CERTIFICATE OF ANALYSIS

PRODUCT NAME: *Certified Organic CBD Tincture - Mint
PRODUCT STRENGTH: 450 mg / bottle
TINCTURE BATCH: 21245A
BEST BY DATE: 03/02/2023
HEMP EXTRACT LOT: CO521-001

Click on the links to view third-party reports

Physical Atttributes

Test	Method	Specification	Results
Color	Joy Internal	Golden to Amber	PASS
Odor	Joy Internal	Characteristic - Olive and Hemp, Minty	PASS
Appearance	Joy Internal	Golden to Amber oil in brown glass bottle with dropper.	PASS
Primary Package Eval.	Joy Internal	Container clean and free of filth. Container caps tight and shrink bands intact	PASS
Secondary Package Eval.	Joy Internal	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	HPLC-UV DAD	LOQ**: ≥ 450 mg / bottle	**475.1 mg**	PASS
Potency - D9-THC	HPLC-UV DAD	LOQ: <0.01% (broad spectrum)	**Below LOQ**	PASS
Pesticide Panel	HPLC-QQQ	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	**Below LOQ**	PASS
Microbial Escherichia coli (STEC)	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram***	**Absent**	PASS
Microbial Salmonella	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram	**Absent**	PASS
Microbial Yeast and Mold	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ 10^2 CFU/gram	**Below LOQ**	PASS
Microbial Total Coliforms	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ 10^2 CFU/gram	**Below LOQ**	PASS
Microbial Total Aerobic Count	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ 10^3 CFU/gram	**Below LOQ**	PASS
Heavy Metals	ICP-MS	Arsenic (As): ≤1.5 ppm† Cadmium (Cd): ≤0.5 ppm Lead (Pb): ≤0.5 ppm Mercury (Hg): ≤1.5 ppm	**Below LOQ**	PASS
Mycotoxins	ICP-MS	Total Aflatoxins <20 ppb†† Afltoxin B1 < 20 ppb Ochratoxin < 20 ppb	**Below LOQ**	PASS
Residual Solvents	GC-HS-MSD	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	**Below LOQ**	PASS

*Only applies to products with labels claiming certified organic
**Level of Quantification
***Colony Forming Units per Gram
† Parts Per Million †† Part Per Billion

Values expressed in scientific notation.
Examples:
10^2=100
10^3=1,000

Quality Certified — Kayla Kolber — 09/13/2021
Kayla Kolber, Quality Assurance Technician — Date

5042 Technology Parkway, Fort Collins, CO 80528 Tel: (833) 569-7223 www.joyorganics.com

C0521-001

7USC1639 Certificate of Analysis

certificate ID
1ET41

man. date 5/24/2021

total cannabinoids **507.6mg** per 30mL

THC‡ ND CBD‡ 475.1mg terpenes

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

Stillwater Laboratories

order 10848

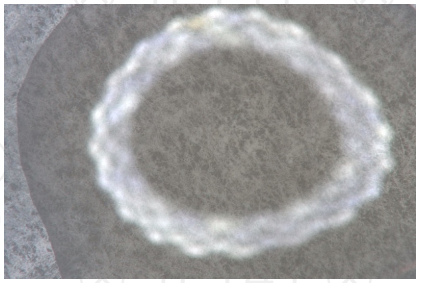
analysis date 5/25/2021 3:34:44 PM

test tag S1HYP

sample wgt

infused

caryophyllene
humulene
terpinolene
ocimene
beta pinene
alpha pinene
limonene
myrcene
linalool



Inspection MSP-7.5.1.2

DESCRIPTION: Concentrate sample received in a client-labeled bottle, collected at dispensary/grow. 1 and sample tag S1HYP
.

Potency per 30mL

	MSP-7.5.1.4	LOD	LOQ	error (95%CI k=2)
total CBD‡	475.1mg	0.07	0.21	±8.22mg
total CBD (CBD+CBDa)	475.1mg	0.07	0.21	±8.22mg
tetrahydrocannabolic acid (THCa)	ND	0.07	0.22	±0.22mg
Δ9-tetrahydrocannabinol (Δ9 THC)	ND	0.07	0.20	±0.20mg
Δ8-tetrahydrocannabinol (Δ8 THC)	ND	0.09	0.27	±0.27mg
tetrahydrocannabivarin (THCv)	ND	0.08	0.23	±0.23mg
cannabidiolic acid (CBDa)	ND	0.06	0.19	±0.19mg
cannabidiol (CBD)	475.1mg	0.07	0.21	±8.22mg
cannabidivarin (CBDv)	ND	0.07	0.21	±0.21mg
cannabigerolic acid (CBGa)	ND	0.06	0.19	±0.19mg
cannabigerol (CBG)	32.5mg	0.02	0.06	±0.61mg
cannabinol (CBN)	ND	0.04	0.12	±0.12mg
cannabichromene (CBC)	ND	0.07	0.21	±0.21mg

Terpenes MSP-7.5.1.6

MSP-7.5.1.6

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

Microbial MSP-7.5.1.10

		limit
E.coli	PASS	0CFU
Salmonella sp.	PASS	0CFU
molds	PASS	10000CFU
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

