# JOYORGANICS

# **CERTIFICATE OF ANALYSIS**

PRODUCT NAME:
PRODUCT STRENGTH:
TINCTURE BATCH:
BEST BY DATE:
HEMP EXTRACT LOT:

Organic CBD Tincture - Orange

1350mg	
230321A	
3/21/2025	
O2PH200022001-PSB01	

#### Physical Atttributes

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	*NLT (product strength) mg / bottle 1435mg		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
<b>Microbial</b> Escherichia coli (STEC)	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram	Absent	PASS
<b>Microbial</b> Salmonella	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram Absent		PASS
<b>Microbial</b> Yeast and Mold	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ 10^2 CFU/gram	Below LOQ	PASS
<b>Microbial</b> 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		PASS
Mycotoxins	ICP-MS	Total Aflatoxins <20 ppb† Afltoxin B1 < 5 ppb Ochratoxin < 5ppb		PASS
<b>Residual Solvents</b>	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 \*Nothing Less Than 10^2=100 CFU 10^3=1,000 CFU

6

Name

Quality Certified

Date

4/18/2023

2519 S. Shields St. #1042, Fort Collins, CO 80526 Tel: (833) 569-7223 www.joyorganics.com

FO-106 Certificate of Analysis Rev. 1.1 - Effective Date: 6/30/2022



## 1350mg Orange Tincture

Batch ID or Lot Number:	Test:	Reported:	USDA License:
230321A	<b>Potency</b>	28Dec2022	N/A
Matrix:	Test ID:	Started:	Sampler ID:
Concentrate	T000231576	28Dec2022	N/A
	Method(s): TM14 (HPLC-DAD): Potency – Standard Cannabinoid Analysis	Received: 27Dec2022	Status: Active

Cannabinoids	LOD (%)	LOQ (%)	Result (%)	<b>Result</b> (mg/g)	Note
Cannabichromene (CBC)	0.006	0.021	ND	ND	
Cannabichromenic Acid (CBCA)	0.005	0.019	ND	ND	
Cannabidiol (CBD)	0.022	0.059	4.834	48.34	
Cannabidiolic Acid (CBDA)	0.023	0.060	ND	ND	
Cannabidivarin (CBDV)	0.005	0.014	0.025	0.25	
Cannabidivarinic Acid (CBDVA)	0.009	0.025	ND	ND	
Cannabigerol (CBG)	0.003	0.012	ND	ND	
Cannabigerolic Acid (CBGA)	0.014	0.050	ND	ND	
Cannabinol (CBN)	0.004	0.016	ND	ND	
Cannabinolic Acid (CBNA)	0.010	0.034	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.017	0.060	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.015	0.054	ND	ND	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.014	0.048	ND	ND	
Tetrahydrocannabivarin (THCV)	0.003	0.011	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.012	0.043	ND	ND	
Total Cannabinoids			4.859	48.59	
Total Potential THC			ND	ND	
Total Potential CBD			4.834	48.34	

## **Final Approval**

Samantha Smo

Sam Smith 28Dec2022 01:40:00 PM MST

APPROVED BY / DATE

Karen Winternheimer 28Dec2022 01:49:00 PM MST



Definitions

PREPARED BY / DATE

% = % (w/w) = Percent (weight of analyte / weight of product). ND = None Detected (defined by dynamic range of the method).

Total Potential Delta 9-THC or CBD is calculated to take into account the loss of a carboxyl group during decarboxylation step, using the following formulas: Total Potential Delta 9-THC = Delta 9-THC + (Delta 9-THCa \*(0.877)) and Total CBD = CBD + (CBDa \*(0.877)).

Testing results are based solely upon the sample submitted to SC Laboratories, Inc., in the condition it was received. SC Laboratories, Inc., 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 SC Laboratories, Inc. ISO/IEC 17025:2017 Accredited by A2LA.



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O2PH200022001-PSB01 230321A | DATE ISSUED 06/23/2022

