



DEA No. RA0571996
FL License # CMTL-0003
CLIA No. 10D1094068

Certificate of Analysis

Compliance Test

Naternal
951 Aviation Pkwy
Suite 900
Morrisville, NC 27560

Batch # VOM.166
Batch Date: 2022-11-28
Extracted From: Hemp Biomass

Sampling Method: MSP 7.3.1
Test Reg State: Florida

Order # NAT221130-010001
Order Date: 2022-11-30
Sample # AADU591

Sampling Date: 2022-12-11
Lab Batch Date: 2022-12-11
Completion Date: 2022-12-16

Initial Gross Weight: 38.423 g
Net Weight: 34.823 g

Number of Units: 1
Net Weight per Unit: 3482.300 mg



Product Image

Potency Tested **Heavy Metals Passed** **Mycotoxins Passed** **Pesticides Passed** **Residual Solvents Passed**

Pathogenic Microbiology Passed **Listeria Monocytogenes Passed**

Potency 10
Specimen Weight: 1509.900 mg

Tested
SOP13.001 (LCUV)

Potency Summary

Total Active THC 0.034% 1.180mg	Total Active CBD 0.971% 33.810mg
Total CBG 0.015% 0.520mg	Total CBN 0.149% 5.190mg
Other Cannabinoids 0.024% 0.840mg	Total Cannabinoids 1.192% 41.510mg

Pieces For Panel: 10

Analyte	Dilution (1:n)	LOD (%)	LOQ (%)	Result (mg/g)	(%)
CBD	100.000	5.40E-5	0.0015	9.6730	0.9673
CBN	10.000	1.40E-5	0.0015	1.4900	0.1490
Delta-9 THC	10.000	1.30E-5	0.0015	0.3380	0.0338
CBC	10.000	1.80E-5	0.0015	0.2350	0.0235
CBG	10.000	2.48E-4	0.0015	0.1500	0.0150
CBDA	10.000	1.00E-5	0.0015	0.0400	0.0040
CBDV	10.000	6.50E-5	0.0015	<LOQ	<LOQ
CBGA	10.000	8.00E-5	0.0015	<LOQ	<LOQ
THCA-A	10.000	3.20E-5	0.0015	<LOQ	<LOQ
THCV	10.000	7.00E-6	0.0015	<LOQ	<LOQ

Mycotoxins
Specimen Weight: 268.300 mg

Passed
SOP13.007 (LCMS)

Dilution Factor: 5.990

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	12	20	<LOQ
Aflatoxin G1	3.0400E-1	6	20	<LOQ					

Pathogenic Microbiology
SAE (MicroArray)

Passed
SOP13.019
(Micro Array)

Specimen Weight: 1006.910 mg

Dilution Factor: 1.000

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

Xueli Gao
Xueli Gao
Ph.D., DABT
Lab Toxicologist

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



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 = THC + (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, Other Cannabinoids Total = Total Cannabinoids - All the listed cannabinoids on the summary section, Total Detected Cannabinoids = Delta6a10a-THC + Delta8-THC + Total CBN + CBT + Delta8-THCV + Total CBG + Total CBD + Total THCV + CBL + Total THC + Total CBC + Total CBDV + Delta10-THC + Total THC-O-Acetate, Analyte Details above show the Dry Weight Concentrations unless specified as 12% moisture concentration. (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 (cfu/g) = Colony Forming Unit per Gram, LOD = Limit of Detection, (µg/g) = Microgram per Gram (ppm) = Parts per Million, (ppm) = (µg/g), (aw) = aw (area ratio) = Area Ratio, (mg/Kg) = Milligram per Kilogram, *Measurement of Uncertainty = +/- 10%

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Pesticides FL V4

Specimen Weight: 268.300 mg

Passed
SOP13.007
(LCMS/GCMS)

Listeria Monocytogenes

Specimen Weight: 980.300 mg

Passed
SOP13.032
(qPCR)

Dilution Factor: 5.590

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
Bifentazate	1.4150E+0	30	3000	<LOQ	Metaxyl	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	Paclobutrazol	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	Pemethrin	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
Fonicamid	5.1700E-1	30	2000	<LOQ					

Dilution Factor: 1.000

Analyte	Action Level (cfu/g)	Result
Listeria Monocytogenes	1	Absence in 1g

Xueli Gao
Xueli Gao Lab Toxicologist
Ph.D., DABT

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



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Initial Gross Weight: 38.423 g
Net Weight: 34.823 g

Number of Units: 1
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Residual Solvents - FL (CBD) **Passed**
SOP13.039 (GCMS)

Specimen Weight: 11.600 mg

Dilution Factor: 1.000

Analyte	LOD (ppm)	LOQ (ppm)	Action Level (ppm)	Result (ppm)	Analyte	LOD (ppm)	LOQ (ppm)	Action Level (ppm)	Result (ppm)
1,1-Dichloroethene	0.0094	0.16	8	<LOQ	Heptane	0.0013	1.39	5000	<LOQ
1,2-Dichloroethane	0.0003	0.04	5	<LOQ	Hexane	0.068	1.17	290	<LOQ
Acetone	0.015	2.08	5000	<LOQ	Isopropyl alcohol	0.0048	1.39	500	<LOQ
Acetonitrile	0.06	1.17	410	<LOQ	Methanol	0.0005	0.69	3000	24.752
Benzene	0.0002	0.02	2	<LOQ	Methylene chloride	0.0029	2.43	600	<LOQ
Butanes	0.4167	2.5	2000	<LOQ	Pentane	0.037	2.08	5000	<LOQ
Chloroform	0.0001	0.04	60	<LOQ	Propane	0.031	5.83	2100	<LOQ
Ethanol	0.0021	2.78	5000	102.920	Toluene	0.0009	2.92	890	<LOQ
Ethyl Acetate	0.0012	1.11	5000	<LOQ	Total Xylenes	0.0001	2.92	2170	<LOQ
Ethyl Ether	0.0049	1.39	5000	<LOQ	Trichloroethylene	0.0014	0.49	80	<LOQ
Ethylene Oxide	0.0038	0.1	5	<LOQ					

Heavy Metals **Passed**
SOP13.048 (ICP-MS)

Specimen Weight: 246.210 mg

Dilution Factor: 203

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

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