



Certificate of Analysis

R&D

Client Information:

Hectare's

819 E. Market St., Ste 101
Louisville, KY 40206

Batch # HE001
Batch Date: 2024-05-30
Extracted From: Hemp

Test Reg State: Florida

Order # HEC240530-020001
Order Date: 2024-05-30
Sample # AAFQ239

Sampling Date: 2024-06-04
Lab Batch Date: 2024-06-04
Orig. Completion Date: 2024-06-12

Volume: 355 ml

Statement of Amendment: Updated to RnD



Product Image

Terpenes Tested	Heavy Metals Passed	Mycotoxins Passed	Pesticides Passed	Pathogenic Microbiology Passed
Listeria Monocytogenes Passed	Microbiology (qPCR) Passed			

Terpenes
Specimen Weight: 451.000 mg

Tested
SOP13.045 (GC/GCMS)

Dilution Factor: 3.000

Analyte	LOQ (%)	Result (mg/g)	(%)	Analyte	LOQ (%)	Result (mg/g)	(%)
Nerol	0.002	0.280	0.028	cis-Nerolidol	0.002	<LOQ	<LOQ
Fenchone	0.002	0.070	0.007	Eucalyptol	0.002	<LOQ	<LOQ
alpha-Pinene	0.002	0.040	0.004	Farnesene	0.002	<LOQ	<LOQ
Fenchyl Alcohol	0.002	0.040	0.004	Gamma-Terpinene	0.002	<LOQ	<LOQ
alpha-Bisabolol	0.002	0.020	0.002	Geraniol	0.002	<LOQ	<LOQ
trans-Caryophyllene	0.002	0.020	0.002	Geranyl acetate	0.002	<LOQ	<LOQ
(+)-Cedrol	0.002	<LOQ	<LOQ	Guaiol	0.002	<LOQ	<LOQ
(R)-(+)-Limonene	0.002	<LOQ	<LOQ	Hexahydrothymol	0.002	<LOQ	<LOQ
3-Carene	0.002	<LOQ	<LOQ	Isoborneol	0.002	<LOQ	<LOQ
alpha-Cedrene	0.002	<LOQ	<LOQ	Isopulegol	0.002	<LOQ	<LOQ
alpha-Humulene	0.002	<LOQ	<LOQ	Linalool	0.002	<LOQ	<LOQ
alpha-Phellandrene	0.002	<LOQ	<LOQ	Ocimene	0.00033	<LOQ	<LOQ
alpha-Terpinene	0.002	<LOQ	<LOQ	Pulegone	0.002	<LOQ	<LOQ
beta-Myrcene	0.002	<LOQ	<LOQ	Sabinene	0.002	<LOQ	<LOQ
beta-Pinene	0.002	<LOQ	<LOQ	Sabinene Hydrate	0.002	<LOQ	<LOQ
Borneol	0.004	<LOQ	<LOQ	Terpinolene	0.002	<LOQ	<LOQ
Camphene	0.002	<LOQ	<LOQ	Total Terpeneol	0.00126	<LOQ	<LOQ
Camphors	0.006	<LOQ	<LOQ	trans-Nerolidol	0.002	<LOQ	<LOQ
Caryophyllene oxide	0.002	<LOQ	<LOQ	Valencene	0.002	<LOQ	<LOQ

Listeria Monocytogenes
Specimen Weight: 1005.700 mg

Passed
SOP13.032 (qPCR)

Total Yeast and Mold
Specimen Weight: 483.800 mg

Passed
SOP13.017 (qPCR)

Dilution Factor: 1.000

Analyte	Result
Listeria Monocytogenes	Absence in 1g

Dilution Factor: 1.000

Analyte	Action Level (cfu/g)	Result (cfu/g)	Remark
Total Yeast/Mold	100000	<LOQ	Passed

Total Terpenes: 0.047%

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 * 0.87), Total Active THC = THCA-A * 0.877 + Delta 9 THC, Total THC = THCV + (THCVA * 0.87), CBG Total = (CBGA * 0.877) + CBG, CBN Total = (CBNA * 0.877) + 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 FL rule 64ER20-39, 5K-4.036, 5K-4.034. Failed - Analyte/microbe is at the level that equal or above the action limit per FL rule 64ER20-39, 5K-4.036, 5K-4.034 Sample not received via laboratory sampling. Potency tested per FL rule 64ER20-39, 5K-4.036, 5K-4.034 and passed. Revised report- see statement of amendment above.

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Volume: 355 ml

Pathogenic Microbiology SAE (MicroArray)

Specimen Weight: 1019.800 mg

Passed
SOP13.019 (Micro Array)

Dilution Factor: 1.000

Analyte	Result (cfu/g)	Analyte	Result (cfu/g)
Aspergillus flavus	Absence in 1g	Aspergillus terreus	Absence in 1g
Aspergillus fumigatus	Absence in 1g	Salmonella	Absence in 1g
Aspergillus niger	Absence in 1g	STEC E. Coli	Absence in 1g

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Volume: 355 ml



Heavy Metals

Specimen Weight: 247.700 mg

Passed
SOP13.048 (ICP-MS)

