
Primary Package Eval.	SOP-132	Container clean and free of filth. Container caps tight and shrinkbands 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	25-31.25 mg CBD LOQ**: 10 PPM† (0.001%)	<b>27.49 mg</b>	PASS
<b>Potency - D9-THC</b>	SOP-111	None Detected LOQ: 10 PPM (0.001%)	<b>ND</b>	PASS
<b>Compliant Pesticide Panel</b>	SOP-111	WIP-100008 : Product specification for Softgels, Oregon Action limits apply	<b>ND</b>	PASS
<b>Microbial - Total Plate Count</b>	SOP-111	Complies with USP 61/62	<b>BELOW LOD</b>	PASS
<b>Microbial - Yeast and Mold</b>	SOP-111	Complies with USP 61/62	<b>BELOW LOD</b>	PASS
<b>Microbial - Coliforms and bacteria (including ecoli and salmonella)</b>	SOP-111	Complies with USP 61/62	<b>BELOW LOD</b>	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	<b>ND</b>	PASS

\*\* Level of Quantitation, † Parts Per Million

Quality Certified by:

*Kei Horikawa*

Kei Horikawa  
Quality Control Manager

12/07/2020

Date

## TOSM-069-GK-1.GCND2520-05

Sample ID: 2011CSALA2982.7534

Matrix: Concentrates &amp; Extracts

Type: Other

Sample Size: 1 units

Batch Size:

Batch#:

Produced: N/A

Collected: 11/05/2020

Received: 11/05/2020

Completed: 11/11/2020

	<b>ND</b>	<b>27.4953 mg/serving</b>	<b>28.1495 mg/serving</b>
	<b>Total THC</b>	<b>Total CBD</b>	<b>Total Cannabinoids</b>

### Cannabinoids

Pass

Testing method: HPLC-SOP 101

Analyte	LOD	LOQ	Results	Results
	mg/g	mg/g	mg/serving	mg/g
CBD	0.0059	0.018	27.4953	65.4650
CBDV	0.0042	0.0126	0.6542	1.5576
CBC	0.0009	0.0027	ND	ND
CBDa	0.0012	0.0037	ND	ND
CBG	0.0047	0.0143	ND	ND
CBGa	0.0016	0.005	ND	ND
CBN	0.0014	0.0041	ND	ND
THCa	0.002	0.006	ND	ND
THCV	0.0036	0.0111	ND	ND
$\Delta 8$ -THC	0.0038	0.0115	ND	ND
$\Delta 9$ -THC	0.0038	0.0115	ND	ND
<b>Total</b>			<b>28.1495</b>	<b>67.0226</b>

1 serving = 1 soft gel capsule, 0.42 grams; 30.0 servings per package; 0.0 mg/package Total THC; 824.8588 mg/package Total CBD;


Date Tested: 11/09/2020

Total THC = THCa \* 0.877 + d9-THC

Total CBD = CBDa \* 0.877 + CBD

LOQ = Limit of Quantitation; LOD = Limit of Detection; NT = Not Tested; ND = Not Detected.


