



Sample Name: **Flavorless CBD Tincture**  
 Lab Sample ID: **10J19.020**  
 Date Submitted: **10/10/2019**  
 Date Reported: **10/30/2019**  
 Sample Type: **CBD Product**  
 Lot Number: **CBD068**

**Sample Description:** 66.6 mg/mL CBD in MCT oil



#### Cannabinoid Potency (Method LabQSP.030)

Compound Name	Result (mg/mL)
Cannabidiol (CBD)	69.0
Tetrahydrocannabinol (THC)	ND
Cannabichromene (CBC)	ND
Cannabidivarin (CBDV)	ND
$\Delta$ 8-Tetrahydrocannabinol ( $\Delta$ 8-THC)	ND
$\Delta$ 9-Tetrahydrocannabinol ( $\Delta$ 9-THC)	ND
Cannabigerol (CBG)	ND
Cannabinol (CBN)	ND

#### Metals Analysis (Method LabQSP.020)

Element Name	Detection Limit (mg/kg)	Result (mg/mL)
Aluminum	0.10	ND
Arsenic	0.01	ND
Beryllium	0.01	ND
Calcium	0.10	ND
Cadmium	0.01	ND
Cobalt	0.02	ND
Chromium	0.01	ND
Copper	0.02	ND
Iron	0.02	ND
Manganese	0.01	ND
Magnesium	0.10	ND
Molybdenum	0.02	ND
Nickel	0.02	ND
Lead	0.01	ND
Titanium	0.02	ND
Vanadium	0.02	ND
Zinc	0.01	ND

#### Sample Certification

Jimmy Dodsworth, Laboratory Manager

1440 Railhead Blvd. Unit 6, Naples, FL 34110 259.254.8288

The results contained herein relate only to the items tested.

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**Sample Name:** Flavorless CBD Tincture  
**Lab Sample ID:** 10119.020  
**Date Submitted:** 10/10/2019  
**Date Reported:** 10/30/2019  
**Sample Type:** CBD Product  
**Lot Number:** CBD068

**Sample Description:** 66.6 mg/mL CBD in MCT oil



### Cannabinoid Potency (Method LabQSP.030)

Compound Name	Result (mg/mL)
Cannabidiol (CBD)	69.0
Tetrahydrocannabinol (THC)	ND
Cannabichromene (CBC)	ND
Cannabidiol (CBD)	69.0
$\Delta$ 8-Tetrahydrocannabinol ( $\Delta$ 8-THC)	ND
$\Delta$ 9-Tetrahydrocannabinol ( $\Delta$ 9-THC)	ND
Cannabigerol (CBG)	ND
Cannabinol (CBN)	ND

### Metals Analysis (Method LabQSP.020)

Element Name	Detection Limit (mg/kg)	Result (mg/mL)
Aluminum	0.10	ND
Arsenic	0.01	ND
Beryllium	0.01	ND
Calcium	0.10	ND
Cadmium	0.01	ND
Cobalt	0.02	ND
Chromium	0.01	ND
Copper	0.02	ND
Iron	0.02	ND
Manganese	0.01	ND
Magnesium	0.10	ND
Molybdenum	0.02	ND
Nickel	0.02	ND
Lead	0.01	ND
Titanium	0.02	ND
Vanadium	0.02	ND
Zinc	0.01	ND

### Sample Certification



# CERTIFICATE OF ANALYSIS

Customer: Root Bioscience - Morrisville, NC 27560

Order #: 707953  
 Batch #: 19281L/19282L  
 Order Date: 10/22/2019  
 Collection Date: 10/22/2019  
 Report Date: 11/01/2019

Specimen Type: Extract  
 Description: 1000mg Lotion and 2000mg Lotion  
 Extracted From: Hemp  
 Method: SOP-3

Initial Gross Weight: 33462.00(mg)  
 Specimen Weight: 112.87(mg)

## Potency - 11

(HPLC)

Analyte	Result (mg/g)	(%)	LOQ (%)	Analyte	Result (mg/g)	(%)	LOQ (%)	Analyte	Result (mg/g)	(%)	LOQ (%)
CBC		ND	0.001	CBD	19.520	1.952	0.001	CBDA		ND	0.001
CBDV	0.233	0.023	0.001	CBG	0.297	0.030	0.001	CBGA		ND	0.001
CBN		ND	0.001	Delta-8-THC		ND	0.001	Delta-9-THC	0.167	0.017	0.001
THCA-A		ND	0.001	THCV		ND	0.001	Total CBD	19.520	1.952	0.001
Total THC	0.167	0.017	0.001								

## Pesticides ( Passed )

(LCMS/MS)

Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)	Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)	Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)
Abamectin	0.500	<LOQ	0.100	Acephate	0.400	<LOQ	0.100	Acequinocyl	2.000	<LOQ	0.750
Acetamiprid	0.200	<LOQ	0.100	Aldicarb	0.400	<LOQ	0.100	Azoxystrobin	0.200	<LOQ	0.100
Bifenazate	0.200	<LOQ	0.100	Bifenthrin	0.200	<LOQ	0.100	Boscalid	0.400	<LOQ	0.100
Carbaryl	0.200	<LOQ	0.100	Carbofuran	0.200	<LOQ	0.100	Chlorantraniliprole	0.200	<LOQ	0.100
Chlorpyrifos	0.200	<LOQ	0.100	Clofentezine	0.200	<LOQ	0.100	Cypermethrin	1.000	<LOQ	0.100
Daminozide	1.000	<LOQ	0.100	Diazinon	0.200	<LOQ	0.100	Dichlorvos	0.100	<LOQ	0.100
Dimethoate	0.200	<LOQ	0.100	Ethoprophos	0.200	<LOQ	0.100	Etofenprox	0.400	<LOQ	0.100
Etoxazole	0.200	<LOQ	0.100	Fenoxycarb	0.200	<LOQ	0.100	Fipronil	0.400	<LOQ	0.100
Flonicamid	1.000	<LOQ	0.100	Fludioxonil	0.400	<LOQ	0.100	Hexythiazox	1.000	<LOQ	0.100
Imazalil	0.200	<LOQ	0.100	Imidacloprid	0.400	<LOQ	0.100	Kresoxim Methyl	0.400	<LOQ	0.100
Malathion A	0.200	<LOQ	0.100	Metalaxyl	0.200	<LOQ	0.100	Methiocarb	0.200	<LOQ	0.100
Methomyl	0.400	<LOQ	0.100	MGK-264	0.200	<LOQ	0.100	Myclobutanil	0.200	<LOQ	0.100
Naled	0.500	<LOQ	0.100	Oxamyl	1.000	<LOQ	0.100	Paclbutrazol	0.400	<LOQ	0.100
Parathion-methyl	0.200	<LOQ	0.250	Permethrin	0.200	<LOQ	0.100	Phosmet	0.200	<LOQ	0.100
Piperonylbutoxide	2.000	<LOQ	0.100	Prallethrin	0.200	<LOQ	0.100	Propiconazole	0.400	<LOQ	0.100
Propoxur	0.200	<LOQ	0.100	Pyrethrins	1.000	<LOQ	0.100	Pyridaben	0.200	<LOQ	0.100
Spinosyn A	0.200	<LOQ	0.100	Spinosyn D	0.200	<LOQ	0.100	Spiromesifen	0.200	<LOQ	0.100
Spirotetramat	0.200	<LOQ	0.100	Spiroxamine	0.400	<LOQ	0.100	Tebuconazole	0.400	<LOQ	0.100
Thiacloprid	0.200	<LOQ	0.100	Thiamethoxam	0.200	<LOQ	0.100	Trifloxystrobin	0.200	<LOQ	0.100

Xueli Gao, Ph.D., DABT  
 Lab Toxicologist

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

\* Total CBD = CBD + (CBD-A \* 0.877). Total THC = THCA-A \* 0.877 + Delta 9 THC, ND = <LOQ, T-Caryophyllene = Trans-Caryophyllene, <LOQ = Less Than Limit of Quantitation, QNS = Quantity Not Sufficient. (%) = Percent, (ppm) = Parts per Million, (ppb) = Parts per Billion, (µg/Kg) = Microgram per Kilogram, (mg/g) = Milligram per Gram, ppm = (µg/g), ppb = (µg/kg).

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 CLIA No. 10D1094068



# CERTIFICATE OF ANALYSIS

Customer: Root Bioscience - Morrisville, NC 27560

<b>Order #:</b> 707953	<b>Specimen Type:</b> Extract	<b>Initial Gross Weight:</b> 33462.00(mg)
<b>Batch #:</b> 19281L/19282L	<b>Description:</b> 1000mg Lotion and 2000mg Lotion	<b>Specimen Weight:</b> 112.87(mg)
<b>Order Date:</b> 10/22/2019	<b>Extracted From:</b> Hemp	
<b>Collection Date:</b> 10/22/2019	<b>Method:</b> SOP-3	
<b>Report Date:</b> 11/01/2019		

### Residual Solvents ( Passed )

								(GC/GCMS)			
Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)	Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)	Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)
Acetone	5,000.000	<LOQ	87.900	Benzene	1.600	<LOQ	1.600	Chloroform	53.000	<LOQ	53.000
Ethanol	5,000.000	<LOQ	26.700	Hexane	60.000	<LOQ	36.600	I-Butane	5,000.000	<LOQ	100.000
Isopropanol	5,000.000	<LOQ	52.300	Methanol	3,000.000	<LOQ	87.900	N-Butane	5,000.000	<LOQ	200.000
Pentane	5,000.000	<LOQ	389.500	Toluene	890.000	<LOQ	38.400				

