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# CERTIFICATE OF ANALYSIS

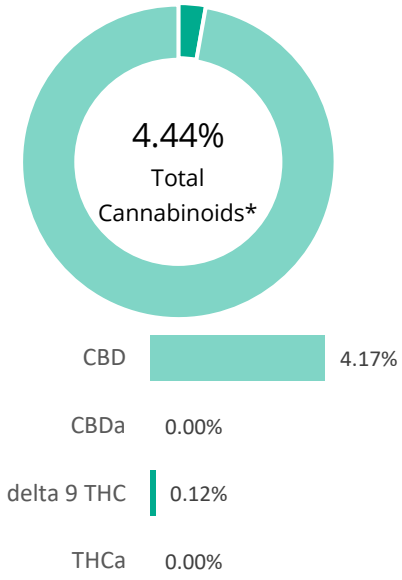
prepared for: Beak and Skiff Research

*4473 Cherry Valley Tpke*
*Lafayette, NY 13084*

## O_CBD_DOIL_ORG_1200

| | | | |
|---|---|---|---|
| **Batch ID:** | T0042 | **Test ID:** | T000170367 |
| **Type:** | Concentrate | **Submitted:** | 10/20/2021 @ 10:27 AM |
| **Test:** | Potency | **Started:** | 10/20/2021 |
| **Method:** | TM14 (HPLC-DAD) | **Reported:** | 10/21/2021 |

## CANNABINOID PROFILE




| Compound | LOQ (%) | Result (%) | Result (mg/g) |
|---|---|---|---|
| Delta 9-Tetrahydrocannabinolic acid (THCA-A) | 0.01 | ND | ND |
| Delta 9-Tetrahydrocannabinol (Delta 9THC) | 0.01 | 0.12 | 1.2 |
| Cannabidiolic acid (CBDA) | 0.01 | ND | ND |
| Cannabidiol (CBD) | 0.01 | 4.17 | 41.7 |
| Delta 8-Tetrahydrocannabinol (Delta 8THC) | 0.02 | ND | ND |
| Cannabinolic Acid (CBNA) | 0.01 | ND | ND |
| Cannabinol (CBN) | 0.00 | 0.00 | 0.0 |
| Cannabigerolic acid (CBGA) | 0.01 | ND | ND |
| Cannabigerol (CBG) | 0.00 | 0.06 | 0.6 |
| Tetrahydrocannabivarinic Acid (THCVA) | 0.01 | ND | ND |
| Tetrahydrocannabivarin (THCV) | 0.00 | ND | ND |
| Cannabidivarinic Acid (CBDVA) | 0.01 | ND | ND |
| Cannabidivarin (CBDV) | 0.00 | 0.02 | 0.2 |
| Cannabichromenic Acid (CBCA) | 0.01 | ND | ND |
| Cannabichromene (CBC) | 0.01 | 0.07 | 0.7 |
| **Total Cannabinoids** | | **4.44** | **44.4** |
| Total Potential THC** | | 0.12 | 1.2 |
| Total Potential CBD** | | 4.17 | 41.7 |

% = % (w/w) = Percent (Weight of Analyte / Weight of Product)
* Total Cannabinoids result reflects the absolute sum of all cannabinoids detected.
** Total Potential THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step.
Total THC = THC + (THCa *(0.877)) and
Total CBD = CBD + (CBDa *(0.877))
ND = None Detected (Defined by Dynamic Range of the method)

NOTES:
N/A

## FINAL APPROVAL

Hannah Wright
21-Oct-2021
3:07 PM
PREPARED BY / DATE

Daniel Weidensaul
21-Oct-2021
3:53 PM
APPROVED BY / DATE

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# CERTIFICATE OF ANALYSIS

Prepared for:

**O_CBD_DOIL_ORG_1200**

**Beak and Skiff Research**

| Batch ID or Lot Number: | Test: | Reported: | Location: |
|---|---|---|---|
| **T0042** | **Residual Solvents** | **10/22/21** | 4473 Cherry Valley Tpke<br>Lafayette, NY 13084 |

| Matrix: | Test ID: | Started: | USDA License: |
|---|---|---|---|
| N/A | T000170371 | 10/21/21 | N/A |

| Status: | Methods: | Received: | Sampler ID: |
|---|---|---|---|
| N/A | TM04 (GC-MS): Residual Solvents | 10/20/2021 @ 10:27 AM | N/A |

