

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Certified Organic Full Spectrum CBD Tincture - Key Lime
PRODUCT STRENGTH: 2250 mg per bottle
TINCTURE BATCH: 22087A
BEST BY DATE: 09/16/2023
HEMP EXTRACT LOT: D0211-002

Click on the links to view third-party reports

Physical Attributes

| Test | Method | Specification | Results |
|-------------------------|--------------|--|---------|
| Color | Joy Internal | Golden to Amber | PASS |
| Odor | Joy Internal | Characteristic - Coconut and Hemp, Lime | PASS |
| Appearance | Joy Internal | Golden to Amber oil in brown glass bottle with dropper. | PASS |
| Primary Package Eval. | Joy Internal | Container clean and free of filth. Container caps tight and shrink bands intact | PASS |
| Secondary Package Eval. | Joy Internal | Labeling Compliance Checked, Cartons sturdy and clean. Sufficient cushion material exists. Box taped and secure. | PASS |

Review of Third-Party Analysis

| Panel | Method | Specification | Results* | Pass/Fail |
|---|-----------------|--|------------------|-----------|
| Potency - Total CBD | HPLC-UV DAD | LOQ*: ≥ 2250 mg / bottle | 2,653 mg | PASS |
| Potency - D9-THC | HPLC-UV DAD | LOQ: $<0.3\%$ total THC (Full spectrum) | 0.22% | PASS |
| Expanded Pesticide Panel | HPLC-QQQ | LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract | Below LOQ | PASS |
| Microbial Escherichia coli (STEC) | PCR | Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram** | Absent | PASS |
| Microbial Salmonella | PCR | Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram | Absent | PASS |
| Microbial Yeast and Mold | Culture Plating | Complies with CDPHE 6 CCR 1010-21 - LOQ 10^2 CFU/gram | Below LOQ | PASS |
| Microbial Total Coliforms | Culture Plating | Complies with CDPHE 6 CCR 1010-21 - LOQ 10^2 CFU/gram | Below LOQ | PASS |
| Microbial Total Aerobic Count | Culture Plating | Complies with CDPHE 6 CCR 1010-21 - LOQ 10^4 CFU/gram | Below LOQ | PASS |
| Heavy Metals | ICP-MS | Arsenic (As): ≤ 1.5 ppm† Cadmium (Cd): ≤ 0.5 ppm Lead (Pb): ≤ 0.5 ppm Mercury (Hg): ≤ 1.5 ppm | Below LOQ | PASS |
| Mycotoxins | ICP-MS | Total Aflatoxins <20 ppb†† Aflatoxin B1 < 5 ppb Ochratoxin < 5 ppb | Below LOQ | PASS |
| Residual Solvents | GC-HS-MSD | LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract | Below LOQ | PASS |

*Level of Quantification

**Colony Forming Units per Gram

† Parts Per Million †† Part Per Billion

Values expressed in scientific notation.

Examples:

$10^2=100$

$10^3=1,000$

Quality Certified *Keegan Schlittler*
Keegan Schlittler
Quality Assurance Manager

03/29/2022

Date

D0211-002

| | | | |
|--|---|-------------------------------|----------------------|
| Batch ID or Lot Number: FMCT2250 | Test: Potency | Reported: 21Feb2022 | USDA License: N/A |
| Matrix: Concentrate | Test ID: T000193665 | Started: 18Feb2022 | Sampler ID: N/A |
| | Method(s): TM14 (HPLC-DAD): Potency – Standard Cannabinoid Analysis (Colorado Panel) | Received: 17Feb2022 | Status: N/A |

