

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Certified Organic Joy Organics CBD Tincture - Natural
PRODUCT STRENGTH: 900 mg
TINCTURE BATCH: 21204A
BEST BY DATE: 01/23/2023
HEMP EXTRACT LOT: CO524-002

Click on the links to view third-party reports

Physical Attributes

Test	Method	Specification	Results
Color	Joy Internal	Golden to Amber	PASS
Odor	Joy Internal	Characteristic - Olive and Hemp	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	900-1,125 mg CBD LOQ*: 10 ppm† (0.001%)	963.7 mg	PASS
Potency - D9-THC	HPLC-UV DAD	LOQ: 10 ppm (.001-0.3%)	ND	PASS
Expanded Pesticide Panel	HPLC-QQQ	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	ND	PASS
Microbial Escherichia coli (STEC)	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram	Below LOQ	PASS
Microbial Salmonella	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram	Below LOQ	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 Panel	ICP-MS	Arsenic (As): ≤1.5 ppm Cadmium (Cd): ≤0.5 ppm Lead (Pb): ≤0.5 ppm Mercury (Hg): ≤1.5 ppm	ND	PASS
Mycotoxins	ICP-MS	Total Aflatoxins <20 ppb† Aflatoxin B1 < 5 ppb Ochratoxin < 5ppb		NOT TESTED
Residual Solvents	GC-HS-MSD	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	ND	PASS

* *Level of Quantitation, † Parts Per
 Million † Part Per Billion CFU/g=Colony
 Forming Units per Gram
 10²=100 CFU
 10³=1,000 CFU

Quality Certified


 Kayla Kolber

Quality Assurance Technician

07/30/2021

Date

5042 Technology Parkway, Fort Collins, CO 80528

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FO-106 Certificate of Analysis

Rev. 1.1 - Effective Date: 2/20/2020



C0524-002

7USC1639 Certificate of Analysis

man. date 5/24/2021

total
cannabinoids **1035.6mg** per 30mL

THC† ND CBD† 963.7mg terpenes

This Product Has Been
Tested and Complies
with 7USC1639o(1)Stillwater
Laboratoriescertificate ID
1ET43

order 10848

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

test tag S1HYR

sample wgt

Inspection MSP-7.5.1.2

DESCRIPTION: Concentrate sample received in a client-labeled
bottle, collected at dispensary/grow. 1 and sample tag S1HYRcaryophyllene
humulene
terpinolene
ocimene
beta pinene
alpha pinene
limonene
myrcene
linalool

infused

Potency per 30mL

MSP-7.5.1.4 LOD LOQ (95%CI k=2)

total CBD†	963.7mg	0.08 0.25 ±16.65mg
total CBD (CBD+CBDA)	963.7mg	0.08 0.25 ±16.65mg
tetrahydrocannabinolic acid (THCa)	ND	0.08 0.25 ±0.25mg
Δ9-tetrahydrocannabinol (Δ9 THC)	ND	0.08 0.24 ±0.24mg
Δ8-tetrahydrocannabinol (Δ8 THC)	ND	0.11 0.32 ±0.32mg
tetrahydrocannabivarin (THCv)	ND	0.09 0.26 ±0.26mg
cannabidiolic acid (CBDA)	ND	0.07 0.22 ±0.22mg
cannabidiol (CBD)	963.7mg	0.08 0.25 ±16.65mg
cannabidivarin (CBDv)	ND	0.08 0.25 ±0.25mg
cannabigerolic acid (CBGA)	ND	0.07 0.22 ±0.22mg
cannabigerol (CBG)	71.9mg	0.02 0.07 ±1.29mg
cannabinol (CBN)	ND	0.05 0.14 ±0.14mg
cannabichromene (CBC)	ND	0.08 0.25 ±0.25mg