ISO / IEC 17025:2017 ACCREDITED  
LABORATORY  
Accreditation No. 73653

  
Douglas Duncan  
Lab Director  
11/11/2020

  
Musa Aman  
COA Review  
11/11/2020

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Completed: 11/11/2020

## Pesticides

Testing method: LCMS &amp; GCMS-SOP 301 and 302

Pass

Analyte	LOD	LOQ	Limit	Results	Status	Analyte	LOD	LOQ	Limit	Results	Status
	µg/g	µg/g	µg/g	µg/g			µg/g	µg/g	µg/g	µg/g	
Abamectin	0.0009	0.003	0.1	ND	Pass	Fludioxonil	0.0143	0.048	0.1	ND	Pass
Acephate	0.005	0.017	0.1	ND	Pass	Hexythiazox	0.0237	0.079	0.1	ND	Pass
Acequinocyl	0.0193	0.064	0.1	ND	Pass	Imazalil *	0.0077	0.026	0.0077	ND	Pass
Acetamiprid	0.0073	0.024	0.1	ND	Pass	Imidacloprid	0.0053	0.018	5	ND	Pass
Aldicarb *	0.0094	0.031	0.0094	ND	Pass	Kresoxim Methyl	0.0182	0.061	0.1	ND	Pass
Azoxystrobin	0.015	0.05	0.1	ND	Pass	Malathion	0.015	0.05	0.5	ND	Pass
Bifenazate	0.0129	0.043	0.1	ND	Pass	Metaxyl	0.0076	0.025	2	ND	Pass
Bifenthrin	0.029	0.097	3	ND	Pass	Methiocarb *	0.0103	0.034	0.0103	ND	Pass
Boscalid	0.0172	0.058	0.1	ND	Pass	Methomyl	0.0109	0.036	1	ND	Pass
Captan	0.036	0.12	0.7	ND	Pass	Methyl Parathion *	0.0091	0.0303	0.0091	ND	Pass
Carbaryl	0.0542	0.181	0.5	ND	Pass	Mevinphos *	0.0041	0.014	0.0041	ND	Pass
Carbofuran *	0.0077	0.026	0.0077	ND	Pass	Myclobutanil	0.01	0.033	0.1	ND	Pass
Chlorantraniliprole	0.0095	0.032	10	ND	Pass	Naled	0.0107	0.036	0.1	ND	Pass
Chlordane *	0.0055	0.0182	0.0055	ND	Pass	Oxamyl	0.0071	0.024	0.5	ND	Pass
Chlorfenapyr *	0.0048	0.0159	0.0048	ND	Pass	Paclobutrazol *	0.0092	0.031	0.0092	ND	Pass
Chlorpyrifos *	0.0197	0.066	0.0197	ND	Pass	Pentachloronitrobenzene	0.0084	0.0279	0.1	ND	Pass
Clofentezine	0.0216	0.072	0.1	ND	Pass	Permethrin	0.0142	0.048	0.5	ND	Pass
Coumaphos *	0.0196	0.065	0.0196	ND	Pass	Phosmet	0.0138	0.046	0.1	ND	Pass
Cyfluthrin	0.0107	0.036	2	ND	Pass	Piperonyl Butoxide	0.0156	0.052	3	ND	Pass
Cypermethrin	0.0105	0.035	1	ND	Pass	Prallethrin	0.018	0.06	0.1	ND	Pass
Daminozide *	0.0052	0.017	0.0052	ND	Pass	Propiconazole	0.013	0.043	0.1	ND	Pass
DDVP *	0.0081	0.027	0.0081	ND	Pass	Propoxur *	0.0097	0.033	0.0097	ND	Pass
Diazinon	0.0134	0.045	0.1	ND	Pass	Pyrethrins	0.0025	0.008	0.5	ND	Pass
Dimethoate *	0.0083	0.028	0.0083	ND	Pass	Pyridaben	0.0236	0.079	0.1	ND	Pass
Dimethomorph	0.0025	0.008	2	ND	Pass	Spinetoram	0.0042	0.014	0.1	ND	Pass
Ethoprophos *	0.0112	0.037	0.0112	ND	Pass	Spinosad	0.0002	0.001	0.1	ND	Pass
Etofenprox *	0.0247	0.082	0.0247	ND	Pass	Spiromesifen	0.0199	0.066	0.1	ND	Pass
Etoxazole	0.0269	0.09	0.1	ND	Pass	Spirotetramat	0.0068	0.023	0.1	ND	Pass
Fenhexamid	0.0215	0.072	0.1	ND	Pass	Spiroxamine *	0.0065	0.022	0.0065	ND	Pass
Fenoxycarb *	0.0186	0.062	0.0186	ND	Pass	Tebuconazole	0.0099	0.033	0.1	ND	Pass
Fenpyroximate	0.0253	0.084	0.1	ND	Pass	Thiacloprid *	0.0094	0.031	0.0094	ND	Pass
Fipronil *	0.0228	0.076	0.0228	ND	Pass	Thiamethoxam	0.005	0.017	5	ND	Pass
Flonicamid	0.0073	0.024	0.1	ND	Pass	Trifloxystrobin	0.0192	0.064	0.1	ND	Pass

Date Tested: 11/09/2020

\* Denotes Category I pesticides, which fail when detected; LOQ = Limit of Quantitation; LOD = Limit of Detection; NT = Not Tested; ND = Not Detected.


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Matrix: Concentrates &amp; Extracts

Type: Other

Sample Size: 1 units

Batch Size:

Batch#:

Produced: N/A

Collected: 11/05/2020

Received: 11/05/2020

Completed: 11/11/2020

### Residual Solvents

Pass

Testing method: HSGCMS-SOP 202

Analyte	LOD	LOQ	Limit	Results	Status
	µg/g	µg/g	µg/g	µg/g	
1,2-Dichloro-Ethane	0.1	0.4	1	ND	Pass
Acetone	64.0	214.0	5000	ND	Pass
Acetonitrile	36.0	119.0	410	ND	Pass
Benzene	0.1	0.2	1	ND	Pass
Butane	42.0	141.0	5000	ND	Pass
Chloroform	0.1	0.4	1	ND	Pass
Ethanol	59.0	197.0	5000	334	Pass
Ethyl-Acetate	43.0	144.0	5000	ND	Pass
Ethylene Oxide	0.2	0.6	1	ND	Pass
Ethyl-Ether	40.0	134.0	5000	ND	Pass
Heptane	46.0	154.0	5000	ND	Pass
Isopropanol	41.0	138.0	5000	ND	Pass
Methanol	160.0	534.0	3000	ND	Pass
Methylene-Chloride	0.1	0.4	1	ND	Pass
n-Hexane	42.0	139.0	290	ND	Pass
Pentane	69.0	229.0	5000	ND	Pass
Propane	21.0	70.0	5000	ND	Pass
Toluene	47.0	156.0	890	ND	Pass
Trichloroethene	0.1	0.4	1	ND	Pass
Xylenes	86.0	287.0	2170	ND	Pass

Date Tested: 11/09/2020

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Sample ID: 2011CSALA2982.7534

