

# CERTIFICATE OF ANALYSIS

**PRODUCT NAME:** Organic CBD Tincture - Natural  
**PRODUCT STRENGTH:** 900mg  
**TINCTURE BATCH:** 220728A  
**BEST BY DATE:** 6/29/2024  
**HEMP EXTRACT LOT:** BCA-000389-220607

## Physical Attributes

| Test                    | Method       | Specification  | Results |
|-------------------------|--------------|--|---------|
| Color                   | Joy Internal | Golden to Amber  | PASS    |
| Odor                    | Joy Internal | Characteristic - Olive and Hemp  | 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 |
|---|-----------------|---|------------------|-----------|
| <b>Potency - Total CBD</b>                  | HPLC-UV DAD     | *NLT (product strength)<br>mg /serving  | <b>30.08mg</b>   | PASS      |
| <b>Potency - D9-THC</b>                     | HPLC-UV DAD     | LOQ: 10 ppm (.001-0.3%)   | <b>ND</b>        | PASS      |
| <b>Expanded Pesticide Panel</b>             | HPLC-QQQ        | LOQ: Complies with CDPHE 6 CCR<br>1010-21 Industrial Hemp Extract                                 | <b>ND</b>        | PASS      |
| <b>Microbial</b><br>Escherichia coli (STEC) | PCR             | Complies with CDPHE 6 CCR<br>1010-21 - LOQ 1 CFU/25 gram  | <b>Absent</b>    | PASS      |
| <b>Microbial</b><br>Salmonella              | PCR             | Complies with CDPHE 6 CCR<br>1010-21 - LOQ 1 CFU/25 gram  | <b>Absent</b>    | PASS      |
| <b>Microbial</b><br>Yeast and Mold          | Culture Plating | Complies with CDPHE 6 CCR<br>1010-21 - LOQ 10 <sup>2</sup> CFU/gram                               | <b>Below LOQ</b> | PASS      |
| <b>Microbial</b><br>Total Coliforms*        | Culture Plating | Complies with CDPHE 6 CCR<br>1010-21 - LOQ 10 <sup>2</sup> CFU/gram                               | <b>Below LOQ</b> | PASS      |
| <b>Microbial</b><br>Total Aerobic Count*    | Culture Plating | Complies with CDPHE 6 CCR<br>1010-21 - LOQ 10 <sup>3</sup> CFU/gram                               | <b>Below LOQ</b> | PASS      |
| <b>Heavy Metals Panel</b>                   | ICP-MS          | Arsenic (As): ≤1.5 ppm<br>Cadmium (Cd): ≤0.5 ppm<br>Lead (Pb): ≤0.5 ppm<br>Mercury (Hg): ≤1.5 ppm | <b>ND</b>        | PASS      |
| <b>Mycotoxins</b>                           | ICP-MS          | Total Aflatoxins <20 ppb†<br>Afltoxin B1 < 5 ppb<br>Ochratoxin < 5ppb                             | <b>ND</b>        | PASS      |
| <b>Residual Solvents</b>                    | GC-HS-MSD       | LOQ: Complies with CDPHE 6 CCR<br>1010-21 Industrial Hemp Extract                                 | <b>ND</b>        | PASS      |

\*Level of Quantitation, † Parts Per Million ‡ Part Per Billion CFU/g=Colony Forming Units per Gram  
 \*Nothing Less Than  
 10<sup>2</sup>=100 CFU  
 10<sup>3</sup>=1,000 CFU


8/10/22  
 Quality Certified \_\_\_\_\_  
Name Date



12423 NE Whitaker Way  
 Portland, OR 97230  
 503-254-1794



**Report Number:** 22-009064/D002.R000  
**Report Date:** 08/08/2022  
**ORELAP#:** OR100028  
**Purchase Order:**  
**Received:** 07/29/22 16:57

