

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Organic CBD Tincture - Lemon
PRODUCT STRENGTH: 1350mg
TINCTURE BATCH: 230425A
BEST BY DATE: 4/25/2025
HEMP EXTRACT LOT: O2PH200022001-PSB01

Physical Attributes

Test	Method	Specification	Results
Color	Joy Internal	Golden to Amber	PASS
Odor	Joy Internal	Characteristic - Coconut and Hemp, Lemon	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	1436mg	PASS
Potency - D9-THC	HPLC-UV DAD	LOQ: <0.01% THC (Broad Spectrum)	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	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 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† Afltoxin B1 < 5 ppb Ochratoxin < 5ppb	ND	PASS
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
 *Nothing Less Than
 10²=100 CFU
 10³=1,000 CFU

Quality Certified

Name



5/16/2023

Date



1350mg CBD Tincture- Lemon

Batch ID or Lot Number: 230425A	Test: Potency	Reported: 28Dec2022	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	
Total Cannabinoids			4.859	48.59	
Total Potential THC			ND	ND	
Total Potential CBD			4.834	48.34	



Pesticide Analysis

PESTICIDE TEST RESULTS - 06/20/2022 ✔ PASS

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

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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

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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

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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 CBD Tincture- Lemon

Batch ID or Lot Number: 230425A	Test: Microbial Contaminants	Reported: 05May2023	USDA License: N/A
Matrix: Finished Product	Test ID: T000242755	Started: 02May2023	Sampler ID: N/A
	Method(s): TM25 (qPCR) TM24, TM26, TM27 (Culture Plating): Microbial (Colorado Panel)	Received: 01May2023	Status: Active

Microbial Contaminants

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

Final Approval



Eden Thompson-Wright
05May2023
02:00:00 PM MDT



Brett Hudson
05May2023
04:46:00 PM MDT



PREPARED BY / DATE

APPROVED BY / DATE

<https://results.botanacor.com/api/v1/coas/uuid/e66565f9-7bab-4adc-901b-fc91ea242449>

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

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CDPHE Certified

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