Cannabinoids

| | LOD (%) | LOQ (%) | Result (%) | Result (mg/g) | Notes |
|--|---------|---------|---------------|---------------|-------|
| Cannabichromene (CBC) | 0.016 | 0.051 | ND | ND | |
| Cannabichromenic Acid (CBCA) | 0.014 | 0.047 | ND | ND | |
| Cannabidiol (CBD) | 0.037 | 0.136 | 9.310 | 93.10 | |
| Cannabidiolic Acid (CBDA) | 0.038 | 0.139 | ND | ND | |
| Cannabidivarin (CBDV) | 0.009 | 0.032 | 0.052 | 0.52 | |
| Cannabidivarinic Acid (CBDVA) | 0.016 | 0.058 | ND | ND | |
| Cannabigerol (CBG) | 0.009 | 0.029 | 0.669 | 6.69 | |
| Cannabigerolic Acid (CBGA) | 0.038 | 0.122 | ND | ND | |
| Cannabinol (CBN) | 0.012 | 0.038 | 0.027* | 0.27* | |
| Cannabinolic Acid (CBNA) | 0.026 | 0.083 | ND | ND | |
| Delta 8-Tetrahydrocannabinol (Delta 8-THC) | 0.045 | 0.145 | ND | ND | |
| Delta 9-Tetrahydrocannabinol (Delta 9-THC) | 0.041 | 0.132 | 0.222 | 2.22 | |
| Delta 9-Tetrahydrocannabinolic Acid (THCA-A) | 0.036 | 0.117 | ND | ND | |
| Tetrahydrocannabivarin (THCV) | 0.008 | 0.026 | ND | ND | |
| Tetrahydrocannabivarinic Acid (THCVA) | 0.032 | 0.103 | ND | ND | |
| Total Cannabinoids | | | 10.280 | 102.80 | |
| Total Potential THC** | | | 0.222 | 2.22 | |
| Total Potential CBD** | | | 9.310 | 93.10 | |

Final Approval


Hannah Wright
 21Feb2022
 01:47:00 PM MST

PREPARED BY / DATE



Ryan Weems
 21Feb2022
 01:49:00 PM MST

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/28160413-69ba-4afa-8bb8-18a662d2a66a>

Definitions
 % = % (w/w) = Percent (weight of analyte / weight of product). ND = None Detected (defined by dynamic range of the method).
 Total Potential Delta 9-THC or CBD is calculated to take into account the loss of a carboxyl group during decarboxylation step, using the following formulas: Total Potential Delta 9-THC = Delta 9-THC + (Delta 9-THCa *(0.877)) and Total CBD = CBD + (CBDA *(0.877)).

Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of Botanacor Laboratories, LLC. ISO/ IEC 17025:2005 Accredited A2LA.



Cert #4329.02

CDPHE Certified
 2816041369ba4afa8bb818a662d2a66a.1

D0211-002

| | | | |
|--|-------------------------------------|-------------------------------|---------------------|
| Batch ID or Lot Number: FMCT2250 | Test: Pesticides | Reported: 22Feb2022 | USDA License: NA |
| Matrix: Concentrate | Test ID: T000193666 | Started: 21Feb2022 | Sampler ID: NA |
| | Method(s): TM17 (LC-QQ LC MS/MS) | Received: 17Feb2022 | Status: NA |

Pesticides

| Pesticides | Dynamic Range (ppb) | Result (ppb) | Pesticides | Dynamic Range (ppb) | Result (ppb) |
|---------------------|---------------------|--------------|-----------------|---------------------|--------------|
| Abamectin | 296 - 2788 | ND | Malathion | 301 - 2748 | ND |
| Acephate | 23 - 2806 | ND | Metalaxyl | 45 - 2822 | ND |
| Acetamiprid | 38 - 2786 | ND | Methiocarb | 46 - 2867 | ND |
| Azoxystrobin | 71 - 2736 | ND | Methomyl | 35 - 2773 | ND |
| Bifenazate | 42 - 2786 | ND | MGK 264 1 | 150 - 1593 | ND |
| Boscalid | 83 - 2759 | ND | MGK 264 2 | 122 - 1146 | ND |
| Carbaryl | 41 - 2722 | ND | Myclobutanil | 42 - 2783 | ND |
| Carbofuran | 42 - 2747 | ND | Naled | 44 - 2758 | ND |
| Chlorantraniliprole | 63 - 2876 | ND | Oxamyl | 36 - 2727 | ND |
| Chlorpyrifos | 42 - 2815 | ND | Pacllobutrazol | 41 - 2656 | ND |
| Clofentezine | 284 - 2744 | ND | Permethrin | 268 - 2785 | ND |
| Diazinon | 290 - 2796 | ND | Phosmet | 39 - 2784 | ND |
| Dichlorvos | 292 - 2852 | ND | Prophos | 299 - 2812 | ND |
| Dimethoate | 39 - 2802 | ND | Propoxur | 42 - 2710 | ND |
| E-Fenpyroximate | 326 - 2886 | ND | Pyridaben | 296 - 2756 | ND |
| Etofenprox | 42 - 2746 | ND | Spinosad A | 31 - 2280 | ND |
| Etoxazole | 296 - 2812 | ND | Spinosad D | 50 - 513 | ND |
| Fenoxycarb | 45 - 2741 | ND | Spiromesifen | 375 - 2753 | ND |
| Fipronil | 44 - 2798 | ND | Spirotetramat | 296 - 2874 | ND |
| Flonicamid | 40 - 2839 | ND | Spiroxamine 1 | 13 - 1216 | ND |
| Fludioxonil | 316 - 2809 | ND | Spiroxamine 2 | 18 - 1608 | ND |
| Hexythiazox | 62 - 2744 | ND | Tebuconazole | 290 - 2717 | ND |
| Imazalil | 276 - 2758 | ND | Thiacloprid | 40 - 2788 | ND |
| Imidacloprid | 44 - 2808 | ND | Thiamethoxam | 40 - 2807 | ND |
| Kresoxim-methyl | 81 - 2757 | ND | Trifloxystrobin | 39 - 2788 | ND |

