

# CERTIFICATE OF ANALYSIS

**PRODUCT NAME:** Organic CBD Tincture - Orange  
**PRODUCT STRENGTH:** 1350mg  
**TINCTURE BATCH:** 230321A  
**BEST BY DATE:** 3/21/2025  
**HEMP EXTRACT LOT:** O2PH200022001-PSB01

### Physical Attributes


Test	Method	Specification	Results
Color	Internal	Golden to Amber	PASS
Odor	Internal	Characteristic - Coconut and Hemp, Orange	PASS
Appearance	Internal	Golden to Amber oil in brown glass bottle with dropper.	PASS
Primary Package Eval.	Internal	Container clean and free of filth. Container caps tight and shrink bands intact	PASS
Secondary Package Eval.	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	*NLT (product strength) mg / bottle	<b>1435mg</b>	PASS
<b>Potency - D9-THC</b>	HPLC-UV DAD	LOQ: 10 ppm (.001-0.3%)	<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  
 \*Nothing Less Than  
 10<sup>2</sup>=100 CFU  
 10<sup>3</sup>=1,000 CFU

Quality Certified

  
 \_\_\_\_\_  
 Name

4/18/2023

\_\_\_\_\_

Date


### 1350mg Orange Tincture


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

### Cannabinoids

	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)	Notes
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	
<b>Total Cannabinoids</b>			<b>4.859</b>	<b>48.59</b>	
Total Potential THC			ND	ND	
Total Potential CBD			4.834	48.34	

### Final Approval

  
PREPARED BY / DATE  
Sam Smith  
28Dec2022  
01:40:00 PM MST

  
APPROVED BY / DATE  
Karen Winternheimer  
28Dec2022  
01:49:00 PM MST



<https://results.botanacor.com/api/v1/coas/uuid/29ee7bf8-06e4-45c3-8684-896b5e990868>

**Definitions**  
% = % (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.



Cert #4329.02

CDPHE Certified  
29ee7bf806e445c38684896b5e990868.1



PESTICIDE TEST RESULTS - 06/20/2022 ✔ PASS



## Pesticide Analysis

Pesticide and plant growth regulator analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS) or gas chromatography-mass spectrometry (GC-MS).

\*GC-MS utilized where indicated.

**Method:** QSP 1212 - Analysis of Pesticides and Mycotoxins by LC-MS or QSP 1213 - Analysis of Pesticides by GC-MS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Abamectin	0.03 / 0.10	0.1	N/A	ND	PASS
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

Continued on next page



**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
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
Fonicamid	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

Continued on next page



**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



**Mycotoxin Analysis**

MYCOTOXIN TEST RESULTS - 06/20/2022 ✔ PASS

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

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

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	
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		20		ND	PASS
Ochratoxin A	6.3 / 19.2	20	N/A	ND	PASS



**Residual Solvents Analysis**

RESIDUAL SOLVENTS TEST RESULTS - 06/21/2022 ✔ PASS

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

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

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

Continued on next page



### Residual Solvents Analysis

Continued

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
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 METALS TEST RESULTS - 06/19/2022 ✔ PASS

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

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

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 Analysis

PCR AND PLATING

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

Method: QSP 1221 - Analysis of Microbiological Contaminants

MICROBIOLOGY TEST RESULTS (PCR) - 06/22/2022 ✔ PASS

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

Analysis conducted by 3M™ Petrifilm™ and plate counts of microbiological contaminants.

Method: QSP 6794 - Plating with 3M™ Petrifilm™

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

Batch ID or Lot Number: <b>230321A</b>	Test: <b>Microbial Contaminants</b>	Reported: <b>27Mar2023</b>	USDA License: N/A
Matrix: Finished Product	Test ID: T000239439	Started: 24Mar2023	Sampler ID: N/A
	Method(s): TM25 (qPCR) TM24, TM26, TM27 (Culture Plating): Microbial (Colorado Panel)	Received: 24Mar2023	Status: Active

## 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
<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



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

PREPARED BY / DATE



Brianne Maillot  
27Mar2023  
03:48:00 PM MDT

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/207e5c17-81f8-4add-8987-84717b373de6>

### 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 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.



Cert #4329.02



CDPHE Certified



207e5c1781f84add898784717b373de6.1