



JOY ORGANICS

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Organic CBD Full Spectrum Tincture - Key Lime
PRODUCT STRENGTH: 900mg
TINCTURE BATCH: 250204C
BEST BY DATE: 2/4/2027
HEMP EXTRACT LOT: 250124C

Physical Attributes

Test	Method	Specification	Results
Color	Joy Internal	Golden to Amber	PASS
Odor	Joy Internal	Characteristic - Coconut and hemp, lime	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	1068mg	PASS
Potency - D9-THC	HPLC-UV DAD	LOQ: 10 ppm (.001-0.3%) mg/ bottle	0.09% 28mg	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	Below LOQ	PASS
Microbial Salmonella	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram	Below LOQ	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† Aflatoxin 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

2/17/2025

Date



Cannabinoi*d* Analysis

Tested by high-performance liquid chromatography with diode-array detection (HPLC-DAD).

Method: QSP 1157 - Analysis of Cannabinoids by HPLC-DAD

TOTAL THC: 28.620 mg/unit

Total THC (Δ^9 -THC+0.877*THCa)

TOTAL CBD: 1068.720 mg/unit

Total CBD (CBD+0.877*CBDa)

TOTAL CANNABINOIDS: 1169.850 mg/unit

Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) + Δ^8 -THC + CBL + CBN

TOTAL CBG: 28.230 mg/unit

Total CBG (CBG+0.877*CBGa)

TOTAL THCV: ND

Total THCV (THCV+0.877*THCVa)

TOTAL CBC: 33.870 mg/unit

Total CBC (CBC+0.877*CBCa)

TOTAL CBDV: 5.670 mg/unit

Total CBDV (CBDV+0.877*CBDVa)

CANNABINOID TEST RESULTS - 02/01/2025

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
CBD	0.004 / 0.011	±1.3264	35.560	3.5560
CBC	0.003 / 0.010	±0.0364	1.129	0.1129
Δ^9 -THC	0.002 / 0.014	±0.0524	0.954	0.0954
CBG	0.002 / 0.006	±0.0456	0.941	0.0941
CBDV	0.002 / 0.012	±0.0077	0.189	0.0189
CBN	0.001 / 0.007	±0.0028	0.096	0.0096
CBDa	0.001 / 0.026	±0.0021	0.073	0.0073
CBL	0.003 / 0.010	±0.0023	0.062	0.0062
Δ^8 -THC	0.01 / 0.02	N/A	ND	ND
THCa	0.001 / 0.005	N/A	ND	ND
THCV	0.002 / 0.012	N/A	ND	ND
THCVa	0.002 / 0.019	N/A	ND	ND
CBDVa	0.001 / 0.018	N/A	ND	ND
CBGa	0.002 / 0.007	N/A	ND	ND
CBCa	0.001 / 0.015	N/A	ND	ND
SUM OF CANNABINOIDS			39.004 mg/g	3.9004%

Unit Mass: 30 grams per Unit / Serving Size: 1 grams per Serving

Δ^9 -THC per Unit	110 per-package limit	28.620 mg/unit	PASS
Δ^9 -THC per Serving		0.954 mg/serving	PASS
Total THC per Unit		28.620 mg/unit	
Total THC per Serving		0.954 mg/serving	
CBD per Unit		1066.800 mg/unit	
CBD per Serving		35.560 mg/serving	
Total CBD per Unit		1068.720 mg/unit	
Total CBD per Serving		35.624 mg/serving	
Sum of Cannabinoids per Unit		1170.120 mg/unit	
Sum of Cannabinoids per Serving		39.004 mg/serving	
Total Cannabinoids per Unit		1169.850 mg/unit	
Total Cannabinoids per Serving		38.995 mg/serving	

DENSITY TEST RESULT

0.9546 g/mL
Tested 02/01/2025
Method: QSP 7870 - Sample Preparation

NOTES

Sample unit mass provided by client.