Final Approval


 Sam Smith
 22Feb2022
 12:13:00 PM MST

PREPARED BY / DATE


 Daniel Weidensaul
 22Feb2022
 12:19:00 PM MST

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/4e8f2d64-3da0-4724-8709-f2c1fcbd606e>

Definitions

ND = None Detected (defined by dynamic range of the method)
 Dynamic Range = Limit of Quantitation (LOQ) through Upper Limit of Method Range
 ppb = Parts Per Billion

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Cert #4329.02
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OFTKL2250

| | | | |
|--|--|------------------------------------|----------------------|
| Batch ID or Lot Number: 22087A | Test: Microbial Contaminants | Reported: 3/28/22 | |
| Matrix: Finished Product | Test ID: T000199883 | Started: 3/25/22 | USDA License: N/A |
| Status: N/A | Methods: TM25 (qPCR) TM24, TM26, TM27(Culture Plating): Microbial | Received: 03/25/2022 @ 10:27 AM | Sampler ID: N/A |

MICROBIAL CONTAMINANTS DETERMINATION

| Contaminant | Method | LOD | LLOQ | ULOQ | Result | Notes |
|------------------------------|------------------------|--------------------------|-----------------------|---------------------------|---------------|---|
| Total Aerobic Count* | TM-26, Culture Plating | 10 ² CFU/g | 10 ³ CFU/g | 1.5x10 ⁵ CFU/g | None Detected | Free from visual mold, mildew, and foreign matter |
| Total Coliforms* | TM-27, Culture Plating | 10 ¹ CFU/g | 10 ² CFU/g | 1.5x10 ⁴ CFU/g | None Detected | |
| Total Yeast and Mold* | TM-24, Culture Plating | 10 ¹ CFU/g | 10 ² CFU/g | 1.5x10 ⁴ CFU/g | None Detected | |
| STEC | TM-25, PCR | 10 ⁰ CFU/25 g | NA | NA | Absent | |
| Salmonella | TM-25, PCR | 10 ⁰ CFU/25 g | NA | NA | Absent | |


 Jackson Osaghae-Nosa
 3/28/2022
 4:16:00 PM


 Brianne Maillot
 3/28/2022
 4:34:00 PM

PREPARED BY / DATE

APPROVED BY / DATE

Definitions

LOD = Limit of Detection | LLOQ = Lower Limit of Quantitation | ULOQ = Upper Limit of Quantitation

 CFU/g = Colony Forming Units per Gram | STEC = Shiga Toxin-Producing *E. coli*

* Values recorded in scientific notation, a common microbial practice of expressing numbers that are too large to be conveniently written in decimal form.

Examples: 10² = 100 CFU
 10³ = 1,000 CFU
 10⁴ = 10,000 CFU
 10⁵ = 100,000 CFU

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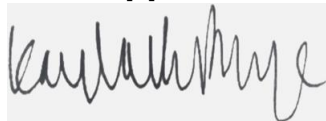
Certificate #4329.02

