

# CERTIFICATE OF ANALYSIS

**PRODUCT NAME:** \*Joy Organics CBD Tincture - Natural  
**PRODUCT STRENGTH:** 1350 mg / Bottle  
**TINCTURE BATCH:** 22048B  
**BEST BY DATE:** 8/17/2023  
**HEMP EXTRACT LOT:** CO524-003

\*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
<b>Potency - Total CBD</b>	HPLC-UV DAD	LOQ*: ≥ 1350 mg / bottle	<b>1,473.9 mg</b>	PASS
<b>Potency - D9-THC</b>	HPLC-UV DAD	LOQ: <0.01% (broad spectrum)	<b>ND</b>	PASS
<b>Expanded Pesticide Panel</b>	HPLC-QQQ	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	<b>ND</b>	PASS
<b>Microbial</b> Escherichia coli (STEC)	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram	<b>Absent</b>	PASS
<b>Microbial</b> Salmonella	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram	<b>Absent</b>	PASS
<b>Microbial</b> Yeast and Mold	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ 10 <sup>2</sup> CFU/gram	<b>Below LOQ</b>	PASS
<b>Microbial</b> Total Coliforms*	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ 10 <sup>2</sup> CFU/gram	<b>Below LOQ</b>	PASS
<b>Microbial</b> Total Aerobic Count*	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ 10 <sup>3</sup> CFU/gram	<b>Below LOQ</b>	PASS
<b>Heavy Metals Panel</b>	ICP-MS	Arsenic (As): ≤1.5 ppm Cadmium (Cd): ≤0.5 ppm Lead (Pb): ≤0.5 ppm Mercury (Hg): ≤1.5 ppm	<b>ND</b>	PASS
<b>Mycotoxins</b>	ICP-MS	Total Aflatoxins <20 ppb† Aflatoxin B1 < 5 ppb Ochratoxin < 5ppb	<b>ND</b>	PASS
<b>Residual Solvents</b>	GC-HS-MSD	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	<b>ND</b>	PASS

\* Level of Quantitation, † Parts Per Million  
 ‡ Part Per Billion  
 CFU/g=Colony Forming Units per Gram  
 10<sup>2</sup>=100 CFU  
 10<sup>3</sup>=1,000 CFU

Quality Certified Cody Elbrader 02/22/22  
 Cody Elbrader Date  
 Quality Assurance Technician



C0524-003

7USC1639 Certificate of Analysis

man. date 5/24/2021

total cannabinoids 1575.4mg per 30mL

THC‡ ND CBD‡ 1473.9mg terpenes

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

Stillwater Laboratories

certificate ID 1ET46

order 10848

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

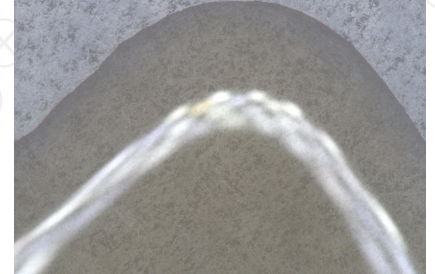
test tag S1HYQ

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 S1HYQ

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



Potency per 30mL

Table with columns: Compound, MSP-7.5.1.4, LOD, LOQ, error (95%CI k=2). Rows include total CBD, THCa, and various cannabinoids.

Terpenes

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

Microbial

Table with columns: Organism, MSP-7.5.1.10, limit. Rows include E.coli, Salmonella sp., molds, Ochratoxin A, Aflatoxin.

Metals

Table with columns: Metal, MSP-7.5.1.11, limit. Rows include Arsenic, Cadmium, Lead, Mercury.

Pesticides

Table with columns: Pesticide, MSP-7.5.1.8, limit. Rows include Abamectin, Acephate, Acequinocyl, Acetamiprid, Aldicarb, Azoxystrobin, Bifenazate, Bifenthrin, Boscalid, Carbaryl, Carbofuran, Chloanthraniliprole, Chlorfenapyr, Chlorpyrifos, Clofentezine, Coumaphos, Cyfluthrin, Cypermethrin, Daminozide, Dichlorvos, Diazinon, Dimethoate, Etoxazole, Fenoxycarb, Fenpyroximate.