### Heavy Metals ( Passed )

								(ICP-MS)			
Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)
Arsenic (As)	500.000	<LOQ	100.000	Cadmium (Cd)	500.000	<LOQ	100.000	Lead (Pb)	500.000	<LOQ	100.000
Mercury (Hg)	500.000	<LOQ	100.000								

### Mycotoxins ( Passed )

								(LCMS/MS)			
Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)
Aflatoxin B1		<LOQ	6.000	Aflatoxin B2		<LOQ	6.000	Aflatoxin G1		<LOQ	6.000
Aflatoxin G2		<LOQ	6.000	Aflatoxin Total	20.000	<LOQ	6.000	Ochratoxin A	20.000	<LOQ	12.000


### Pathogenic Microbiology ( Passed )

						(Micro Array)		
Analyte	Result (cfu/g)	Remark	Analyte	Result (cfu/g)	Remark	Analyte	Result (cfu/g)	Remark
Aspergillus Flavus	<1	Absence	Aspergillus Fumigatus	<1	Absence	Aspergillus Niger	<1	Absence
Aspergillus Terreus	<1	Absence	Salmonella	<1	Absence	STEC E. Coli	<1	Absence

### Filth and Foreign Material ( Passed )

						(Electronic Balance)		
Analyte	Action Level (area ratio)	Result (area ratio)	Analyte	Action Level (mg/Kg)	Result (mg/Kg)	Analyte	Action Level (%)	Result (%)
Covered Area	0.250	0.000	Feces	0.500	0.000	Weight %	5.000	0.000

  
 Xueli Gao, Ph.D., DABT  
 Lab Toxicologist

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

\* Total CBD = CBD + (CBD-A \* 0.877). Total THC = THCA-A \* 0.877 + Delta 9 THC, ND = <LOQ, T-Caryophyllene = Trans-Caryophyllene, <LOQ = Less Than Limit of Quantitation, QNS = Quantity Not Sufficient. (%) = Percent, (ppm) = Parts per Million, (ppb) = Parts per Billion, (µg/Kg) = Microgram per Kilogram, (mg/g) = Milligram per Gram, ppm = (µg/g), ppb = (µg/kg),

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CLIA No. 10D1094068

# Certificate of Analysis

Compliance Test

**Tranquil Earth CBD, LLC**  
130 Oak Park Drive  
Mooresville, North Carolina 28115

Batch # 21028  
Batch Date: 2021-02-05  
Extracted From: Hemp Biomass

Sampling Method: MSP 7.3.1 Test Reg  
State: Florida

Production Facility: Root Bioscience NC, LLC  
Production Date: 2021-02-05

Order # RO0210205-020020  
Order Date: 2021-02-05  
Sample # AAAZ008

Sampling Date: 2021-02-09  
Lab Batch Date: 2021-02-09  
Completion Date: 2021-02-12

Initial Gross Weight: 25.461 g



Product Image

Potency Tested  
 Heavy Metals Passed  
 Mycotoxins Passed  
 Pesticides Passed  
 Residual Solvents Passed  
 Listeria Monocytogenes Passed  
 Pathogenic Passed

**Potency - 11**  
Specimen Weight: 114.380 mg

Analyte	Dilution (1:n)	LOD (%)	LOQ (%)	Result (mg/g)	Result (%)
CBD	10.000	0.000054	0.001	10.470	1.047
CBG	10.000	0.000248	0.001	0.196	0.020
CBC	10.000	0.000018	0.001	<LOQ	<LOQ
THCV	10.000	0.000007	0.001	<LOQ	<LOQ
Delta-9 THC	10.000	0.000013	0.001	<LOQ	<LOQ
Delta-8 THC	10.000	0.000026	0.001	<LOQ	<LOQ
CBN	10.000	0.000014	0.001	<LOQ	<LOQ
CBGA	10.000	0.000008	0.001	<LOQ	<LOQ
CBDV	10.000	0.000065	0.001	<LOQ	<LOQ
CBDA	10.000	0.00001	0.001	<LOQ	<LOQ
THCA-A	10.000	0.000032	0.001	<LOQ	<LOQ

**Tested (HPLC/LCMS)**

**Potency Summary**

Total CBD 1.047%	Total THC None Detected
Total CBG 0.020%	Total CBN None Detected
Other Cannabinoids None Detected	Total Cannabinoids 1.067%