Dilution Factor: 201

Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Arsenic (As)	4.83	100	1500	<LOQ	Lead (Pb)	11.76	100	500	<LOQ
Cadmium (Cd)	.64	100	500	<LOQ	Mercury (Hg)	.58	100	3000	<LOQ



Mycotoxins

Specimen Weight: 609.800 mg

Passed
SOP13.007 (LCMS)

Dilution Factor: 2.460

Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Aflatoxin B1	3.0400E-1	6	20	<LOQ	Aflatoxin G2	2.7100E-1	6	20	<LOQ
Aflatoxin B2	7.7000E-2	6	20	<LOQ	Ochratoxin A	7.5400E-1	3.8	20	<LOQ
Aflatoxin G1	3.0400E-1	6	20	<LOQ					

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Volume: 355 ml

Pesticides

Specimen Weight: 609.800 mg

Passed

SOP13.007 (LCMS/GCMS)

Dilution Factor: 2.460

Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Abamectin	2.8800E-1	28.23	300	<LOQ	Fludioxonil	1.7400E+0	48	3000	<LOQ
Acephate	2.3000E-2	30	3000	<LOQ	Hexythiazox	4.9000E-2	30	2000	<LOQ
Acequinocyl	9.5640E+0	48	2000	<LOQ	Imazalil	2.4800E-1	30	100	<LOQ
Acetamiprid	5.2000E-2	30	3000	<LOQ	Imidacloprid	9.4000E-2	30	3000	<LOQ
Aldicarb	2.6000E-2	30	100	<LOQ	Kresoxim Methyl	4.2000E-2	30	1000	<LOQ
Azoxystrobin	8.1000E-2	10	3000	<LOQ	Malathion	8.2000E-2	30	2000	<LOQ
Bifenazate	1.4150E+0	30	3000	<LOQ	Metalaxyl	8.1000E-2	10	3000	<LOQ
Bifenthrin	4.3000E-2	30	500	<LOQ	Methiocarb	3.2000E-2	30	100	<LOQ
Boscalid	5.5000E-2	10	3000	<LOQ	Methomyl	2.2000E-2	30	100	<LOQ
Captan	6.1200E+0	30	3000	<LOQ	methyl-Parathion	1.7100E+0	10	100	<LOQ
Carbaryl	2.2000E-2	10	500	<LOQ	Mevinphos	2.1500E+0	10	100	<LOQ
Carbofuran	3.4000E-2	10	100	<LOQ	Myclobutanil	1.0290E+0	30	3000	<LOQ
Chlorantraniliprole	3.3000E-2	10	3000	<LOQ	Naled	9.5000E-2	30	500	<LOQ
Chlordane	1.0000E+1	10	100	<LOQ	Oxamyl	2.5000E-2	30	500	<LOQ
Chlorfenapyr	3.4000E-2	30	100	<LOQ	Paclbutrazol	6.5000E-2	30	100	<LOQ
Chlormequat Chloride	1.0800E-1	10	3000	<LOQ	Pentachloronitrobenzene	1.3200E+0	10	200	<LOQ
Chlorpyrifos	3.5000E-2	30	100	<LOQ	Permethrin	3.4300E-1	30	1000	<LOQ
Clofentezine	1.1900E-1	30	500	<LOQ	Phosmet	8.2000E-2	30	200	<LOQ
Coumaphos	3.7700E+0	48	100	<LOQ	Piperonylbutoxide	2.9000E-2	30	3000	<LOQ
Cyfluthrin	3.1100E+0	30	1000	<LOQ	Prallethrin	7.9800E-1	30	400	<LOQ
Cypermethrin	1.4490E+0	30	1000	<LOQ	Propiconazole	7.0000E-2	30	1000	<LOQ
Daminozide	8.8500E-1	30	100	<LOQ	Propoxur	4.6000E-2	30	100	<LOQ
Diazinon	4.4000E-2	30	200	<LOQ	Pyrethrins	2.3593E+1	30	1000	<LOQ
Dichlorvos	2.1820E+0	30	100	<LOQ	Pyridaben	3.2000E-2	30	3000	<LOQ
Dimethoate	2.1000E-2	30	100	<LOQ	Spinetoram	8.0000E-2	10	3000	<LOQ
Dimethomorph	5.8300E+0	48	3000	<LOQ	Spinosad	8.8000E-2	30	3000	<LOQ
Ethoprophos	3.6000E-1	30	100	<LOQ	Spiromesifen	2.6100E-1	30	3000	<LOQ
Etofenprox	1.1600E-1	30	100	<LOQ	Spirotetramat	8.9000E-2	30	3000	<LOQ
Etoxazole	9.5000E-2	30	1500	<LOQ	Spiroxamine	1.3100E-1	30	100	<LOQ
Fenhexamid	5.1000E-1	10	3000	<LOQ	Tebuconazole	6.7000E-2	30	1000	<LOQ
Fenoxycarb	1.0700E-1	30	100	<LOQ	Thiacloprid	6.4000E-2	30	100	<LOQ
Fenpyroximate	1.3800E-1	30	2000	<LOQ	Thiamethoxam	5.0000E-2	30	1000	<LOQ
Fipronil	1.0700E-1	30	100	<LOQ	Trifloxystrobin	3.7000E-2	30	3000	<LOQ
Flonicamid	5.1700E-1	30	2000	<LOQ					

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