#### PESTICIDE TEST RESULTS - 06/20/2022 🔗 PASS

## Pesticide Analysis

Pesticide and plant growth regulator analysis	COMPOUND	LOD/LOQ	ACTION LIMIT	MEASUREMENT NCERTAINTY (µg/g)	RESULT	RESULT
utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS) or gas chromatography-mass spectrometry (GC- MS).		(µg/g)	(µg/g)		(µg/g)	
*GC-MS utilized where indicated. Method: OSP 1212 - Analysis of Pesticides and Mycotoxins by	Abamectin	0.03/0.10	0.1	N/A	ND	PASS
LC-MS or OSP 1213 - Analysis of Pesticides by GC-MS	Acephate	0.02/0.07	0.1	N/A	ND	PASS
	Acequinocyl	0.02/0.07	0.1	N/A	ND	PASS
	Acetamiprid	0.02/0.05	0.1	N/A	ND	PASS
	Aldicarb	0.03/0.08	≥ LOD	N/A	ND	PASS
	Azoxystrobin	0.02/0.07	0.1	N/A	ND	PASS
	Bifenazate	0.01 / 0.04	0.1	N/A	ND	PASS
	Bifenthrin	0.02/0.05	3	N/A	ND	PASS
	Boscalid	0.03/0.09	0.1	N/A	ND	PASS
	Captan	0.19/0.57	0.7	N/A	ND	PASS
	Carbaryl	0.02/0.06	0.5	N/A	ND	PASS
	Carbofuran	0.02/0.05	≥ LOD	N/A	ND	PASS
	Chlorantraniliprole	0.04/0.12	10	N/A	ND	PASS

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O2PH200022001-PSB01 230321A | DATE ISSUED 06/23/2022

## Pesticide Analysis Continued

PESTICIDE TEST RESULTS - 06/20/2022 continued 🔗 PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESUL
Chlordane*	0.03/0.08	≥ LOD	N/A	ND	PASS
Chlorfenapyr*	0.03/0.10	≥ LOD	N/A	ND	PASS
Chlorpyrifos	0.02/0.06	≥ LOD	N/A	ND	PASS
Clofentezine	0.03/0.09	0.1	N/A	ND	PASS
Coumaphos	0.02/0.07	≥ LOD	N/A	ND	PASS
Cyfluthrin	0.12/0.38	2	N/A	ND	PASS
Cypermethrin	0.11/0.32	1	N/A	ND	PASS
Daminozide	0.02/0.07	≥ LOD	N/A	ND	PASS
Diazinon	0.02/0.05	0.1	N/A	ND	PASS
Dichlorvos (DDVP)	0.03/0.09	≥ LOD	N/A	ND	PASS
Dimethoate	0.03/0.08	≥ LOD	N/A	ND	PASS
Dimethomorph	0.03/0.09	2	N/A	ND	PASS
Ethoprophos	0.03/0.10	≥ LOD	N/A	ND	PASS
Etofenprox	0.02/0.06	≥ LOD	N/A	ND	PASS
Etoxazole	0.02/0.06	0.1	N/A	ND	PASS
Fenhexamid	0.03/0.09	0.1	N/A	ND	PASS
Fenoxycarb	0.03/0.08	≥LOD	N/A	ND	PASS
Fenpyroximate	0.02/0.06	0.1	N/A	ND	PASS
Fipronil	0.03/0.08	≥LOD	N/A	ND	PASS
Flonicamid	0.03/0.10	0.1	N/A	ND	PASS
Fludioxonil	0.03/0.10	0.1	N/A	ND	PASS
Hexythiazox	0.02/0.07	0.1	N/A	ND	PASS
Imazalil	0.02/0.06	≥LOD	N/A	ND	PASS
Imidacloprid	0.04/0.11	5	N/A	ND	PASS
Kresoxim-methyl	0.02/0.07	0.1	N/A	ND	PASS
Malathion	0.03/0.09	0.5	N/A	ND	PASS
Metalaxyl	0.02/0.07	2	N/A	ND	PASS
Methiocarb	0.02/0.07	≥LOD	N/A	ND	PASS
Methomyl	0.03/0.10	1	N/A	ND	PASS
Mevinphos	0.03/0.09	≥LOD	N/A	ND	PASS
Myclobutanil	0.03/0.09	0.1	N/A	ND	PASS
Naled	0.02/0.07	0.1	N/A	ND	PASS
Oxamyl	0.04/0.11	0.5	N/A	ND	PASS
Paclobutrazol	0.02/0.05	≥LOD	N/A	ND	PASS
Parathion-methyl	0.03/0.10	≥LOD	N/A	ND	PASS
Pentachloronitrobenzene*	0.03/0.09	0.1	N/A	ND	PASS
Permethrin	0.04/0.12	0.5	N/A	ND	PASS
Phosmet	0.03/0.10	0.1	N/A	ND	PASS
Piperonyl Butoxide	0.02/0.07	3	N/A	ND	PASS
Prallethrin	0.03/0.08	0.1	N/A	ND	PASS
Propiconazole	0.02/0.07	0.1	N/A	ND	PASS

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O2PH200022001-PSB01 230321A | DATE ISSUED 06/23/2022

