JOY ORGANICS

CERTIFICATE OF ANALYSIS

PRODUCT NAME:	Certified Organic Joy Organics CBD Tincture - Mint
PRODUCT STRENGTH:	900mg
FILL LOT NUMBER:	NA
TINCTURE BATCH:	21027A
BEST BY DATE:	07/27/2022
HEMP EXTRACT LOT*:	**B1014-002**

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, 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
Potency - Total CBD	SOP-111	900-1,125 mg CBD LOQ**: 10 PPM† (0.001%)	**925.1 mg**	PASS
Potency - D9-THC	SOP-111	None Detected LOQ: 10 PPM (0.001%)	**ND**	PASS
Compliant Pesticide Panel	SOP-111	WIP-100008 : Product specification for Tinctures, Oregon Action limits apply	**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 - Yeast and 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	**ND**	PASS

* *Level of Quantitation, † Parts Per Million

Quality Certified — Kei Horikawa — 02/09/2021

Kei Horikawa
Quality Control Manager

Date

119 W. Oak St. Fort Collins, CO 80524
Tel: (833) 569-7223 www.joyorganics.com

B1014-002

7USC1639 Certificate of Analysis

sample ID 25012
retention ID 25012

analysis : 10/22/2020 12:01:11 PM

certificate ID
0KR40

total cannabinoids **952.5mg** per 30 mL

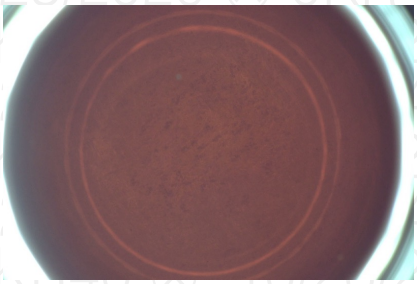
THC‡ ND CBD‡ 925.1mg

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

Stillwater Laboratories

order 8689
received **10/22/2020 12:01:11 PM**
test tag
sample wgt 15.0 g

7USC1639 Infused



Inspection MSP-7.5.1.2

DESCRIPTION: Oil sample (15.00g) received in a client-labeled bottle, by commercial courier. Labeled 25012.

Potency per 30 mL

	MSP-7.5.1.4	LOD	LOQ	error (95%CI k=2)
tetrahydrocannabolic acid (THCa)	ND	0.20	0.59	±0.59mg
Δ9-tetrahydrocannabinol (Δ9 THC)	ND	0.18	0.55	±0.55mg
Δ8-tetrahydrocannabinol (Δ8 THC)	ND	0.25	0.74	±0.74mg
tetrahydrocannabivarin (THCv)	ND	0.21	0.62	±0.62mg
cannabidiolic acid (CBDa)	ND	0.17	0.51	±0.51mg
cannabidiol (CBD)	925.1mg	0.19	0.58	±16.28mg
cannabidivarin (CBDv)	4.9mg	0.19	0.58	±0.67mg
cannabigerolic acid (CBGa)	ND	0.17	0.52	±0.52mg
cannabigerol (CBG)	22.4mg	0.21	0.63	±1.01mg
cannabinol (CBN)	ND	0.11	0.32	±0.32mg
cannabichromene (CBC)	ND	0.19	0.58	±0.58mg

‡ = decarbed NT = not tested NL = no limit, ND = not detected, LOD = detection limit , LOQ = quantitation limit

Microbial MSP-7.5.1.10

		limit
Ochratoxin A	PASS	20 ppb
Aflatoxin	PASS	20 ppb

Solvents MSP-7.5.1.7

		limit
Acetone	PASS	5000 ppm
Acetonitrile	PASS	410 ppm
Benzene	PASS	0 ppm
Butane	PASS	5000 ppm
Chloroform	PASS	0 ppm
Cyclohexane	PASS	0 ppm
Ethanol	PASS	10000 ppm
Heptane	PASS	5000 ppm
Hexane	PASS	290 ppm
Isopropyl alcohol	PASS	5000 ppm
Methanol	PASS	3000 ppm
Pentane	PASS	5000 ppm
Propane	PASS	5000 ppm
Toluene	PASS	890 ppm
Xylenes	PASS	2170 ppm

Metals MSP-7.5.1.11

		limit
Arsenic	PASS	1500 ppb
Cadmium	PASS	500 ppb
Lead	PASS	500 ppb
Mercury	PASS	300 ppb

Pesticides MSP-7.5.1.8

		limit
Abamectin	PASS	0.3 ppm
Acephate	PASS	5.0 ppm
Acequinocyl	PASS	4.0 ppm
Acetamiprid	PASS	5.0 ppm
Aldicarb	PASS	0.0 ppm
Azoxystrobin	PASS	40.0 ppm
Bifenazate	PASS	5.0 ppm
Bifenthrin	PASS	0.5 ppm
Boscalid	PASS	10.0 ppm
Carbaryl	PASS	0.5 ppm
Carbofuran	PASS	0.0 ppm
Chloantraniliprole	PASS	40.0 ppm
Chlorfenapyr	PASS	0.0 ppm
Chlorpyrifos	PASS	0.0 ppm
Clofentezine	PASS	0.5 ppm
Coumaphos	PASS	0.0 ppm
Cyfluthrin	PASS	1.0 ppm
Cypermethrin	PASS	1.0 ppm