Pesticide Analysis *Continued*

PESTICIDE TEST RESULTS - 01/02/2025 *continued* **PASS**

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Pyrethrins	0.016 / 0.049	1	N/A	ND	PASS
Pyridaben	0.005 / 0.017	3	N/A	ND	PASS
Pyriproxyfen	0.003 / 0.009		N/A	ND	
Resmethrin	0.013 / 0.039		N/A	ND	
Spinetoram	0.003 / 0.010	3	N/A	ND	PASS
Spinosad	0.003 / 0.010	3	N/A	ND	PASS
Spirodiclofen	0.031 / 0.093		N/A	ND	
Spiromesifen	0.016 / 0.050	12	N/A	ND	PASS
Spirotetramat	0.003 / 0.010	13	N/A	ND	PASS
Spiroxamine	0.020 / 0.062	≥ LOD	N/A	ND	PASS
Tebuconazole	0.003 / 0.010	2	N/A	ND	PASS
Tebufenozide	0.003 / 0.008		N/A	ND	
Teflubenzuron	0.007 / 0.022		N/A	ND	
Tetrachlorvinphos	0.003 / 0.008		N/A	ND	
Tetramethrin	0.021 / 0.063		N/A	ND	
Thiabendazole	0.006 / 0.020		N/A	ND	
Thiacloprid	0.003 / 0.009	≥ LOD	N/A	ND	PASS
Thiamethoxam	0.003 / 0.010	4.5	N/A	ND	PASS
Thiophanate-methyl	0.013 / 0.040		N/A	ND	
Trifloxystrobin	0.003 / 0.009	30	N/A	ND	PASS


Mycotoxin Analysis

MYCOTOXIN TEST RESULTS - 01/02/2025 **PASS**

COMPOUND	LOD/LOQ (µg/kg)	ACTION LIMIT (µg/kg)	MEASUREMENT UNCERTAINTY (µg/kg)	RESULT (µg/kg)	RESULT
Aflatoxin B1	1.6 / 5.0		N/A	ND	
Aflatoxin B2	1.4 / 4.1		N/A	ND	
Aflatoxin G1	1.6 / 4.9		N/A	ND	
Aflatoxin G2	1.6 / 5.0		N/A	ND	
Ochratoxin A	1.6 / 5.0	20	N/A	ND	PASS
Total Aflatoxin		20		ND	PASS

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

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



Pesticide Analysis

Pesticide and plant growth regulator analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS) or gas chromatography-mass spectrometry (GC-MS). ‡Analytes part of our California Select Panel.

*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

PESTICIDE TEST RESULTS - 01/02/2025 PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Abamectin	0.032 / 0.097	0.3	N/A	ND	PASS
Acephate	0.006 / 0.018	5	N/A	ND	PASS
Acequinocyl	0.009 / 0.027	4	N/A	ND	PASS
Acetamiprid	0.016 / 0.049	5	N/A	ND	PASS
Aldicarb	0.030 / 0.090	≥ LOD	N/A	ND	PASS
Allethrin	0.030 / 0.092		N/A	ND	
Atrazine	0.006 / 0.019		N/A	ND	
Azadirachtin	0.082 / 0.248		N/A	ND	
Azoxystrobin	0.003 / 0.009	40	N/A	ND	PASS
Benzovindiflupyr	0.003 / 0.009		N/A	ND	
Bifenazate	0.003 / 0.009	5	N/A	ND	PASS
Bifenthrin	0.021 / 0.064	0.5	N/A	ND	PASS
Boscalid	0.003 / 0.009	10	N/A	ND	PASS
Buprofezin‡	0.006 / 0.019		N/A	ND	
Carbaryl	0.007 / 0.020	0.5	N/A	ND	PASS
Carbofuran	0.003 / 0.008	≥ LOD	N/A	ND	PASS
Chlorantraniliprole	0.006 / 0.018	40	N/A	ND	PASS
Chlorfenapyr*	0.005 / 0.015	≥ LOD	N/A	ND	PASS
Chlorpyrifos	0.013 / 0.039	≥ LOD	N/A	ND	PASS
Clofentezine	0.003 / 0.009	0.5	N/A	ND	PASS
Clothianidin	0.008 / 0.025		N/A	ND	
Coumaphos	0.003 / 0.010	≥ LOD	N/A	ND	PASS
Cyantraniliprole	0.003 / 0.010		N/A	ND	
Cyfluthrin	0.052 / 0.159	1	N/A	ND	PASS
Cypermethrin	0.051 / 0.153	1	N/A	ND	PASS
Cyprodinil‡	0.003 / 0.008		N/A	ND	
Daminozide	0.026 / 0.077	≥ LOD	N/A	ND	PASS
Deltamethrin	0.059 / 0.180		N/A	ND	
Diazinon	0.006 / 0.017	0.2	N/A	ND	PASS
Dichlorvos (DDVP)	0.012 / 0.038	≥ LOD	N/A	ND	PASS
Dimethoate	0.003 / 0.009	≥ LOD	N/A	ND	PASS
Dimethomorph	0.016 / 0.050	20	N/A	ND	PASS
Dinotefuran	0.010 / 0.030		N/A	ND	
Diuron	0.013 / 0.040		N/A	ND	
Dodemorph	0.012 / 0.035		N/A	ND	
Endosulfan sulfate	0.016 / 0.048		N/A	ND	
Endosulfan-α*	0.004 / 0.014		N/A	ND	
Endosulfan-β*	0.006 / 0.019		N/A	ND	
Ethoprophos	0.003 / 0.009	≥ LOD	N/A	ND	PASS
Etofenprox	0.014 / 0.042	≥ LOD	N/A	ND	PASS
Etoxazole	0.007 / 0.020	1.5	N/A	ND	PASS

