JOY ORGANICS

CERTIFICATE OF ANALYSIS

PRODUCT NAME:	Certified Organic CBD FS Tincture - Tropical
PRODUCT STRENGTH:	900mg
FILL LOT NUMBER:	NA
TINCTURE BATCH	21179A
BEST BY DATE:	12/28/2022
HEMP EXTRACT LOT	**B1211-002**

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	Coconut and hemp, tropical.	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%)	**1010.4 mg**	PASS
Potency - D9-THC	SOP-111	LOQ: 10 PPM (0.001%-0.3%)	**.12%**	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 — Kayla Kolber — 07/06/2021

Kayla Kolber
Quality Assurance Technician
Date

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

B1211-002

7USC1639 Certificate of Analysis

sample ID 25403

certificate ID
0MN48

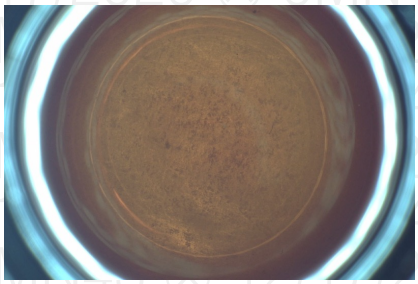
total cannabinoids **1106.8mg** per 30mL

THC‡ 32.7mg CBD‡ 1010.4m

Stillwater Laboratories

order 9236
analysis date 12/15/2020 4:57:23 PM
test tag 9236.1.2
sample wgt 1.0 g

7USC1639 Infused



Inspection MSP-7.5.1.2

DESCRIPTION: Tincture sample received in a client-labeled bottle, by commercial courier. Labeled 25403 and sample tag 9236.1.2.

Potency per 30mL

	MSP-7.5.1.4	LOD	LOQ	error (95%CI k=2)
tetrahydrocannabolic acid (THCa)	ND	0.06	0.17	±0.17mg
Δ9-tetrahydrocannabinol (Δ9 THC)	32.7mg	0.05	0.16	±0.72mg
Δ8-tetrahydrocannabinol (Δ8 THC)	ND	0.07	0.22	±0.22mg
tetrahydrocannabivarin (THCv)	ND	0.06	0.18	±0.18mg
cannabidiolic acid (CBDa)	ND	0.05	0.15	±0.15mg
cannabidiol (CBD)	1010.4mg	0.06	0.17	±17.34mg
cannabidivarin (CBDv)	ND	0.06	0.17	±0.17mg
cannabigerolic acid (CBGa)	ND	0.05	0.15	±0.15mg
cannabigerol (CBG)	57.6mg	0.06	0.19	±1.16mg
cannabinol (CBN)	3.5mg	0.03	0.09	±0.15mg
cannabichromene (CBC)	2.6mg	0.06	0.17	±0.22mg

‡ = 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

Metals MSP-7.5.1.11

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

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	0.4 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	0.5 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:

Kyle Larson, MSc (Biology)
Deputy Director

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

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Certificate #4961.01
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certificate ID
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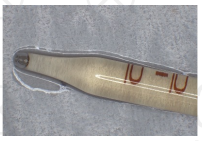

rec'd 6/30/2021 4:20:31 PM order 11182

7USC1639 Certificate of Analysis

Stillwater Laboratories

Microbial

MSP-7.5.1.10	limit	LOD	LOQ	error	result
E.coli	ND	0CFU	0.0 I 0.1 I	±0.1CFU	PASS
Salmonella sp.	ND	0CFU	0.0 I 0.1 I	±0.1CFU	PASS
molds	ND	10000CFU	1.9 I 5.8 I	±5.8CFU	PASS

SECURITY FEATURE: WATERMARK MUST MATCH CERTIFICATE ID AND ISSUE DATE

Certified by:

Printed 7/3/2021 12:10 PM

ACCREDITED
CERT #s 4961.01, 4961.02 & 4961.03

https://customer.a2la.org/index.cfm?event=directory.detail&labPID=423635B2-5128-4C6F-871A-419DCF43B0D7

Stillwater Laboratories Inc.
MT License L0001, L00007
6073 US93N Suite 5, Olney MT 59927
406-881-2019

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

• All testing was completed onsite at 6073 US93N, Olney MT •• Potency (cannabinoid concentration) is calcuated as: $[cannabioid] = [cannabinoid]_{HPLC} \times volume_{dilution}/m_{dry}$. ••• Decarboxyted cannabinoid concentration is calculated $XXX_{total} = 0.877 \times XXXa + XXX$ •••• Standards are used to calibrate the resulting data and estimate error using a standard estimate of error method; LOD is the limit of detection ($3.3s_i$), LOQ is the limit of quantification (3xLOD), and experimental error is calculated from weighing, dilution, and interpolation error using the 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: (concentration) $\pm t_{CL90} \times s_g$. Sampling error is not considered in error calculations. ND = not detected (< LOD), NT = not tested, NL = no limit, NA = not applicable. ‡ = decarbed