## Pesticide Analysis Continued

#### PESTICIDE TEST RESULTS - 06/20/2022 continued 🔗 PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Propoxur	0.03/0.09	≥ LOD	N/A	ND	PASS
Pyrethrins	0.04/0.12	0.5	N/A	ND	PASS
Pyridaben	0.02/0.07	0.1	N/A	ND	PASS
Spinetoram	0.02/0.07	0.1	N/A	ND	PASS
Spinosad	0.02/0.07	0.1	N/A	ND	PASS
Spiromesifen	0.02/0.05	0.1	N/A	ND	PASS
Spirotetramat	0.02/0.06	0.1	N/A	ND	PASS
Spiroxamine	0.03/0.08	≥ LOD	N/A	ND	PASS
Tebuconazole	0.02/0.07	0.1	N/A	ND	PASS
Thiadoprid	0.03/0.10	≥ LOD	N/A	ND	PASS
Thiamethoxam	0.03/0.10	5	N/A	ND	PASS
Trifloxystrobin	0.03/0.08	0.1	N/A	ND	PASS

# ្លំ🍟 Mycotoxin Analysis

Mycotoxin analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS).

Method: QSP 1212 - Analysis of Pesticides and Mycotoxins by LC-MS



Residual Solvent analysis utilizing gas chromatography-mass spectrometry (GC-MS).

Method: QSP 1204 - Analysis of Residual Solvents by GC-MS

#### MYCOTOXIN TEST RESULTS - 06/20/2022 🔗 PASS

COMPOUND	LOD/LOQ (µg/kg)	ACTION LIMIT (µg/kg)	MEASUREMENT UNCERTAINTY (µg/kg)	RESULT (µg/kg)	RESULT
Aflatoxin B1	2.0/6.0		N/A	ND	Ĩ
Aflatoxin B2	1.8 / 5.6		N/A	ND	
Aflatoxin G1	1.0/3.1		N/A	ND	
Aflatoxin G2	1.2/3.5		N/A	ND	
Total Aflatoxin	1 A	20		ND	PASS
Ochratoxin A	6.3/19.2	20	N/A	ND	PASS

#### RESIDUAL SOLVENTS TEST RESULTS - 06/21/2022 @ PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Propane	10/20	5000	N/A	ND	PASS
n-Butane	10/50	5000	N/A	ND	PASS
n-Pentane	20/50	5000	N/A	ND	PASS
n-Hexane	2/5	290	N/A	ND	PASS
n-Heptane	20/60	5000	N/A	ND	PASS
Benzene	0.03 / 0.09	1	N/A	ND	PASS
Toluene	7/21	890	N/A	ND	PASS
Total Xylenes	50/160	2170	N/A	ND	PASS
Methanol	50/200	3000	N/A	ND	PASS
Ethanol	20/50	5000	N/A	ND	PASS
2-Propanol (Isopropyl Alcohol)	10/40	5000	N/A	ND	PASS
Acetone	20/50	5000	N/A	ND	PASS
Ethyl Ether	20/50	5000	N/A	ND	PASS

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O2PH200022001-PSB01 230321A | DATE ISSUED 06/23/2022

# Residual Solvents Analysis

#### RESIDUAL SOLVENTS TEST RESULTS - 06/21/2022 continued 🔗 PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Ethylene Oxide	0.3/0.8	1	N/A	ND	PASS
Ethyl Acetate	20/60	5000	N/A	ND	PASS
Chloroform	0.1/0.2	1	N/A	ND	PASS
Dichloromethane (Methylene Chloride)	0.3/0.9	1	N/A	ND	PASS
Trichloroethylene	0.1/0.3	1	N/A	ND	PASS
1,2-Dichloroethane	0.05 / 0.1	1	N/A	ND	PASS
Acetonitrile	2/7	410	N/A	ND	PASS

### Heavy Metals Analysis

Heavy metal analysis utilizing inductively coupled plasma-mass spectrometry (ICP-MS).

Method: QSP 1160 - Analysis of Heavy Metals by ICP-MS

## Microbiology Analysis

PCR AND PLATING

Analysis conducted by polymerase chain reaction (PCR) and fluorescence detection of microbiological contaminants.

Method: QSP 1221 - Analysis of Microbiological Contaminants

Analysis conducted by  $3M^{\text{TM}}$  Petrifilm<sup>TM</sup> and plate counts of microbiological contaminants.