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Pesticide Analysis *Continued*

PESTICIDE TEST RESULTS - 01/02/2025 *continued* ✓ PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Etridiazole*	0.002 / 0.005		N/A	ND	
Fenhexamid	0.003 / 0.008	10	N/A	ND	PASS
Fenoxycarb	0.003 / 0.010	≥ LOD	N/A	ND	PASS
Fenpyroximate	0.007 / 0.020	2	N/A	ND	PASS
Fensulfothion	0.003 / 0.010		N/A	ND	
Fenthion	0.003 / 0.010		N/A	ND	
Fenvalerate†	0.033 / 0.099		N/A	ND	
Fipronil	0.003 / 0.010	≥ LOD	N/A	ND	PASS
Flonicamid	0.007 / 0.022	2	N/A	ND	PASS
Fludioxonil	0.003 / 0.010	30	N/A	ND	PASS
Fluopyram†	0.003 / 0.009		N/A	ND	
Hexythiazox	0.003 / 0.010	2	N/A	ND	PASS
Imazalil	0.003 / 0.009	≥ LOD	N/A	ND	PASS
Imidacloprid	0.003 / 0.010	3	N/A	ND	PASS
Iprodione	0.077 / 0.233		N/A	ND	
Kinoprene	0.077 / 0.233		N/A	ND	
Kresoxim-methyl	0.006 / 0.019	1	N/A	ND	PASS
λ-Cyhalothrin	0.068 / 0.206		N/A	ND	
Malathion	0.003 / 0.009	5	N/A	ND	PASS
Metaxyl	0.003 / 0.010	15	N/A	ND	PASS
Methiocarb	0.003 / 0.008	≥ LOD	N/A	ND	PASS
Methomyl	0.008 / 0.025	0.1	N/A	ND	PASS
Methoprene†	0.172 / 0.521		N/A	ND	
Mevinphos	0.008 / 0.024	≥ LOD	N/A	ND	PASS
MGK-264	0.015 / 0.047		N/A	ND	
Myclobutanil	0.003 / 0.009	9	N/A	ND	PASS
Naled	0.021 / 0.064	0.5	N/A	ND	PASS
Novaluron	0.002 / 0.005		N/A	ND	
Oxamyl	0.017 / 0.051	0.2	N/A	ND	PASS
Paclobutrazol	0.003 / 0.010	≥ LOD	N/A	ND	PASS
Parathion-methyl	0.016 / 0.050	≥ LOD	N/A	ND	PASS
Pentachloronitro- benzene (Quintozene)*	0.004 / 0.012	0.2	N/A	ND	PASS
Permethrin	0.056 / 0.168	20	N/A	ND	PASS
Phenothrin	0.016 / 0.047		N/A	ND	
Phosmet	0.007 / 0.020	0.2	N/A	ND	PASS
Piperonyl Butoxide	0.010 / 0.029	8	N/A	ND	PASS
Pirimicarb	0.003 / 0.009		N/A	ND	
Prallethrin	0.015 / 0.046	0.4	N/A	ND	PASS
Propiconazole	0.027 / 0.080	20	N/A	ND	PASS
Propoxur	0.003 / 0.008	≥ LOD	N/A	ND	PASS
Pyraclostrobin	0.003 / 0.010		N/A	ND	

