



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

Certificate of Analysis

Compliance Test

Root Bioscience
951 Aviation Pkwy
Morrisville, NC 27560

Batch # 21211
Batch Date: 2021-08-24
Extracted From: Hemp Biomass

Sampling Method: MSP 7.3.1
Test Reg State: Florida

Production Facility: Root Bioscience NC, LLC
Production Date: 2021-08-24

Order # ROO210824-010084
Order Date: 2021-08-24
Sample # AABU747

Sampling Date: 2021-08-25
Lab Batch Date: 2021-08-25
Completion Date: 2021-08-31

Initial Gross Weight: 33.817 g



Product Image

Potency
Tested

Heavy Metals
Passed

Mycotoxins
Passed

Pesticides
Passed

Residual Solvents
Passed

Pathogenic Microbiology
Passed

Listeria Monocytogenes
Passed

Potency - 11

Specimen Weight: 91.610 mg

| Analyte | Dilution (1:n) | LOD (%) | LOQ (%) | Result (mg/g) | (%) |
|-------------|----------------|----------|---------|---------------|-------|
| CBD | 10.000 | 0.000054 | 0.001 | 22.600 | 2.260 |
| Delta-9 THC | 10.000 | 0.000013 | 0.001 | 0.272 | 0.027 |
| CBN | 10.000 | 0.000014 | 0.001 | 0.184 | 0.018 |
| CBC | 10.000 | 0.000018 | 0.001 | | <LOQ |
| THCV | 10.000 | 0.000007 | 0.001 | | <LOQ |
| Delta-8 THC | 10.000 | 0.000026 | 0.001 | | <LOQ |
| CBGA | 10.000 | 0.000008 | 0.001 | | <LOQ |
| CBG | 10.000 | 0.000248 | 0.001 | | <LOQ |
| CBDV | 10.000 | 0.000065 | 0.001 | | <LOQ |
| CBDA | 10.000 | 0.000001 | 0.001 | | <LOQ |
| THCA-A | 10.000 | 0.000032 | 0.001 | | <LOQ |

Tested (HPLC/LCMS)

Potency Summary

| | |
|-------------------------------------|------------------------------|
| Total THC 0.027% | Total CBD 2.260% |
| Total CBG None Detected | Total CBN 0.018% |
| Other Cannabinoids None Detected | Total Cannabinoids 2.306% |

Xueli Gao
Ph.D., DABT
Lab Toxicologist

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



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|--|---|---|---|

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| Order # ROO210824-010084 Order Date: 2021-08-24 Sample # AABU747 | Sampling Date: 2021-08-25 Lab Batch Date: 2021-08-25 Completion Date: 2021-08-31 | Initial Gross Weight: 33.817 g |
|--|--|--------------------------------|

H Heavy Metals Passed (ICP-MS)

Specimen Weight: 252.900 mg

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 Passed (LCMS)

Specimen Weight: 179.400 mg

Dilution Factor: 8.361

| 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
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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Production Date: 2021-08-24

Order # ROO210824-010084
Order Date: 2021-08-24
Sample # AABU747

Sampling Date: 2021-08-25
Lab Batch Date: 2021-08-25
Completion Date: 2021-08-31

Initial Gross Weight: 33.817 g

Pesticides FL V4 **Passed**
(LCMS/GCMS)

Specimen Weight: 179.400 mg

Dilution Factor: 8.361

| 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 | Chlormequat 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 |
| Metaxyl | 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 |
| Paclotrazol | 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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Completion Date: 2021-08-31

Initial Gross Weight: 33.817 g



Residual Solvents - FL (CBD)

Specimen Weight: 103.900 mg

Passed
(GCMS)

Dilution Factor: 1.000

| Analyte | LOQ (ppm) | Action Level (ppm) | Result (ppm) | Analyte | LOQ (ppm) | Action Level (ppm) | Result (ppm) |
|---------------|-----------|--------------------|--------------|-------------------|-----------|--------------------|--------------|
| Acetone | 2.08 | 5000 | <LOQ | Benzene | 0.02 | 2 | <LOQ |
| Butanes | 2.5 | 2000 | <LOQ | Ethanol | 2.78 | 5000 | Passed |
| Ethyl Acetate | 1.11 | 5000 | <LOQ | Heptane | 1.39 | 5000 | <LOQ |
| Hexane | 1.17 | 290 | <LOQ | Isopropyl alcohol | 1.39 | 500 | <LOQ |
| Methanol | 0.69 | 3000 | <LOQ | Pentane | 2.08 | 5000 | <LOQ |
| Propane | 5.83 | 2100 | <LOQ | Toluene | 2.92 | 890 | <LOQ |
| Total Xylenes | 2.92 | 2170 | <LOQ | | | | |



Pathogenic Microbiology SAE (MicroArray)

Specimen Weight: 1020.300 mg

Passed
(Micro Array)

Dilution Factor: 1.000

| Analyte | Result (cfu/g) | Result | Analyte | Result (cfu/g) | Result |
|--------------------|----------------|---------------|-----------------------|----------------|---------------|
| Aspergillus flavus | <1 | Absence in 1g | Aspergillus fumigatus | <1 | Absence in 1g |
| Aspergillus niger | <1 | Absence in 1g | Aspergillus terreus | <1 | Absence in 1g |
| Salmonella | <1 | Absence in 1g | STECE. Coli | <1 | Absence in 1g |

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|--|--|--------------------------------|

Listeria Monocytogenes **Passed**
(qPCR)

Specimen Weight: 972.200 mg

Dilution Factor: 1.000

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

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