

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Organic Full Spectrum CBD Tincture - Tropical
PRODUCT STRENGTH: 1350mg
TINCTURE BATCH: 241211A
BEST BY DATE: 12/11/2026
HEMP EXTRACT LOT: 230407C

Physical Attributes

Test	Method	Specification	Results
Color	Joy Internal	Golden to Amber	PASS
Odor	Joy Internal	Characteristic - Coconut and Hemp, Tropical	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	LOQ*: $\geq$ product strength mg / bottle	1761mg	PASS
Potency - D9-THC	HPLC-UV DAD	LOQ: $<0.3\%$ total THC (Full spectrum) mg/bottle	0.22% 66mg	PASS
Expanded Pesticide Panel	HPLC-QQQ	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	Below LOQ	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	ICP-MS	Arsenic (As): ≤ 1.5 ppm† Cadmium (Cd): ≤ 0.5 ppm Lead (Pb): ≤ 0.5 ppm Mercury (Hg): ≤ 1.5 ppm	Below LOQ	PASS
Mycotoxins	ICP-MS	Total Aflatoxins <20 ppb†† Aflatoxin B1 <5 ppb Ochratoxin <5 ppb	Below LOQ	PASS
Residual Solvents	GC-HS-MSD	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	Below LOQ	PASS

*Level of Quantification

**Colony Forming Units per Gram

† Parts Per Million †† Part Per Billion

Values expressed in scientific notation.

Examples:

$10^2=100$

$10^3=1,000$

Quality Certified

Name

2/6/2025

Date



Certificate of Analysis

Compliance Test

Batch # 241211A
Batch Date: 2024-11-19
Extracted From: N/A

Test Reg State: Colorado

Order # 241119-030001
Order Date: 2024-11-19
Sample # AAGD894

Sampling Date: 2024-11-22
Lab Batch Date: 2024-11-22
Completion Date: 2024-11-27

Initial Gross Weight: 235.000 g



**Potency
Tested**



**Pathogenic
Passed**



**Microbiology Petrifilm
Passed**

Product Image



Potency 10

Specimen Weight: 101.080 mg

Tested

SOP13.001 (HPLC)

Analyte	Dilution (1:n)	LOD (mg/g)	LOQ (%)	Result (mg/g)	(%)
CBD	10.000	5.40E-5	0.015	59290	5.929
Delta-9 THC	10.000	1.30E-5	0.015	2240	0.224
CBC	10.000	1.80E-5	0.015	1850	0.185
CBG	10.000	2.48E-4	0.015	1180	0.118
CBDV	10.000	6.50E-5	0.015	670	0.067
THCV	10.000	7.00E-6	0.015	250	0.025
CBN	10.000	1.40E-5	0.015	220	0.022
CBDA	10.000	1.00E-5	0.015	<LOQ	<LOQ
CBGA	10.000	8.00E-5	0.015	<LOQ	<LOQ
THCA-A	10.000	3.20E-5	0.015	<LOQ	<LOQ
Total Active CBD	10.000			59.290	5.929
Total Active THC	10.000			2.240	0.224



Potency Summary

**Total Active THC
0.224%**

**Total Active CBD
5.929%**

**Total CBG
0.118%**

**Total CBN
0.022%**

**Total Cannabinoids
6.570%**

Aixia Sun

Aixia Sun Lab Director/Principal Scientist
D.H.Sc., M.Sc., B.Sc., MT (AAB)