D0211-002

| | | | |
|--|---|-------------------------------|---------------------|
| Batch ID or Lot Number: FMCT2250 | Test: Heavy Metals | Reported: 21Feb2022 | USDA License: NA |
| Matrix: Unit Co | Test ID: T000193668 | Started: 18Feb2022 | Sampler ID: NA |
| | Method(s): TM19 (ICP-MS): Heavy Metals | Received: 17Feb2022 | Status: NA |

| Heavy Metals | Dynamic Range (ppm) | Result (ppm) | Notes |
|--------------|---------------------|--------------|-------|
| Arsenic | 0.04 - 4.34 | ND | |
| Cadmium | 0.04 - 4.45 | ND | |
| Mercury | 0.04 - 4.49 | ND | |
| Lead | 0.04 - 4.01 | ND | |

Final Approval



Kayla Phye
 22Feb2022
 05:29:00 PM MST

PREPARED BY / DATE



Ryan Weems
 22Feb2022
 05:44:00 PM MST

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/79f18405-49db-4592-a7b6-6b1e0f6d7e03>

Definitions

ND = None Detected (defined by dynamic range of the method)
 Dynamic Range = Limit of Quantitation (LOQ) through Upper Limit of Method Range

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Cert #4329.02


CDPHE Certified
 79f1840549db4592a7b66b1e0f6d7e03.1

D0211-002


| | | | |
|--|---|------------------------------------|----------------------|
| Batch ID or Lot Number: FMCT2250 | Test: Mycotoxins | Reported: 2/21/22 | |
| Matrix: Concentrate | Test ID: T000193670 | Started: 2/18/22 | USDA License: N/A |
| Status: N/A | Method: TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins (Colorado Panel) | Received: 02/17/2022 @ 11:04 AM | Sampler ID: N/A |

MYCOTOXIN DETERMINATION

| Compound | Dynamic Range (ppb) | Result (ppb) | Notes |
|--|---------------------|--------------|-------|
| Ochratoxin A | 3.4 - 136.7 | ND | N/A |
| Aflatoxin B1 | 1.1 - 33.9 | ND | |
| Aflatoxin B2 | 1.3 - 33.7 | ND | |
| Aflatoxin G1 | 1.2 - 33.7 | ND | |
| Aflatoxin G2 | 1.5 - 32.2 | ND | |
| Total Aflatoxins (B1, B2, G1, and G2) | | ND | |


 Ryan Weems
 21-Feb-22
 12:35 PM

PREPARED BY / DATE


 Sam Smith
 21-Feb-22
 12:37 PM

APPROVED BY / DATE

Definitions

ND = None Detected (Defined by Dynamic Range of the method)

Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of Botanacor Laboratories, LLC.



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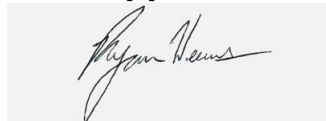

 ACCREDITED
 Certificate #4329.02

D0211-002

| | | | |
|--|---|-------------------------------|----------------------|
| Batch ID or Lot Number: FMCT2250 | Test: Residual Solvents | Reported: 21Feb2022 | USDA License: N/A |
| Matrix: Concentrate | Test ID: T000193669 | Started: 21Feb2022 | Sampler ID: N/A |
| | Method(s): TM04 (GC-MS): Residual Solvents | Received: 17Feb2022 | Status: N/A |

| Residual Solvents | Dynamic Range (ppm) | Result (ppm) | Notes |
|-------------------------------|---------------------|--------------|-------|
| Propane | 93 - 1861 | ND | |
| Butanes (Isobutane, n-Butane) | 189 - 3789 | ND | |
| Methanol | 66 - 1329 | ND | |
| Pentane | 100 - 1996 | ND | |
| Ethanol | 98 - 1960 | ND | |
| Acetone | 106 - 2123 | ND | |
| Isopropyl Alcohol | 108 - 2159 | ND | |
| Hexane | 7 - 132 | ND | |
| Ethyl Acetate | 106 - 2124 | ND | |
| Benzene | 0.2 - 4.3 | ND | |
| Heptanes | 106 - 2127 | ND | |
| Toluene | 19 - 379 | ND | |
| Xylenes (m,p,o-Xylenes) | 132 - 2647 | ND | |

Final Approval



Ryan Weems
 22Feb2022
 05:27:00 PM MST

PREPARED BY / DATE



Daniel Weidensaul
 22Feb2022
 05:33:00 PM MST

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/549f48bb-8c20-4826-9431-a8406b4135a0>

Definitions

ND = None Detected (defined by dynamic range of the method)
 Dynamic Range = Limit of Quantitation (LOQ) through Upper Limit of Method Range

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