**Product** OTNAT900-220728A-  
**identity:** #1  
**Laboratory ID:** 22-009064-0001

### Summary

**Potency:**

| Analyte        | Result | Limits | Units | Status |                                       |
|----------------|--------|--------|-------|--------|---------------------------------------|
| CBD            | 3.27   |        | %     |        | CBD-Total per Serving Size 32.7 mg/1g |
| CBG            | 0.215  |        | %     |        |                                       |
| Analyte per 1g | Result | Limits | Units | Status |                                       |
| CBD per 1g     | 32.7   |        | mg/1g |        | THC-Total per Serving Size <LOQ       |
| CBG per 1g     | 2.15   |        | mg/1g |        | (Reported in milligrams per serving)  |

**Microbiology:**

| Analyte             | Result | Units |
|---------------------|--------|-------|
| Aerobic Plate Count | 170    | cfu/g |



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**Purchase Order:**  
**Received:** 07/29/22 16:57

**Product identity:** OTNAT900-220728A-#1  
**Client/Metric ID:** .  
**Sample Date:**  
**Laboratory ID:** 22-009064-0001  
**Evidence of Cooling:** No  
**Temp:** 31.1 °C  
**Relinquished by:** Fedex  
**Serving Size #1:** 1 g

### Sample Results

| Potency                   | Method: J AOAC 2015 V98-6 (mod) <sup>b</sup> |        | Units % | Batch: 2206565 | Analyze: 8/3/22 10:41:00 PM |
|---------------------------|--|--------|---------|----------------|-----------------------------|
| Analyte                   | Result                                       | Limits | Units   | LOQ            | Notes                       |
| CBD                       | 3.27   |        | %       | 0.0332         |                             |
| CBD-A                     | < LOQ  |        | %       | 0.00332        |                             |
| CBD-Total                 | 3.27   |        | %       | 0.0361         |                             |
| CBG                       | 0.215  |        | %       | 0.00332        |                             |
| CBG-A                     | < LOQ  |        | %       | 0.00332        |                             |
| CBG-Total                 | 0.215  |        | %       | 0.00619        |                             |
| CBN                       | < LOQ  |        | %       | 0.00332        |                             |
| Δ8-THC                    | < LOQ  |        | %       | 0.00332        |                             |
| Δ9-THC                    | < LOQ  |        | %       | 0.00332        |                             |
| THC-A                     | < LOQ  |        | %       | 0.00332        |                             |
| THC-Total                 | < LOQ  |        | %       | 0.00622        |                             |
| <b>Total Cannabinoids</b> | <b>3.49</b>                                  |        | %       |                |                             |

| Potency per 1g   | Method: J AOAC 2015 V98-6 (mod) <sup>b</sup> |        | Units mg/se | Batch: 2206565 | Analyze: 8/3/22 10:41:00 PM |
|------------------|--|--------|-------------|----------------|-----------------------------|
| Analyte          | Result                                       | Limits | Units       | LOQ            | Notes                       |
| CBD per 1g       | 32.7   |        | mg/1g       | 0.332          |                             |
| CBD-A per 1g     | < LOQ  |        | mg/1g       | 0.0332         |                             |
| CBD-Total per 1g | 32.7   |        | mg/1g       | 0.361          |                             |
| CBG per 1g       | 2.15   |        | mg/1g       | 0.0332         |                             |
| CBG-A per 1g     | < LOQ  |        | mg/1g       | 0.0332         |                             |
| CBG-Total per 1g | 2.15   |        | mg/1g       | 0.0619         |                             |
| CBN per 1g       | < LOQ  |        | mg/1g       | 0.0332         |                             |
| Δ8-THC per 1g    | < LOQ  |        | mg/1g       | 0.0332         |                             |
| Δ9-THC per 1g    | < LOQ  |        | mg/1g       | 0.0332         |                             |
| THC-A per 1g     | < LOQ  |        | mg/1g       | 0.0332         |                             |
| THC-Total per 1g | < LOQ  |        | mg/1g       | 0.0622         |                             |