Definitions and Abbreviations used in this report: Total Active CBD = CBD + (CBD-A * 0.877), *Total CBDV = CBDV + (CBDVA * 0.867), Total Active THC = THCA-A * 0.877 + Delta 9 THC, Total THCV = THCV + (THCVA * 0.87), CBG Total = (CBGA * 0.878) + CBG, CBN Total = (CBNA * 0.876) + CBN, Total CBC = CBC + (CBCA * 0.877), Total THC-O-Acetate = Delta 8 THC-O-Acetate + Delta 9 THC-O-Acetate, Total THCP = Delta8-THCP + Delta9-THCP, Total Cannabinoids = Total percentage of cannabinoids within the sample. (mg/ml) = Milligrams per Milliliter, LOQ = Limit of Quantitation, LOD = Limit of Detection, Dilution = Dilution Factor, (ppb) = Parts per Billion, (%) = Percent, (cfu/g) = Colony Forming Unit per Gram, (µg/g) = Microgram per Gram, (ppm) = Parts per Million, (ppm) = (µg/g), (aw) = Water Activity, (mg/Kg) = Milligram per Kilogram. ACS uses simple acceptance criteria. Passed - Analyte/microbe is not detected or is at the level below the action limit per CO rule 6 CCR 1010-21. Failed - Analyte/microbe is at the level that equal or above the action limit per CO rule 6 CCR 1010-21 Sample not received via laboratory sampling.

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SAMPLE DETAILS

SAMPLE NAME: Organic Tropical Tincture-
1350mg CBD- Full Spectrum
Infused, Liquid Edible

SAMPLE DETAIL

Batch Number: 241211A
Sample ID: 241230L034

Date Collected: 12/30/2024

Date Received: 12/30/2024

Batch Size:

Sample Size: 1.0 units

Unit Mass: 30 milliliters per Unit

Serving Size: 1 milliliters per Serving



Scan QR code to verify
authenticity of results.

SAFETY ANALYSIS - SUMMARY

Pesticides:  **PASS**

Mycotoxins:  **PASS**

Residual Solvents:  **PASS**

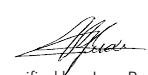
Heavy Metals:  **PASS**

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Sample Certification: California Code of Regulations Title 4 Division 19. Department of Cannabis Control Business and Professions Code. Reference: Sections 26100, 26104 and 26110, Business and Professions Code.

Decision Rule: Statements of conformity (e.g. Pass/Fail) to specifications are made in this report without taking measurement uncertainty into account. Where statements of conformity are made in this report, the following decision rules are applied: PASS - Results within limits/specifications, FAIL - Results exceed limits/specifications.

References: limit of detection (LOD), limit of quantification (LOQ), not detected (ND), not tested (NT), $\mu\text{g/g}$ = ppm, $\mu\text{g/kg}$ = ppb


LQC verified by: Juan Romero-Cortez
Job Title: Laboratory Analyst II
Date: 01/03/2025


Approved by: Josh Wurzer
Job Title: Chief Compliance Officer
Date: 01/03/2025



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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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



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 ✓ PASS

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 ✓ PASS

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



Certificate of Analysis

Compliance Test

Batch # 02/01/?
Batch Date: 2024-11-19
Extracted From: N/A

Test Reg State: Colorado

Order # 241119-030001
Order Date: 2024-11-19
Sample # AAGD894

Sampling Date: 2024-11-22
Lab Batch Date: 2024-11-22
Completion Date: 2024-11-27

Initial Gross Weight: 235.000 g

Pathogenic SE (qPCR) - CO
Specimen Weight: 25.780 g

Passed
SOP13.029
(qPCR)

Dilution Factor: 1.000

Analyte	Result (cfu/g)	Analyte	Result (cfu/g)
E.Coli	Passed	Salmonella	Passed

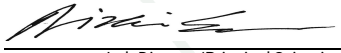


Microbiology (Petrifilm) - CO
Specimen Weight: 1009.100 mg

Passed
SOP13.003
(Petrifilm)

Dilution Factor: 1.000

Analyte	LOQ (cfu/g)	Action Limit (cfu/g)	Result (cfu/g)	Analyte	LOQ (cfu/g)	Action Limit (cfu/g)	Result (cfu/g)
Aerobic Bacteria	10	10000	<10	Yeast/Mold	10	1000	<10
Total Coliform	10	100	<10				


Aixa Sun Lab Director/Principal Scientist
D.H.Sc., M.Sc., B.Sc., MT (AAB)

Definitions are found on page 1

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