



License No. 800025015
FL License # CMTL-0003
CLIA No. 10D1094068

Certificate of Analysis

Compliance Test

Root Bioscience
951 Aviation Pkwy
Morrisville, NC 27560

Batch # FSN120004
Batch Date: 2021-04-07
Extracted From: Hemp Biomass

Sampling Method: MSP 7.3.1 Test Reg
State: Florida

Production Facility: Root Bioscience NC,
LLC
Production Date: 2021-04-07

Order # ROO210407-030024
Order Date: 2021-04-07
Sample # AABE507

Sampling Date: 2021-04-09
Lab Batch Date: 2021-04-09
Completion Date: 2021-04-20

Initial Gross Weight: 81.365 g
Net Weight: 31.836 g

Number of Units: 1
Net Weight per Unit: 31836.000 mg



Product Image

Potency
Tested

Heavy Metals
Passed

Mycotoxins
Passed

Pesticides
Passed

**Residual
Solvents**
Passed

**Pathogenic
Microbiology**
Passed

**Listeria
Monocytogenes**
Passed

Pathogenic
Passed



Potency - 11

Specimen Weight: 96.700 mg

Analyte	Dilution (1:n)	LOD (%)	LOQ (%)	Result (mg/g)	(%)
CBD	1000.000	0.000054	0.001	43.400	4.340
CBN	1000.000	0.000014	0.001	6.320	0.632
Delta-9 THC	1000.000	0.000013	0.001	1.850	0.185
CBG	1000.000	0.000248	0.001	0.820	0.082
CBDA	1000.000	0.00001	0.001	0.240	0.024
THCV	1000.000	0.000007	0.001	0.230	0.023
CBC	1000.000	0.000018	0.001		<LOQ
Delta-8 THC	1000.000	0.000026	0.001		<LOQ
CBGA	1000.000	0.00008	0.001		<LOQ
CBDV	1000.000	0.000065	0.001		<LOQ
THCA-A	1000.000	0.000032	0.001		<LOQ

Tested
(HPLC/LCMS)



Potency Summary

Total THC 0.185% 58.897mg	Total CBD 4.361% 1,388.383mg
Total CBG 0.082% 26.106mg	Total CBN 0.632% 201.204mg
Other Cannabinoids 0.023% 7.322mg	Total Cannabinoids 5.283% 1,681.911mg

Xueli Gao
Ph.D., DABT
Lab Toxicologist

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



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Heavy Metals

Specimen Weight: 254.980 mg

Passed
(ICP-MS)

Dilution Factor: 2.000

Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Arsenic (As)	100	1500	<LOQ	Cadmium (Cd)	100	500	<LOQ
Lead (Pb)	100	500	<LOQ	Mercury (Hg)	100	3000	<LOQ



Mycotoxins

Specimen Weight: 164.000 mg

Passed
(LCMS)

Dilution Factor: 9.146

Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Aflatoxin B1	6	20	<LOQ	Aflatoxin B2	6	20	<LOQ
Aflatoxin G1	6	20	<LOQ	Aflatoxin G2	6	20	<LOQ
Ochratoxin A	12	20	<LOQ				

Xueli Gao
Ph.D., DABT
Lab Toxicologist

Aixia Sun
D.H.Sc., M.Sc., B.Sc., MT (AAB)
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Sample # AABE507

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Number of Units: 1
Net Weight per Unit: 31836.000 mg



Pesticides FL V4

Specimen Weight: 164.000 mg

Passed
(LCMS/GCMS)