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**Report Number:** 22-009064/D002.R000  
**Report Date:** 08/08/2022  
**ORELAP#:** OR100028  
**Purchase Order:**  
**Received:** 07/29/22 16:57

Microbiology

| Analyte                 | Result   | Limits | Units | LOQ | Batch   | Analyzed Method                               | Status | Notes |
|-------------------------|----------|--------|-------|-----|---------|---|--------|-------|
| Aerobic Plate Count     | 170      | 10,000 | cfu/g | 10  | 2206470 | 08/04/22 AOAC 990.12 (Petrifilm) <sup>b</sup> | pass   |       |
| E.coli                  | < LOQ    | 100.00 | cfu/g | 10  | 2206468 | 08/04/22 AOAC 991.14 (Petrifilm) <sup>b</sup> | pass   |       |
| Total Coliforms         | < LOQ    | 100.00 | cfu/g | 10  | 2206468 | 08/04/22 AOAC 991.14 (Petrifilm) <sup>b</sup> | pass   |       |
| Mold (RAPID Petrifilm)  | < LOQ    | 1,000. | cfu/g | 10  | 2206469 | 08/05/22 AOAC 2014.05 (RAPID) <sup>b</sup>    | pass   |       |
| Yeast (RAPID Petrifilm) | < LOQ    | 1,000. | cfu/g | 10  | 2206469 | 08/05/22 AOAC 2014.05 (RAPID) <sup>b</sup>    | pass   |       |
| Salmonella spp. by PCR  | Negative |        | /25g  |     | 2206472 | 08/03/22 AOAC 2020.02 <sup>b</sup>            |        |       |

## CERTIFICATE OF ANALYSIS

Prepared for:

**JOY ORGANICS**5042 Technology Parkway Ste. 500  
FT. COLLINS, CO USA 80528**900 mg 5G Broad Spectrum Tincture Bulk in EVOO**

|   |   |                               |                      |
|---|---|-------------------------------|----------------------|
| Batch ID or Lot Number:<br><b>BCA-000389-220607</b> | Test:<br><b>Residual Solvents</b>             | Reported:<br><b>14Jun2022</b> | USDA License:<br>N/A |
| Matrix:<br>Concentrate                              | Test ID:<br>T000209814                        | Started:<br>14Jun2022         | Sampler ID:<br>N/A   |
|   | Method(s):<br>TM04 (GC-MS): Residual Solvents | Received:<br>10Jun2022        | Status:<br>Active    |

| Residual Solvents             | Dynamic Range (ppm) | Result (ppm) | Notes |
|-------------------------------|---------------------|--------------|-------|
| Propane                       | 91 - 1825           | ND           |       |
| Butanes (Isobutane, n-Butane) | 139 - 2779          | ND           |       |
| Methanol                      | 57 - 1131           | ND           |       |
| Pentane                       | 81 - 1620           | ND           |       |
| Ethanol                       | 82 - 1640           | ND           |       |
| Acetone                       | 88 - 1752           | ND           |       |
| Isopropyl Alcohol             | 93 - 1850           | ND           |       |
| Hexane                        | 6 - 114             | ND           |       |
| Ethyl Acetate                 | 91 - 1828           | ND           |       |
| Benzene                       | 0.2 - 3.7           | ND           |       |
| Heptanes                      | 89 - 1783           | ND           |       |
| Toluene                       | 17 - 332            | ND           |       |
| Xylenes (m,p,o-Xylenes)       | 121 - 2428          | ND           |       |

**Final Approval**Jacob Miller  
14Jun2022  
05:51:00 PM MDT

PREPARED BY / DATE

Ryan Weems  
14Jun2022  
05:55:00 PM MDT

APPROVED BY / DATE

<https://results.botanacor.com/api/v1/coas/uuid/8bdc2347-eb59-41b2-b5b8-b052adf9cdbc>**Definitions**ND = None Detected (defined by dynamic range of the method)  
Dynamic Range = Limit of Quantitation (LOQ) through Upper Limit of Method Range

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 17025:2017 Accredited by A2LA.