Method: QSP 6794 - Plating with 3M<sup>™</sup> Petrifilm<sup>™</sup>

#### HEAVY METALS TEST RESULTS - 06/19/2022 🔗 PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Arsenic	0.02/0.1	0.2	N/A	ND	PASS
Cadmium	0.02/0.05	0.2	N/A	ND	PASS
Lead	0.04/0.1	0.5	N/A	ND	PASS
Mercury	0.002/0.01	0.1	N/A	ND	PASS

#### MICROBIOLOGY TEST RESULTS (PCR) - 06/22/2022 OPASS

COMPOUND	ACTION LIMIT	RESULT	RESULT
Shiga toxin-producing Escherichia coli	Not Detected in 1g	ND	PASS
Salmonella spp.	Not Detected in 1g	ND	PASS
Staphylococcus aureus		ND	

#### MICROBIOLOGY TEST RESULTS (PLATING) - 06/22/2022 ND

COMPOUND	RESULT (cfu/g)
Total Yeast and Mold	ND
Total Enterobacteriaceae	ND

#### NOTES

COA amended, update to order detail information.



## 1350mg Orange Tincture

Test: Microbial Conta	aminants	Reported: <b>27Mar2023</b>		USDA License: N/A
Test ID:		Started:		Sampler ID:
T000239439		24Mar2023		N/A
Method(s):		Received:		Status:
-		24Mar2023		Active
		Quantitation		
Method	LOD	Range	Result	Notes
TM25: PCR	10 <sup>0</sup> CFU/25g	NA	Absent	Free from visual mold, mildew, and
TM25: PCR	10 <sup>0</sup> CFU/25g	NA	Absent	— foreign matter
TM24: Culture Plating	10 <sup>1</sup> CFU/g	1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup>	None Detected	
TM26: Culture Plating	10 <sup>2</sup> CFU/g	1.0x10 <sup>3</sup> - 1.5x10 <sup>5</sup>	None Detected	
TM27: Culture Plating	10 <sup>1</sup> CFU/g	1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup>	None Detected	
	Microbial Conta Test ID: T000239439 Method(s): TM25 (qPCR) TM (Culture Plating) Panel) Method TM25: PCR TM25: PCR TM25: PCR TM24: Culture Plating TM26: Culture Plating TM27: Culture	Microbial Contaminants   Test ID:   T000239439   Method(s):   TM25 (qPCR) TM24, TM26, TM27   (Culture Plating): Microbial (Colorador Panel)   Method LOD   TM25: PCR 10 <sup>0</sup> CFU/25g   TM25: PCR 10 <sup>0</sup> CFU/25g   TM25: PCR 10 <sup>1</sup> CFU/25g   TM24: Culture Plating 10 <sup>1</sup> CFU/25g   TM26: Culture Plating 10 <sup>2</sup> CFU/25g   TM26: Culture Plating 10 <sup>2</sup> CFU/25g   TM27: Culture 10 <sup>1</sup> CFU/25g	Microbial Contaminants27Mar2023Test ID: T000239439Started: 24Mar2023Method(s): TM25 (qPCR) TM24, TM26, TM27 (Culture Plating): Microbial (Colorado Panel)Received: 24Mar2023MethodLODQuantitation RangeMethod10° CFU/25gNATM25: PCR10° CFU/25gNATM25: PCR10° CFU/25gNATM25: PCR10° CFU/25gNATM25: PCR10° CFU/25gNATM26: Culture Plating10° CFU/25g1.0x10² - 1.5x10⁴TM26: Culture Plating10° CFU/g1.0x10³ - 1.5x10⁵	Microbial Contaminants27Mar2023Test ID: T000239439Started: 24Mar2023Method(s): TM25 (qPCR) TM24, TM26, TM27 (Culture Plating): Wicrobial (Colorado Panel)Received: 24Mar2023Method LODQuantitation RangeResultMethodLODNATM25: PCR10° CFU/25gTM25: PCR10° CFU/25gTM25: PCR10° CFU/25gTM25: PCR10° CFU/25gTM24: Culture Plating10° CFU/25gTM26: Culture Plating10° CFU/gTM26: Culture Plating10° CFU/gTM27: Culture Plating10° CFU/gTM27: Culture10° CFU/g

## **Final Approval**

Eden Thompson

Eden Thompson-Wright 27Mar2023 01:47:00 PM MDT

Buanne Maillot

**Brianne Maillot** 27Mar2023 03:48:00 PM MDT



PREPARED BY / DATE

APPROVED BY / DATE



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:  $10^2 = 100 \text{ CFU}$ ,  $10^3 = 1,000 \text{ CFU}$ ,  $10^4 = 10,000 \text{ CFU}$ ,  $10^5 = 100,000 \text{ CFU}$ 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 SC Laboratories, Inc., in the condition it was received. SC Laboratories, Inc., 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 SC Laboratories, Inc. ISO/IEC 17025:2017 Accredited by A2LA.



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