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

Metals

MSP-7.5.1.11

limit

Pesticides

MSP-7.5.1.8

limit

Pesticides

MSP-7.5.1.8

limit

E.coli PASS	0CFU	Arsenic PASS	1500 ppb	Abamectin PASS	0.30 ppm	Fipronil PASS	0.00 ppm
Salmonella sp. PASS	0CFU	Cadmium PASS	500 ppb	Acephate PASS	5.00 ppm	Flonicamid PASS	2.00 ppm
molds PASS	10000CFU	Lead PASS	500 ppb	Acequinocyl PASS	4.00 ppm	Fludioxonil PASS	30.00
Ochratoxin A PASS	20 ppb	Mercury PASS	300 ppb	Acetamiprid PASS	5.00 ppm	Hexythiazox PASS	2.00 ppm
Aflatoxin PASS	20 ppb			Aldicarb PASS	0.00 ppm	Imazalil PASS	0.00 ppm
Solvents		Pesticides		Azoxystrobin PASS	40.00	Imidacloprid PASS	3.00 ppm
Acetone PASS	5000 ppm	Permethrin PASS	20.00 ppm	Bifenazate PASS	5.00 ppm	Malathion PASS	5.00 ppm
Acetonitrile PASS	410 ppm	Phosmet PASS	0.20 ppm	Bifenthrin PASS	0.50 ppm	Metalaxyl PASS	15.00
Benzene PASS	0 ppm	Piperonylbutoxide PASS	8.00 ppm	Boscalid PASS	10.00	Methiocarb PASS	0.00 ppm
Butane PASS	5000 ppm	Prallethrin PASS	0.40 ppm	Carbaryl PASS	0.30 ppm	Methomyl PASS	0.10 ppm
Chloroform PASS	0 ppm	Propiconazole PASS	20.00 ppm	Carbofuran PASS	0.00 ppm	Methyl parathion PASS	0.00 ppm
Cyclohexane PASS	0 ppm	Propoxur PASS	0.00 ppm	Chloanthraniliprole PASS	40.00	Mevinphos PASS	0.00 ppm
Ethanol PASS	10000 ppm	Pyrethrin PASS	1.00 ppm	Chlorfenapyr PASS	0.00 ppm	Myclobutanil PASS	9.00 ppm
Heptane PASS	5000 ppm	Pyridaben PASS	3.00 ppm	Chlorpyrifos PASS	0.00 ppm	Naled PASS	0.50 ppm
Hexane PASS	290 ppm	Spinetoram PASS	3.00 ppm	Clofentezine PASS	0.50 ppm	Oxamyl PASS	0.20 ppm
Isopropyl alcohol PASS	5000 ppm	Spinosad PASS	3.00 ppm	Coumaphos PASS	0.00 ppm	Paclobutrazol PASS	0.00 ppm
Methanol PASS	3000 ppm	Spiromesifen PASS	12.00 ppm	Cyfluthrin PASS	1.00 ppm	Permethrin PASS	20.00
Pentane PASS	5000 ppm	Spirotetramat PASS	13.00 ppm	Cypermethrin PASS	1.00 ppm		
Propane PASS	5000 ppm	Spiroxamine PASS	0.00 ppm	Daminozide PASS	0.00 ppm		
Toluene PASS	890 ppm	Tebuconazole PASS	2.00 ppm	Dichlorvos PASS	0.00 ppm		
Xylenes PASS	2170 ppm	Thiacloprid PASS	0.10 ppm	Diazinon PASS	0.20 ppm		
		Thiamethoxam PASS	4.50 ppm	Dimethoate PASS	0.00 ppm		
		Trifloxystrobin PASS	30.00 ppm	Etoxazole PASS	1.50 ppm		
				Fenoxycarb PASS	0.00 ppm		
				Fenpyroximate PASS	2.00 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

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 406-881-2019

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OTNAT900

Batch ID or Lot Number: 21204A	Test: Microbial Contaminants	Reported: 7/29/21	
Matrix: Finished Product	Test ID: T000153789	Started: 7/26/21	USDA License: N/A
Status: N/A	Methods: TM25 (qPCR) TM24, TM26, TM27(Culture Plating): Microbial (Colorado Panel)	Received: 07/26/2021 @ 10:10 AM	Sampler ID: N/A

MICROBIAL CONTAMINANTS DETERMINATION

Contaminant	Method	LOD	LLOQ	ULOQ	Result	Notes
Total Aerobic Count*	TM-26, Culture Plating	10 ² CFU/g	10 ³ CFU/g	1.5x10 ⁵ CFU/g	None Detected	Free from visual mold, mildew, and foreign matter
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	

Brianne Maillot
 Brianne Maillot
 7/29/2021
 4:05:00 PM

Courtney Richards
 Courtney Richards
 7/29/2021
 4:28:00 PM

PREPARED BY / DATE

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:
 10² = 100 CFU
 10³ = 1,000 CFU
 10⁴ = 10,000 CFU
 10⁵ = 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.



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