



Full Spectrum Hemp-Derived CBD 1000mg Tincture *Natural*

Batch Specific Information

| | |
|--------------------------------|---|
| Product Name: | Kōkua 1000mg CBD Tincture, <i>Natural</i> |
| Product Description: | Full Spectrum Oil-Based Tincture, 1 fl oz (30 mL) |
| Product Ingredients: | Coconut MCT Oil*, Full Spectrum Hemp Extract^ |
| Batch No.: | BP01T01 |
| Best if Used By: | July 2021 |
| Date of Production: | January 2020 |
| Hemp Extraction Method: | CO ₂ Extraction <i>In-House</i> |
| Farm Location: | Crestwood, Kentucky |

Produced By:

Botanical Processing LLC
PO Box 32127
Louisville, KY 40232
(502) 742-7151
customer@botanical-processing.com
aloha@kokuacreations.com

*USDA Certified Organic Ingredient

^Produced in-house from locally sourced hemp flower

This product contains less than 0.3% THC.
These statements have not been evaluated by the Food
and Drug Administration. This product is not intended to
diagnose, treat, cure, or prevent any disease.



Marie Grinstead, PhD

Born in Hawai'i, Raised in Kentucky.

ABOUT KŌKUA

In 2015, Marie founded Botanical Processing, a CO₂ extraction laboratory, while working towards her doctorate in engineering. As an extraction scientist, she focuses on researching and developing optimal CO₂ extraction methods as part of producing safe and effective natural products. Marie is humbled by the opportunity to share her wellness creations, and Kōkua is uniquely made using her preferred ingredients and methods.

With no better way to express her motivation behind the brand, she chose the Hawaiian word, Kōkua, meaning *the desire to help, aid, and assist others*. When she is not in the lab, Marie spends time with her family and devotes efforts towards her dance studio, 'Ike Roa, which exists to share and perpetuate the beautiful, diverse cultures of Polynesia.

Kōkua *the deep, self-less desire to help, aid, and assist others.*

KokuaCreations.com

Certificate ID: **75252**

 Received: **1/17/20**

 Scan QR Code
for authenticity

Botanical Processing LLC

 Client Sample ID: **MCT Oil Tincture**
4484 Robards Ln

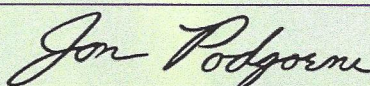
 Lot Number: **BP01T01**
Louisville, KY 40218

 Matrix: **Tincture/Infused Oil - MCT Oil**
Attn: Marie Grinstead

Authorization:

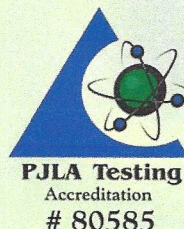
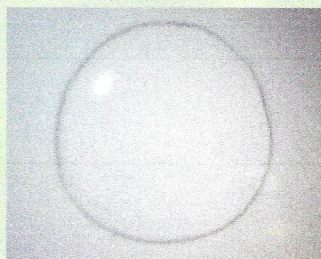
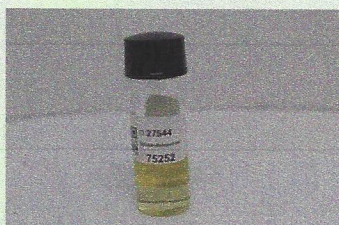
Jon Podgorni, Lead Research Chemist

Signature:



Date:

1/22/2020



The data contained within this report was collected in accordance with the requirements of ISO/IEC17025:2017. I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

CN: Cannabinoid Profile & Potency [WI-10-17 & WI-10-17-01]

 Analyst: **MAM**

 Test Date: **1/20/2020**

The client sample was analyzed for plant-based cannabinoids by Liquid Chromatography (LC). The collected data was compared to data collected for certified reference standards at known concentrations.

75252-CN

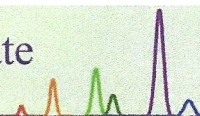
| ID | Weight % | Concentration (mg/mL) | |
|---------|----------|-----------------------|----------------------------|
| D9-THC | 0.07 | 0.69 | |
| THCV | ND | ND | |
| CBD | 3.59 | 33.54 | |
| CBDV | 0.08 | 0.74 | |
| CBG | 0.03 | 0.24 | |
| CBC | 0.18 | 1.73 | |
| CBN | ND | ND | |
| THCA | ND | ND | |
| CBDA | 0.23 | 2.18 | |
| CBGA | ND | ND | |
| D8-THC | ND | ND | |
| exo-THC | ND | ND | |
| Total | 4.19 | 39.13 | 0% Cannabinoids (wt%) 3.6% |
| Max THC | 0.07 | 0.69 | |
| Max CBD | 3.80 | 35.46 | |