Pesticides MSP-7.5.1.8

		limit
Abamectin	PASS	0.30 ppm
Acephate	PASS	5.00 ppm
Acequinocyl	PASS	4.00 ppm
Acetamiprid	PASS	5.00 ppm
Aldicarb	PASS	0.00 ppm
Azoxystrobin	PASS	40.00
Bifenazate	PASS	5.00 ppm
Bifenthrin	PASS	0.50 ppm
Boscalid	PASS	10.00
Carbaryl	PASS	0.50 ppm
Carbofuran	PASS	0.00 ppm
Chloantraniliprole	PASS	40.00
Chlorfenapyr	PASS	0.00 ppm
Chlorpyrifos	PASS	0.00 ppm
Clofentezine	PASS	0.50 ppm
Coumaphos	PASS	0.00 ppm
Cyfluthrin	PASS	1.00 ppm
Cypermethrin	PASS	1.00 ppm
Daminozide	PASS	0.00 ppm
Dichlorvos	PASS	0.00 ppm
Diazinon	PASS	0.20 ppm
Dimethoate	PASS	0.00 ppm
Etoxazole	PASS	1.50 ppm
Fenoxycarb	PASS	0.00 ppm
Fenpyroximate	PASS	2.00 ppm

Pesticides MSP-7.5.1.8

		limit
Fipronil	PASS	0.00 ppm
Flonicamid	PASS	2.00 ppm
Fludioxonil	PASS	30.00
Hexythiazox	PASS	2.00 ppm
Imazalil	PASS	0.00 ppm
Imidacloprid	PASS	3.00 ppm
Malathion	PASS	5.00 ppm
Metalaxyl	PASS	15.00
Methiocarb	PASS	0.00 ppm
Methomyl	PASS	0.10 ppm
Methyl parathion	PASS	0.00 ppm
Mevinphos	PASS	0.00 ppm
Myclobutanil	PASS	9.00 ppm
Naled	PASS	0.50 ppm
Oxamyl	PASS	0.20 ppm
Paclobutrazol	PASS	0.00 ppm
Permethrin	PASS	20.00

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
Permethrin	PASS	20.00 ppm
Phosmet	PASS	0.20 ppm
Piperonylbutoxide	PASS	8.00 ppm
Prallethrin	PASS	0.40 ppm
Propiconazole	PASS	20.00 ppm
Propoxur	PASS	0.00 ppm
Pyrethrin	PASS	1.00 ppm
Pyridaben	PASS	3.00 ppm
Spinetoram	PASS	3.00 ppm
Spinosad	PASS	3.00 ppm
Spiromesifen	PASS	12.00 ppm
Spirotetramat	PASS	13.00 ppm
Spiroxamine	PASS	0.00 ppm
Tebuconazole	PASS	2.00 ppm
Thiacloprid	PASS	0.10 ppm
Thiamethoxam	PASS	4.50 ppm
Trifloxystrobin	PASS	30.00 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

Printed
6/1/2021 12:19 PM

The data in this report is the property of and is administered by Stillwater Labs. The format, layout, and security features of this report are copyrighted by Stillwater Laboratories Inc. © 2020

HEMP INDUSTRIES ASSOCIATION Member

ASA PFC Laboratory

A2LA ACCREDITED
CERT #s 4961.01, 4961.02 & 4961.03

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

botanacor

Official Compliance: Colorado

CERTIFICATE OF ANALYSIS

OTM450

Batch ID or Lot Number:	Test:	Reported:
21245A	**Microbial Contaminants**	**9/10/21**

Matrix:	Test ID:	Started:	USDA License:
Finished Product	T000161516	9/7/21	N/A

Status:	Methods:	Received:	Sampler ID:
N/A	TM25 (qPCR) TM24, TM26, TM27(Culture Plating): Microbial (Colorado Panel)	09/03/2021 @ 01:51 PM	N/A

MICROBIAL CONTAMINANTS DETERMINATION

Contaminant	Method	LOD	LLOQ	ULOQ	Result
Total Aerobic Count*	TM-26, Culture Plating	10^2 CFU/g	10^3 CFU/g	1.5x10^5 CFU/g	None Detected
Total Coliforms*	TM-27, Culture Plating	10^2 CFU/g	10^2 CFU/g	1.5x10^4 CFU/g	None Detected
Total Yeast and Mold*	TM-24, Culture Plating	10^2 CFU/g	10^2 CFU/g	1.5x10^4 CFU/g	None Detected
E. coli (STEC)	TM-25, PCR	1 CFU/25 g	NA	NA	Absent
Salmonella	TM-25, PCR	1 CFU/25 g	NA	NA	Absent

Notes

Free from visual mold, mildew, and foreign matter

Brett Hudson
9/10/2021
11:16:00 AM

PREPARED BY / DATE

Brianne Maillot
9/10/2021
11:36:00 AM

APPROVED BY / DATE

Definitions

LOD = Limit of Detection | LLOQ = Lower Limit of Quantitation | ULOQ = Upper Limit of Quantitation
CFU/g = Colony Forming Units per Gram | STEC = Shiga Toxin-Producing *E. coli*
* Values recorded in scientific notation, a common microbial practice of expressing numbers that are too large to be conveniently written in decimal form.

Examples:
10^2 = 100 CFU
10^3 = 1,000 CFU
10^4 = 10,000 CFU
10^5 = 100,000 CFU

Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of Botanacor Laboratories, LLC.

CDPHE Certified

Certificate #4329.02