Pesticides

Table with columns: Pesticide, MSP-7.5.1.8, limit. Rows include Fipronil, Flonicamid, Fludioxonil, Hexythiazox, Imazalil, Imidacloprid, Malathion, Metalaxyl, Methiocarb, Methomyl, Methyl parathion, Mevinphos, Myclobutanil, Naled, Oxamyl, Paclbutrazol, Permethrin.

Solvents

Table with columns: Solvent, MSP-7.5.1.7, limit. Rows include Acetone, Acetonitrile, Benzene, Butane, Chloroform, Cyclohexane, Ethanol, Heptane, Hexane, Isopropyl alcohol, Methanol, Pentane, Propane, Toluene, Xylenes.

Pesticides

Table with columns: Pesticide, MSP-7.5.1.8, limit. Rows include Permethrin, Phosmet, Piperonylbutoxide, Prallethrin, Propiconazole, Propoxur, Pyrethrin, Pyridaben, Spinetoram, Spinosad, Spiromesifen, Spirotetramat, Spiroxamine, Tebuconazole, Thiacloprid, Thiamethoxam, Trifloxystrobin.

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 Kyle Larson

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 OF ANALYSIS**

 Prepared for:  
**JOY ORGANICS**

 5042 Technology Parkway Ste. 500  
 FT. COLLINS, CO USA 80528

**OTNAT1350**

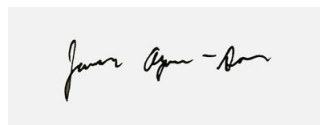
Batch ID or Lot Number: <b>22048B</b>	Test: <b>Microbial Contaminants</b>	Reported: <b>21Feb2022</b>	USDA License: N/A
Matrix: Finished Product	Test ID: T000193794	Started: 18Feb2022	Sampler ID: N/A
	Method(s): TM25 (qPCR) TM24, TM26, TM27 (Culture Plating): Microbial (Colorado Panel)	Received: 18Feb2022	Status: N/A

**Microbial**
**Contaminants**

Contaminants	Method	LOD	Quantitation Range	Result	Notes
STEC	TM25: PCR	10 <sup>0</sup> CFU/25g	NA	Absent	Free from visual mold, mildew, and foreign matter TYM: None Detected Total Aerobic: None Detected
<i>Salmonella</i>	TM25: PCR	10 <sup>0</sup> CFU/25g	NA	Absent	
Total Yeast and Mold*	TM24: Culture Plating	10 <sup>1</sup> CFU/g	1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup>	None Detected	
Total Aerobic Count*	TM26: Culture Plating	10 <sup>2</sup> CFU/g	1.0x10 <sup>3</sup> - 1.5x10 <sup>5</sup>	None Detected	
Total Coliforms*	TM27: Culture Plating	10 <sup>1</sup> CFU/g	1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup>	None Detected	

**Final Approval**


 Brett Hudson  
 21Feb2022  
 02:42:00 PM MST



 Jackson Osaghae-Nosa  
 21Feb2022  
 03:25:00 PM MST


PREPARED BY / DATE

APPROVED BY / DATE

<https://results.botanacor.com/api/v1/coas/uuid/b0ef6b50-33df-4cd8-833c-df13a84c3057>
**Definitions**

\* 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<sup>2</sup> = 100 CFU, 10<sup>3</sup> = 1,000 CFU, 10<sup>4</sup> = 10,000 CFU, 10<sup>5</sup> = 100,000 CFU  
 CFU/g = Colony Forming Units per Gram, LOD = Limit of Detection  
 ULOQ = Upper Limit of Quantitation, LLOQ = Lower Limit of Quantitation  
 STEC = Shiga Toxin-Producing E. coli

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. ISO/ IEC 17025:2005 Accredited A2LA.



Cert #4329.02

CDPHE Certified

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