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Residual Solvents Analysis

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

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

Total Butanes = n-Butane + 2-Methylpropane (Isobutane)
Total Heptanes = 2,2-Dimethylpentane (Neoheptane) +
2,3-Dimethylpentane + 2,4-Dimethylpentane + 3,3-Dimethylpentane +
2,2,3-Trimethylbutane (Triptane) + 2-Methylhexane (Isoheptane) +
3-Methylhexane + 3-Ethylpentane + n-Heptane
Total Xylenes = 1,2-Dimethylbenzene (o-Xylene) +
1,3-Dimethylbenzene (m-Xylene) / 1,4-Dimethylbenzene (p-Xylene)

RESIDUAL SOLVENTS TEST RESULTS - 01/03/2025

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Propane	0.234 / 0.781	5000	N/A	ND	PASS
2-Methylpropane (Isobutane)	0.052 / 0.173		N/A	ND	
n-Butane	0.019 / 0.063	5000	N/A	ND	PASS
Total Butanes				ND	
n-Pentane	0.310 / 1.033	5000	N/A	ND	PASS
n-Hexane	0.110 / 0.366	290	N/A	ND	PASS
2,2-Dimethylpentane (Neoheptane)	0.493 / 1.642		N/A	ND	
2,3-Dimethylpentane	1.009 / 3.365		N/A	ND	
2,4-Dimethylpentane	0.737 / 2.458		N/A	ND	
3,3-Dimethylpentane	0.198 / 0.660		N/A	ND	
2,2,3-Trimethylbutane (Triptane)	0.521 / 1.738		N/A	ND	
2-Methylhexane (Isoheptane)	0.610 / 2.034		N/A	ND	
3-Methylhexane	0.235 / 0.785		N/A	ND	
3-Ethylpentane	0.304 / 1.012		N/A	ND	
n-Heptane	13.12 / 43.72	5000	N/A	ND	PASS
Total Heptanes				ND	
Benzene	0.089 / 0.295	1	N/A	ND	PASS
Toluene	0.115 / 0.382	890	N/A	ND	PASS
1,3-Dimethylbenzene (m-Xylene) / 1,4-Dimethylbenzene (p-Xylene)	0.451 / 1.502		N/A	ND	
1,2-Dimethylbenzene (o-Xylene)	0.387 / 1.289		N/A	ND	
Total Xylenes		2170		ND	PASS
Methanol	53.92 / 163.4	3000	N/A	ND	PASS
Ethanol	8.984 / 27.23	5000	N/A	ND	PASS
2-Propanol (Isopropyl Alcohol)	8.421 / 25.52	5000	N/A	ND	PASS
Acetone	10.59 / 32.08	5000	N/A	ND	PASS
Ethyl Acetate	1.123 / 3.745	5000	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

HEAVY METALS TEST RESULTS - 12/31/2024

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Arsenic	0.02 / 0.1	1.5	N/A	ND	PASS
Cadmium	0.02 / 0.05	0.5	N/A	ND	PASS
Lead	0.04 / 0.1	0.5	N/A	ND	PASS
Mercury	0.002 / 0.01	3	N/A	ND	PASS

NOTES



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™ Petrifilm™ and plate counts of microbiological contaminants.

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

MICROBIOLOGY TEST RESULTS (PCR) - 02/14/2025 PASS

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

MICROBIOLOGY TEST RESULTS (PLATING) - 02/14/2025 ND

COMPOUND	RESULT (cfu/g)
Coliforms	ND
Total Aerobic Bacteria	ND
Total Yeast and Mold	ND

NOTES
Sample unit mass provided by client.