

CERTIFICATE OF ANALYSIS

PRODUCT NAME: *Joy Organics CBD Tincture - Orange
PRODUCT STRENGTH: 450 mg / bottle
TINCTURE BATCH: 22046A
BEST BY DATE: 8/15/2023
HEMP EXTRACT LOT: CO218-002

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 - Coconut and Hemp, Orange	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

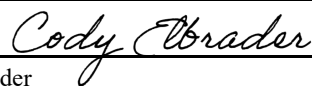
Review of Third-Party Analysis

Panel	Method	Specification	Results*	Pass/Fail
Potency - Total CBD	HPLC-UV DAD	LOQ*: ≥ 450 mg / bottle	487.9 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†† Aflatoxin 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

*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


 Cody Elbrader
 Quality Assurance Technician

02/21/2022
 Date



C0218-002

7USC1639 Certificate of Analysis

man. date 2/22/2021

total cannabinoids 512.9mg per 30 mL

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

Stillwater Laboratories

certificate ID 1BS25

THC total ND CBD total 487.9mg terpenes

order 9903

analysis date 2/22/2021 5:32:07 PM

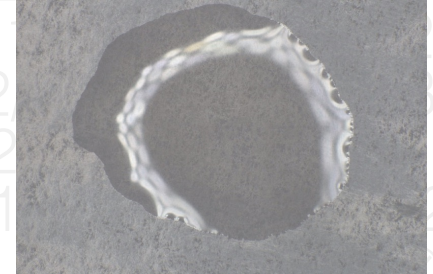
test tag S1BWL

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 S1BWL.

- caryophyllene
humulene
terpinolene
ocimene
beta pinene
alpha pinene
limonene
myrcene
linalool



MIP

Potency per 30 mL

Table with columns: Compound, Result, LOD, LOQ, Error (95%CI k=2). Rows include tetrahydrocannabinolic acid (THCa), delta-9-tetrahydrocannabinol (delta 9 THC), delta-8-tetrahydrocannabinol (delta 8 THC), tetrahydrocannabivarin (THCv), cannabidiolic acid (CBDa), cannabidiol (CBD), cannabidivarin (CBDv), cannabigerolic acid (CBGa), cannabigerol (CBG), cannabinal (CBN), and cannabichromene (CBC).

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

Large table listing Microbial, Metals, and Pesticides with their respective results (PASS, FAIL, etc.) and limits.

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:

Signature of Justin M Johnston

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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Certificate #4961.01

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

Prepared for:

JOY ORGANICS
OTO450


Batch ID or Lot Number: 22046A	Test: Microbial Contaminants	Reported: 2/21/22	Location: 5042 Technology Parkway Ste. 50 FT. COLLINS, CO 80528
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Matrix: Finished Product	Test ID: T000193427	Started: 2/16/22	USDA License: N/A
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Status: N/A	Methods: TM25 (qPCR) TM24, TM26, TM27(Culture Plating): Microbial (Colorado Panel)	Received: 02/16/2022 @ 09:37 AM	Sampler ID: N/A
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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 ¹ CFU/g	10 ² CFU/g	1.5x10 ⁴ CFU/g	None Detected	
Total Yeast and Mold*	TM-24, Culture Plating	10 ¹ CFU/g	10 ² CFU/g	1.5x10 ⁴ CFU/g	None Detected	
STEC	TM-25, PCR	10 ⁰ CFU/25 g	NA	NA	Absent	
Salmonella	TM-25, PCR	10 ⁰ CFU/25 g	NA	NA	Absent	


 Brett Hudson
 2/19/2022
 4:36:00 PM


 Jackson Osaghae-Nosa
 2/21/2022
 10:36:00 AM

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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Certificate #4329.02