Cert #4329.02



CDPHE Certified

8bdc2347eb5941b2b5b8b052adf9cdbc.1

# CERTIFICATE OF ANALYSIS

Prepared for:

**JOY ORGANICS**

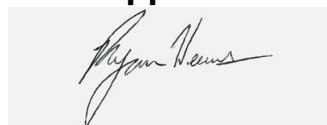
5042 Technology Parkway Ste. 500  
FT. COLLINS, CO USA 80528

## 900 mg 5G Broad Spectrum Tincture Bulk in EVOO

|   |   |                               |                     |
|---|---|-------------------------------|---------------------|
| Batch ID or Lot Number:<br><b>BCA-000389-220607</b> | Test:<br><b>Heavy Metals</b>              | Reported:<br><b>14Jun2022</b> | USDA License:<br>NA |
| Matrix:<br>Unit Co                                  | Test ID:<br>T000209813                    | Started:<br>14Jun2022         | Sampler ID:<br>NA   |
|   | Method(s):<br>TM19 (ICP-MS): Heavy Metals | Received:<br>10Jun2022        | Status:<br>NA       |

| Heavy Metals | Dynamic Range (ppm) | Result (ppm) | Notes |
|--------------|---------------------|--------------|-------|
| Arsenic      | 0.05 - 4.58         | ND           |       |
| Cadmium      | 0.05 - 4.53         | ND           |       |
| Mercury      | 0.04 - 4.43         | ND           |       |
| Lead         | 0.05 - 4.66         | ND           |       |

### Final Approval



Ryan Weems  
14Jun2022  
02:50:00 PM MDT

PREPARED BY / DATE



Daniel Weidensaul  
14Jun2022  
02:53:00 PM MDT

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/f6748d30-6fdd-4791-80a7-c909ec3f3a99>

#### Definitions

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Cert #4329.02

CDPHE Certified  
f6748d306fdd479180a7c909ec3f3a99.1

Prepared for:  
**JOY ORGANICS**

5042 Technology Parkway Ste. 500  
FT. COLLINS, CO USA 80528

## 900 mg 5G Broad Spectrum Tincture Bulk in EVOO

|   |                                     |                               |                     |
|---|-------------------------------------|-------------------------------|---------------------|
| Batch ID or Lot Number:<br><b>BCA-000389-220607</b> | Test:<br><b>Pesticides</b>          | Reported:<br><b>16Jun2022</b> | USDA License:<br>NA |
| Matrix:<br>Concentrate                              | Test ID:<br>T000209812              | Started:<br>14Jun2022         | Sampler ID:<br>NA   |
|   | Method(s):<br>TM17 (LC-QQ LC MS/MS) | Received:<br>10Jun2022        | Status:<br>NA       |