Pesticides MSP-7.5.1.8

		limit
Daminozide	PASS	0.0 ppm
Dichlorvos	PASS	0.0 ppm
Diazinon	PASS	0.2 ppm
Dimethoate	PASS	0.0 ppm
Etoxazole	PASS	1.5 ppm
Fenoxycarb	PASS	0.0 ppm
Fenpyroximate	PASS	2.0 ppm
Fipronil	PASS	0.0 ppm
Flonicamid	PASS	2.0 ppm
Fludioxonil	PASS	30.0 ppm
Hexythiazox	PASS	2.0 ppm
Imazalil	PASS	0.0 ppm
Imidacloprid	PASS	3.0 ppm
Malathion	PASS	5.0 ppm
Metalaxyl	PASS	15.0 ppm
Methiocarb	PASS	0.0 ppm
Methomyl	PASS	0.1 ppm
Methyl parathion	PASS	0.0 ppm
Mevinphos	PASS	0.0 ppm
Myclobutanil	PASS	9.0 ppm
Naled	PASS	0.5 ppm
Oxamyl	PASS	0.2 ppm
Paclobutrazol	PASS	0.0 ppm
Permethrin	PASS	20.0 ppm
Phosmet	PASS	0.2 ppm

Pesticides MSP-7.5.1.8

		limit
Piperonylbutoxide	PASS	8.0 ppm
Prallethrin	PASS	0.4 ppm
Propiconazole	PASS	20.0 ppm
Propoxur	PASS	0.0 ppm
Pyrethrin	PASS	1.0 ppm
Pyridaben	PASS	3.0 ppm
Spinetoram	PASS	3.0 ppm
Spinosad	PASS	3.0 ppm
Spiromesifen	PASS	12.0 ppm
Spirotetramat	PASS	13.0 ppm
Spiroxamine	PASS	0.0 ppm
Tebuconazole	PASS	2.0 ppm
Thiacloprid	PASS	0.1 ppm
Thiamethoxam	PASS	4.5 ppm
Trifloxystrobin	PASS	30.0 ppm

INSTRUMENTS
potency: HPLC (LC2030C-UV)
terpenes: GCMS (QP2020/HS20)
solvents: GCMS (QP2020/HS20)
pesticides: LCMSMS (LC8060)
mycotoxins: LCMSMS (LC8060)
microbial: qPCR (AriaMx) and plating
metals: ICPMS (ICPMS-2030)

SECURITY FEATURE: WATERMARK MUST MATCH CERTIFICATE ID AND ISSUE DATE

Certified by:

Justin M Johnston
Deputy Director

Stillwater Laboratories Inc.
MT License L00001, 7, 8
6073 US93N Suite 5
Olney MT 59927
406-881-2019

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10/27/2020 4:45 PM

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

OTM900

Certificate of Analysis

ISO/IEC 17025:2017

ACCREDITED
Certificate #4961.01

Stillwater Laboratories

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

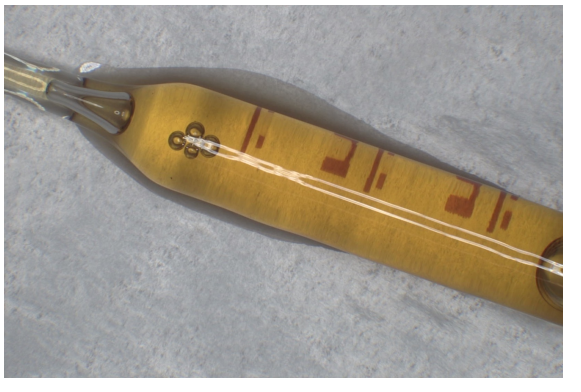
21027A

Sample Handling

test ID
order **9752**
source

sample date 2/5/21 1:53 PM
labID **1BF49**
weight

tincture



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

potency
not tested

Terpenes

	%	estimated error

terpenes
not tested / not required

	%	estimated error

Solvents

	MT limit	1BF49	LOQ

Pesticides (MT)

	MT limit	1BF49	LOQ

pesticides
not tested / not required

Pesticides (other)

	1BF49	LOQ

not tested / not required

Toxic Metals

	MT limit	1BF49	LOQ

metals
not tested / not required

Microbial

	MT limit	1BF49	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

Comments

• All testing was completed onsite at 6073 US93N, Olney MT •• Potency (cannabinoid concentration) is calcuated from the equation: [cannabioid] = $[\text{cannabinoid}]_{HPLC}$ x $\text{volume}_{dilution}/m_{dry}$. 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 x 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} x s_g. Sampling error is not

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