Dilution Factor: 9.146

Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Abamectin	28.23	300	<LOQ	Acephate	30	3000	<LOQ
Acequinocyl	48	2000	<LOQ	Acetamiprid	30	3000	<LOQ
Aldicarb	30	100	<LOQ	Azoxystrobin	10	3000	<LOQ
Bifenazate	30	3000	<LOQ	Bifenthrin	30	500	<LOQ
Boscalid	10	3000	<LOQ	Captan	30	3000	<LOQ
Carbaryl	10	500	<LOQ	Carbofuran	10	100	<LOQ
Chlorantraniliprole	10	3000	<LOQ	Chlordane	10	100	<LOQ
Chlorfenapyr	30	100	<LOQ	Chloromequat Chloride	10	3000	<LOQ
Chlorpyrifos	30	100	<LOQ	Clofentazine	30	500	<LOQ
Coumaphos	48	100	<LOQ	Cyfluthrin	30	1000	<LOQ
Cypermethrin	30	1000	<LOQ	Daminozide	30	100	<LOQ
Diazinon	30	200	<LOQ	Dichlorvos	30	100	<LOQ
Dimethoate	30	100	<LOQ	Dimethomorph	48	3000	<LOQ
Ethoprophos	30	100	<LOQ	Etofenprox	30	100	<LOQ
Etoxazole	30	1500	<LOQ	Fenhexamid	10	3000	<LOQ
Fenoxycarb	30	100	<LOQ	Fenpyroximate	30	2000	<LOQ
Fipronil	30	100	<LOQ	Flonicamid	30	2000	<LOQ
Fludioxonil	48	3000	<LOQ	Hexythiazox	30	2000	<LOQ
Imazalil	30	100	<LOQ	Imidacloprid	30	3000	<LOQ
Kresoxim Methyl	30	1000	<LOQ	Malathion	30	2000	<LOQ
Metaxalyl	10	3000	<LOQ	Methiocarb	30	100	<LOQ
Methomyl	30	100	<LOQ	methyl-Parathion	10	100	<LOQ
Mevinphos	10	100	<LOQ	Myclobutanil	30	3000	<LOQ
Naled	30	500	<LOQ	Oxamyl	30	500	<LOQ
Paclobutrazol	30	100	<LOQ	Pentachloronitrobenzene	10	200	<LOQ
Permethrin	30	1000	<LOQ	Phosmet	30	200	<LOQ
Piperonylbutoxide	30	3000	<LOQ	Prallethrin	30	400	<LOQ
Propiconazole	30	1000	<LOQ	Propoxur	30	100	<LOQ
Pyrethrins	30	1000	<LOQ	Pyridaben	30	3000	<LOQ
Spinetoram	10	3000	<LOQ	Spinosad	30	3000	<LOQ
Spiromesifen	30	3000	<LOQ	Spirotetramat	30	3000	<LOQ
Spiroxamine	30	100	<LOQ	Tebuconazole	30	1000	<LOQ
Thiacloprid	30	100	<LOQ	Thiamethoxam	30	1000	<LOQ
Trifloxystrobin	30	3000	<LOQ				

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Number of Units: 1
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Residual Solvents - FL (CBD)

Specimen Weight: 14.000 mg

Passed
(GCMS)

Dilution Factor: 1.000

Analyte	LOQ (ppm)	Action Level (ppm)	Result (ppm)	Analyte	LOQ (ppm)	Action Level (ppm)	Result (ppm)
1,1-Dichloroethane	0.16	8	<LOQ	1,2-Dichloroethane	0.04	5	<LOQ
Acetone	2.08	5000	<LOQ	Acetonitrile	1.17	410	<LOQ
Benzene	0.02	2	<LOQ	Butanes	2.5	2000	<LOQ
Chloroform	0.04	60	<LOQ	Ethanol	2.78	5000	<LOQ
Ethyl Acetate	1.11	5000	<LOQ	Ethyl Ether	1.39	5000	<LOQ
Ethylene Oxide	0.1	5	<LOQ	Heptane	1.39	5000	<LOQ
Hexane	1.17	290	<LOQ	Isopropyl alcohol	1.39	500	<LOQ
Methanol	0.69	3000	<LOQ	Methylene chloride	2.43	600	<LOQ
Pentane	2.08	5000	<LOQ	Propane	5.83	2100	<LOQ
Toluene	2.92	890	<LOQ	Total Xylenes	2.92	2170	<LOQ
Trichloroethylene	0.49	80	<LOQ				

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Pathogenic Microbiology - A (MicroArray)

Passed
(Micro Array)

Specimen Weight: 164.000 mg

Analyte	Result (cfu/g)	Result	Analyte	Result (cfu/g)	Result
Aspergillus flavus	<1	Absence in 1 g	Aspergillus fumigatus	<1	Absence in 1 g
Aspergillus niger	<1	Absence in 1 g	Aspergillus terreus	<1	Absence in 1 g



Listeria Monocytogenes

Passed
(qPCR)

Specimen Weight: 992.800 mg

Dilution Factor: 1.000

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



Pathogenic SAE (qPCR)

Passed
(qPCR)

Specimen Weight: 226.200 mg

Analyte	Action Level (cfu/g)	Result (cfu/g)	Analyte	Action Level (cfu/g)	Result (cfu/g)
E.Coli	1	Absence in 1 g	Salmonella	1	Absence in 1 g

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