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

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



Definitions and Abbreviations used in this report: \*Total CBD = CBD + (CBD-A \* 0.877), \*Total THC = THCA-A \* 0.877 + Delta 9 THC, \*CBG Total = (CBGA \* 0.877) + CBG, \*CBN Total = (CBNA \* 0.877) + CBN, \*Other Cannabinoids Total = CBC + CBDV + THCV + THCV-A, \*Total Detected Cannabinoids = CBD Total + CBG Total + CBN Total + THC Total + CBC + CBDV + THCV + THCV-A, \*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 = +/- 5%

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# CERTIFICATE OF ANALYSIS



Customer: Root Bioscience - Morrisville, NC 27560

Order #:707951  
Batch #: 19284B  
Order Date: 10/22/2019  
Collection Date: 10/22/2019  
Report Date: 11/01/2019

Specimen Type: Extract  
Description: 1000mg Body Butter  
Extracted From: Hemp  
Method: SOP-3

Initial Gross Weight: 47266.00(mg)  
Specimen Weight: 115.66(mg)

Potency - 11				(HPLC)			
Analyte	Result (mg/g)	(%)	LOQ (%)	Analyte	Result (mg/g)	(%)	LOQ (%)
CBC		ND	0.001	CBD	11.100	1.110	0.001
CBDV	0.138	0.014	0.001	CBG	0.177	0.018	0.001
CBN		ND	0.001	Delta-8-THC		ND	0.001
THCA-A		ND	0.001	THCV		ND	0.001
Total THC		ND	0.001				

Pesticides (Passed)				(LCMS/MS)			
Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)	Analyte	Action Level (ppm)	Result (ppm)	LOQ (ppm)
Abamectin	0.500	<LOQ	0.100	Acephate	0.400	<LOQ	0.100
Acetamirid	0.200	<LOQ	0.100	Aldicarb	0.400	<LOQ	0.100
Bifenazale	0.200	<LOQ	0.100	Bifenthrin	0.200	<LOQ	0.100
Carbaryl	0.200	<LOQ	0.100	Carbofuran	0.200	<LOQ	0.100
Chlorpyrifos	0.200	<LOQ	0.100	Clofentazine	0.200	<LOQ	0.100
Daminozide	1.000	<LOQ	0.100	Diazinon	0.200	<LOQ	0.100
Dimethoate	0.200	<LOQ	0.100	Ethoprophos	0.200	<LOQ	0.100
Etoazole	0.200	<LOQ	0.100	Fenoxycarb	0.200	<LOQ	0.100
Flonicamid	1.000	<LOQ	0.100	Fludioxonil	0.400	<LOQ	0.100
Imazali	0.200	<LOQ	0.100	Imidacloprid	0.400	<LOQ	0.100
Malathion A	0.200	<LOQ	0.100	Metaxyl	0.200	<LOQ	0.100
Methomyl	0.400	<LOQ	0.100	MGK-264	0.200	<LOQ	0.100
Naled	0.500	<LOQ	0.100	Oxamyl	1.000	<LOQ	0.100
Parathion-methyl	0.200	<LOQ	0.250	Permethrin	0.200	<LOQ	0.100
Piperonylbutoxide	2.000	<LOQ	0.100	Prallethrin	0.200	<LOQ	0.100
Propoxur	0.200	<LOQ	0.100	Pyrethrins	1.000	<LOQ	0.100
Spinosyn A	0.200	<LOQ	0.100	Spinosyn D	0.200	<LOQ	0.100
Spirotetramat	0.200	<LOQ	0.100	Spiroxamine	0.400	<LOQ	0.100
Thiacloprid	0.200	<LOQ	0.100	Thiamethoxam	0.200	<LOQ	0.100
				Acequinocyl	2.000	<LOQ	0.750
				Azoxystrobin	0.200	<LOQ	0.100
				Boscalid	0.400	<LOQ	0.100
				Chlorantraniliprole	0.200	<LOQ	0.100
				Cypermethrin	1.000	<LOQ	0.100
				Dichlorvos	0.100	<LOQ	0.100
				Etofenprox	0.400	<LOQ	0.100
				Fipronil	0.400	<LOQ	0.100
				Hexythiazox	1.000	<LOQ	0.100
				Kresoxim Methyl	0.400	<LOQ	0.100
				Methiocarb	0.200	<LOQ	0.100
				Myclobutanil	0.200	<LOQ	0.100
				Paclobutrazol	0.400	<LOQ	0.100
				Phosmet	0.200	<LOQ	0.100
				Propiconazole	0.400	<LOQ	0.100
				Pyridaben	0.200	<LOQ	0.100
				Spiromesifen	0.200	<LOQ	0.100
				Tebuconazole	0.400	<LOQ	0.100
				Trifloxystrobin	0.200	<LOQ	0.100

Xueli Gao, Ph.D., DABT  
Lab Toxicologist

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

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