Ratio of Total CBD to THC 51.2:1

Limit of Quantitation (LOQ) = 0.01 wt%

Max THC (and Max CBD) are calculated values for total cannabinoids after heating, assuming complete decarboxylation of the acid to the neutral form. It is calculated based on the weight loss of the acid group during decarboxylation: $\text{Max THC} = (0.877 \times \text{THCA}) + \text{THC}$. This calculation does not include other cannabinoid isomers (eg. D8-THC and exo-THC). ND = None detected above the limits of detection (LOD), which is half of LOQ.

END OF REPORT



Certificate ID: **76347**
 Received: **2/5/20**
 Client Sample ID: **MCT Oil Tincture**
 Lot Number: **BP01T01**
 Matrix: **Tincture/Infused Oil - MCT Oil**

Scan QR Code
for authenticity



Botanical Processing LLC
4484 Robards Ln
Louisville, KY 40218
Attn: Marie Grinstead

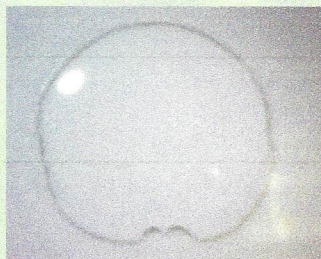
Authorization:
Jon Podgorni, Lead Research Chemist

Signature:

Jon Podgorni

Date:

2/17/2020



The data contained within this report was collected in accordance with the requirements of ISO/IEC 17025:2017. I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

HM: Heavy Metal Analysis [WI-10-13]

Analyst: CJS

Test Date: 2/11/2020

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

76347-HM

| Symbol | Metal | Conc. ¹ (µg/kg) | RL | Use Limits ² (µg/kg) | | Status |
|--------|---------|----------------------------|----|---------------------------------|-----------|--------|
| | | | | All | Ingestion | |
| As | Arsenic | ND | 50 | 200 | 1500 | PASS |
| Cd | Cadmium | ND | 50 | 200 | 500 | PASS |
| Hg | Mercury | ND | 50 | 100 | 1500 | PASS |
| Pb | Lead | ND | 50 | 500 | 1000 | PASS |

1) ND = None detected to Lowest Limits of Detection (LLD)

2) MA Dept. of Public Health: Protocol for MMJ and MIPS, Exhibit 4(a) for all products.

3) USP exposure limits based on daily oral dosing of 1g of concentrate for a 110 lb person.

MB1: Microbiological Contaminants [WI-10-09]

Analyst: MM

Test Date: 2/7/2020

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

76347-MB1

| Symbol | Analysis | Results | Units | Limits* | Status |
|--------|---|---------|-------|---------------|--------|
| AC | Total Aerobic Bacterial Count | <100 | CFU/g | 100,000 CFU/g | PASS |
| CC | Total Coliform Bacterial Count | <100 | CFU/g | 1,000 CFU/g | PASS |
| EB | Total Bile Tolerant Gram Negative Count | <100 | CFU/g | 1,000 CFU/g | PASS |
| YM | Total Yeast & Mold | <100 | CFU/g | 10,000 CFU/g | PASS |

Recommended limits established by the American Herbal Pharmacopoeia (AHP) monograph for Cannabis Inflorescence [2013], for consumable botanical products, including processed and unprocessed cannabis materials, and solvent-based extracts. Note: All recorded Microbiological tests are within the established limits.

MB2: Pathogenic Bacterial Contaminants [WI-10-10]

Analyst: LabAdmin

Test Date: 2/8/2020

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

76347-MB2

| Test ID | Analysis | Results | Units | Limits* | Status |
|--------------|----------------|----------|-------|--------------|--------|
| 6347-LD-ECP' | E. coli (O157) | Negative | NA | Non Detected | PASS |
| 76347-LD-SPT | Salmonella | Negative | NA | Non Detected | PASS |

Note: All recorded pathogenic bacteria tests passed.