Matrix: Concentrates &amp; Extracts

Type: Other

Sample Size: 1 units

Batch Size:

Batch#:

Produced: N/A

Collected: 11/05/2020

Received: 11/05/2020

Completed: 11/11/2020

### Traditional Microbials

Testing method: Petrifilm-SOP 402

Pass

Analyte	Limit	Results	Status
	cfu/g	cfu/g	
Enterobacter	ND	ND	Pass
Salmonella	ND	ND	Pass
E. Coli	ND	ND	Pass
Total aerobic plate count	< 1000	210	Pass
Total coliforms	ND	ND	Pass
Total Yeast & Mold	< 100	ND	Pass

Date Tested: 11/11/2020

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The values reported pertain only to the product tested. R&D Sample Only. Tested as-is/received from client. Unless otherwise stated all Laboratory Quality Control (LQC) samples performed within specifications established by the BCC in 16 CCR section 5730. Sample tested per CALIFORNIA CODE OF REGULATIONS, TITLE 16, DIVISION 42. BUREAU OF CANNABIS CONTROL.

# TOSM-069-GK-1.GCND2520-05

Sample ID: 2011CSALA3208.8077

Matrix: Other

Type: Other

Sample Size: 1 units

Batch Size:

Batch#:

Produced: 11/11/2020

Collected: 11/11/2020

Received: 11/11/2020

Completed: 11/12/2020



## Summary

Pass

Not Tested

Total Cannabinoids

Not Tested

Pesticides

Not Tested

Residual Solvents

Not Tested

Microbials

Not Tested

Mycotoxins

Not Tested

Heavy Metals

## Terpenes

Complete

Testing method: HS-GC-FID - SOP 201

Analyte	LOD	LOQ	Results	Results
	%	%	%	mg/g
β-Caryophyllene	0.006	0.0173	1.35	13.49
Caryophyllene Oxide	0.029	0.0874	<LOQ	<LOQ
α-Humulene	0.006	0.0173	0.08	0.76
γ-Terpinene	0.006	0.0168	0.06	0.55
Guaiol	0.011	0.0334	<LOQ	<LOQ
Camphene	0.005	0.0163	ND	ND
Eucalyptol	0.006	0.0175	ND	ND
Geraniol	0.007	0.0205	ND	ND
Isopulegol	0.009	0.0282	ND	ND
Linalool	0.008	0.0228	ND	ND
Ocimene	0.004	0.0109	ND	ND
p-Cymene	0.005	0.0162	ND	ND
Terpinolene	0.006	0.0168	ND	ND
trans-Nerolidol	0.007	0.0219	ND	ND
α-Bisabolol	0.01	0.0295	ND	ND
α-Pinene	0.006	0.0175	ND	ND
α-Terpinene	0.005	0.0165	ND	ND
β-Myrcene	0.008	0.024	ND	ND
β-Pinene	0.005	0.0147	ND	ND
δ-3-Carene	0.005	0.016	ND	ND
δ-Limonene	0.005	0.0159	ND	ND
<b>Total</b>			<b>1.48</b>	<b>14.81</b>

Date Tested: 11/12/2020

NT

Moisture

Moisture Analyzer SOP-103

NT

Water Activity

Water Activity Meter SOP-102

NT

Foreign Matter

Visual Inspection SOP-690


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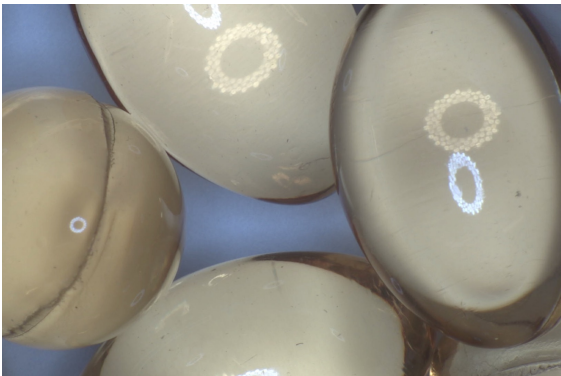
Lot# 20337A

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

Sample Handling

test ID            sample date 12/4/20 11:51 AM  
order **9108**    labID **0MD28**    weight 19.3 g  
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-7.5.1.1	AriaMx/Hardy
solvents	MSP-7.5.1.6	QP2020/HS20
metals	MSP-7.5.1.11	ICPMS2030



Potency	%	estimated error	Terpenes	%	estimated error	%	estimated error	%	estimated error
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potency  
not tested

terpenes  
not tested / not required

Solvents	MT limit	0MD28	LOQ	Pesticides (MT)	MT limit	0MD28	LOQ	Pesticides (other)	0MD28	LOQ
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pesticides  
not tested / not required

not tested /  
not required

Toxic Metals	MT limit	0MD28	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	0MD28	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

Comments

Certified by:

Kyle Larson, MSc (Biology)  
Deputy Director  
6073 US93N, Olney MT 59927  
406-881-2019 rdb@stwlabs.com

Printed 12/5/2020 12:43 PM

• 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