| Pesticides          | Dynamic Range (ppb) | Result (ppb) | Pesticides      | Dynamic Range (ppb) | Result (ppb) |
|---------------------|---------------------|--------------|-----------------|---------------------|--------------|
| Abamectin           | 365 - 2660          | ND           | Malathion       | 304 - 2758          | ND           |
| Acephate            | 45 - 2774           | ND           | Metalaxyl       | 51 - 2788           | ND           |
| Acetamiprid         | 43 - 2778           | ND           | Methiocarb      | 39 - 2735           | ND           |
| Azoxystrobin        | 40 - 2739           | ND           | Methomyl        | 42 - 2747           | ND           |
| Bifenazate          | 42 - 2765           | ND           | MGK 264 1       | 187 - 1618          | ND           |
| Boscalid            | 15 - 2744           | ND           | MGK 264 2       | 129 - 1129          | ND           |
| Carbaryl            | 40 - 2776           | ND           | Myclobutanil    | 37 - 2661           | ND           |
| Carbofuran          | 43 - 2761           | ND           | Naled           | 28 - 2666           | ND           |
| Chlorantraniliprole | 46 - 2731           | ND           | Oxamyl          | 3 - 2768            | ND           |
| Chlorpyrifos        | 47 - 2776           | ND           | Paclobotrazol   | 41 - 2732           | ND           |
| Clofentezine        | 306 - 2776          | ND           | Permethrin      | 340 - 2681          | ND           |
| Diazinon            | 298 - 2777          | ND           | Phosmet         | 41 - 2752           | ND           |
| Dichlorvos          | 311 - 2758          | ND           | Prophos         | 290 - 2708          | ND           |
| Dimethoate          | 45 - 2766           | ND           | Propoxur        | 39 - 2744           | ND           |
| E-Fenpyroximate     | 296 - 2737          | ND           | Pyridaben       | 302 - 2767          | ND           |
| Etofenprox          | 42 - 2726           | ND           | Spinosad A      | 36 - 2242           | ND           |
| Etoxazole           | 299 - 2708          | ND           | Spinosad D      | 55 - 497            | ND           |
| Fenoxycarb          | 45 - 2737           | ND           | Spiromesifen    | 306 - 2722          | ND           |
| Fipronil            | 39 - 2733           | ND           | Spirotetramat   | 292 - 2784          | ND           |
| Flonicamid          | 4 - 2732            | ND           | Spiroxamine 1   | 17 - 1160           | ND           |
| Fludioxonil         | 260 - 2633          | ND           | Spiroxamine 2   | 21 - 1502           | ND           |
| Hexythiazox         | 49 - 2737           | ND           | Tebuconazole    | 259 - 2755          | ND           |
| Imazalil            | 286 - 2760          | ND           | Thiacloprid     | 41 - 2763           | ND           |
| Imidacloprid        | 51 - 2800           | ND           | Thiamethoxam    | 45 - 2752           | ND           |
| Kresoxim-methyl     | 53 - 2822           | ND           | Trifloxystrobin | 41 - 2736           | ND           |

### Final Approval



Karen Winternheimer  
16Jun2022  
04:48:00 PM MDT

PREPARED BY / DATE



Daniel Weidensaul  
16Jun2022  
05:01:00 PM MDT

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/f3024b12-9b3e-454e-8b15-031fa6dc723d>

#### 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  
f3024b129b3e454e8b15031fa6dc723d.1

# CERTIFICATE OF ANALYSIS

Prepared for:

**JOY ORGANICS**

5042 Technology Parkway Ste. 500  
FT. COLLINS, CO USA 80528

## 900 mg 5G Broad Spectrum Tincture Bulk in EVOO

|   |   |                               |                      |
|---|---|-------------------------------|----------------------|
| Batch ID or Lot Number:<br><b>BCA-000389-220607</b> | Test:<br><b>Mycotoxins</b>                            | Reported:<br><b>14Jun2022</b> | USDA License:<br>N/A |
| Matrix:<br>Concentrate                              | Test ID:<br>T000209815                                | Started:<br>13Jun2022         | Sampler ID:<br>N/A   |
|   | Method(s):<br>TM18 (UHPLC-QQQ LCMS/MS):<br>Mycotoxins | Received:<br>10Jun2022        | Status:<br>Active    |

| Mycotoxins                            | Dynamic Range (ppb) | Result (ppb) | Notes |
|---------------------------------------|---------------------|--------------|-------|
| Ochratoxin A                          | 3.75 - 130.56       | ND           | N/A   |
| Aflatoxin B1                          | 1.02 - 32.57        | ND           |       |
| Aflatoxin B2                          | 1.05 - 32.35        | ND           |       |
| Aflatoxin G1                          | 0.99 - 32.70        | ND           |       |
| Aflatoxin G2                          | 1.05 - 32.66        | ND           |       |
| Total Aflatoxins (B1, B2, G1, and G2) |                     | ND           |       |

### Final Approval



Jacob Miller  
14Jun2022  
02:49:00 PM MDT

PREPARED BY / DATE



Ryan Weems  
14Jun2022  
02:52:00 PM MDT

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/c59f3eb4-008d-41b3-a826-15b3a83185b3>

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