MY: Mycotoxin Testing [WI-10-05]

Analyst: AKR

Test Date: 2/6/2020

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

76347-MY

| Test ID | Date | Results | MDL | Limits | Status* |
|------------------|----------|---------|-------|----------|---------|
| Total Aflatoxin | 2/6/2020 | < MDL | 2 ppb | < 20 ppb | PASS |
| Total Ochratoxin | 2/6/2020 | < MDL | 3 ppb | < 20 ppb | PASS |

PST: Pesticide Analysis [WI-10-11]

Analyst: CJR

Test Date: 2/17/2020

The client sample was analyzed for pesticides using Liquid Chromatography with Mass Spectrometric detection (LC/MS/MS). The method used for sample prep was based on the European method for pesticide analysis (EN 15662).

76347-PST

| Analyte | CAS | Result | Units | LLD | Limits (ppb) | Status |
|--------------------|-------------|--------|-------|-------|--------------|--------|
| Abamectin | 71751-41-2 | ND | ppb | 0.2 | 300 | PASS |
| Azoxystrobin | 131860-33-8 | ND | ppb | 0.10 | 40000 | PASS |
| Bifenazate | 149877-41-8 | ND | ppb | 0.10 | 5000 | PASS |
| Bifenthrin | 82657-04-3 | ND | ppb | 0.20 | 500 | PASS |
| Cyfluthrin | 68359-37-5 | ND | ppb | 0.50 | 1000 | PASS |
| Daminozide | 1596-84-5 | ND | ppb | 10.00 | 10 | * |
| Etoxazole | 153233-91-1 | ND | ppb | 0.10 | 1500 | PASS |
| Fenoxycarb | 72490-01-8 | ND | ppb | 0.10 | 10 | PASS |
| Imazalil | 35554-44-0 | ND | ppb | 0.10 | 10 | PASS |
| Imidacloprid | 138261-41-3 | ND | ppb | 0.10 | 3000 | PASS |
| Myclobutanil | 88671-89-0 | ND | ppb | 0.10 | 9000 | PASS |
| Paclobutrazol | 76738-62-0 | ND | ppb | 0.10 | 10 | PASS |
| Piperonyl butoxide | 51-03-6 | ND | ppb | 0.10 | 8000 | PASS |
| Pyrethrin | 8003-34-7 | ND | ppb | 0.1 | 1000 | PASS |
| Spinosad | 168316-95-8 | ND | ppb | 0.1 | 3000 | PASS |
| Spiromesifen | 283594-90-1 | ND | ppb | 0.10 | 12000 | PASS |
| Spirotetramat | 203313-25-1 | ND | ppb | 0.10 | 13000 | PASS |
| Trifloxystrobin | 141517-21-7 | ND | ppb | 0.10 | 30000 | PASS |

* Testing limits for ingestion established by the State of California: CCR, Title 16, Division 42, Chapter 5, Section 5313. ND indicates "none detected" above the lower limit of detection (LLD). Analytes marked with (*) indicate analytes for which no recovery was observed for a pre-spiked matrix sample.

VC: Analysis of Volatile Organic Compounds [WI-10-28]

Analyst: JR

Test Date: 2/5/2020

The client sample was analyzed by Head-Space Gas Chromatography (HS-GC). The collected data was compared to data collected for certified reference standards at known concentrations.

76347-VC

| Compound | CAS | Amount ¹ | Limit ² | RL | Status |
|--------------|----------|---------------------|--------------------|-----|--------|
| Propane | 74-98-6 | ND | 1,000 ppm | 100 | PASS |
| Isobutane | 75-28-5 | ND | 1,000 ppm | 100 | PASS |
| Butane | 106-97-8 | ND | 1,000 ppm | 100 | PASS |
| Methanol | 67-56-1 | ND | 3,000 ppm | 100 | PASS |
| Pentane | 109-66-0 | ND | 5,000 ppm | 100 | PASS |
| Ethanol | 64-17-5 | ND | 5,000 ppm | 100 | * |
| Acetone | 67-64-1 | ND | 5,000 ppm | 100 | PASS |
| Isopropanol | 67-63-0 | ND | 5,000 ppm | 100 | PASS |
| Acetonitrile | 75-05-8 | ND | 410 ppm | 100 | PASS |
| Hexane | 110-54-3 | ND | 290 ppm | 100 | PASS |
| Heptane | 142-82-5 | ND | 5,000 ppm | 100 | PASS |

1) ND = Not detected at a level greater than the Reporting Limit (RL).

2) In ppm, based on USP recommended limits for residual solvents, adopted by the Massachusetts Department of Public Health for cannabis concentrates and extracts on 3/31/16. Butane/Propane limits are based on limits established for state of Colorado.

(*) For ethanol, as many formulations contain flavorings based on ethanol extracts of natural products, no status has been assigned.

END OF REPORT