## RESIDUAL SOLVENTS DETERMINATION

| Solvent | Dynamic Range (ppm) | Result (ppm) |
|---|---|---|
| **Propane** | 65 - 1299 | *ND |
| **Butanes** (Isobutane, n-Butane) | 130 - 2604 | *ND |
| **Methanol** | 59 - 1173 | *ND |
| **Pentane** | 77 - 1533 | *ND |
| **Ethanol** | 91 - 1825 | *ND |
| **Acetone** | 92 - 1833 | *ND |
| **Isopropyl Alcohol** | 105 - 2098 | *ND |
| **Hexane** | 6 - 110 | *ND |
| **Ethyl Acetate** | 94 - 1876 | *ND |
| **Benzene** | 0 - 4 | *ND |
| **Heptanes** | 86 - 1730 | *ND |
| **Toluene** | 18 - 354 | *ND |
| **Xylenes** (m,p,o-Xylenes) | 135 - 2691 | *ND |

**Notes**

Karen Winternheimer
22-Oct-21
10:31 AM

PREPARED BY / DATE

Ryan Weems
22-Oct-21
10:34 AM

APPROVED BY / DATE

### Definitions

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

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# CERTIFICATE OF ANALYSIS

Prepared for:

## O_CBD_DOIL_ORG_1200

**Beak and Skiff Research**

| Batch ID or Lot Number: | Test: | Reported: | Location: |
|---|---|---|---|
| **T0042** | **Pesticides** | **10/27/21** | 4473 Cherry Valley Tpke<br>Lafayette, NY 13084 |

| Matrix: | Test ID: | Started: | USDA License: |
|---|---|---|---|
| Concentrate | T000170368 | 10/26/21 | N/A |

| Status: | Method: | Received: | Sampler ID: |
|---|---|---|---|
| N/A | TM17(LC-QQQ LC MS/MS): | 10/20/2021 @ 10:27 AM | N/A |

## PESTICIDE DETERMINATION

| Compound | LOQ (ppb) | Result (ppb) | Compound | LOQ (ppb) | Result (ppb) | Compound | LOQ (ppb) | Result (ppb) |
|---|---|---|---|---|---|---|---|---|
| **Acephate** | 35 | ND | **Fenoxycarb** | 49 | ND | **Paclobutrazol** | 56 | ND |
| **Acetamiprid** | 49 | ND | **Fipronil** | 51 | ND | **Permethrin** | 265 | ND |
| **Avermectin** | 279 | ND | **Flonicamid** | 47 | ND | **Phosmet** | 50 | ND |
| **Azoxystrobin** | 49 | ND | **Fludioxonil** | 296 | ND | **Prophos** | 275 | ND |
| **Bifenazate** | 48 | ND | **Hexythiazox** | 59 | ND | **Propoxur** | 45 | ND |
| **Boscalid** | 62 | ND | **Imazalil** | 275 | ND | **Pyridaben** | 256 | ND |
| **Carbaryl** | 48 | ND | **Imidacloprid** | 48 | ND | **Spinosad A** | 37 | ND |
| **Carbofuran** | 49 | ND | **Kresoxim-methyl** | 150 | ND | **Spinosad D** | 50 | ND |
| **Chlorantraniliprole** | 68 | ND | **Malathion** | 261 | ND | **Spiromesifen** | 349 | ND |
| **Chlorpyrifos** | 500 | ND | **Metalaxyl** | 51 | ND | **Spirotetramat** | 379 | ND |
| **Clofentezine** | 276 | ND | **Methiocarb** | 59 | ND | **Spiroxamine 1** | 23 | ND |
| **Diazinon** | 288 | ND | **Methomyl** | 50 | ND | **Spiroxamine 2** | 30 | ND |
| **Dichlorvos** | 275 | ND | **MGK 264 1** | 179 | ND | **Tebuconazole** | 275 | ND |
| **Dimethoate** | 51 | ND | **MGK 264 2** | 116 | ND | **Thiacloprid** | 46 | ND |
| **E-Fenpyroximate** | 310 | ND | **Myclobutanil** | 54 | ND | **Thiamethoxam** | 55 | ND |
| **Etofenprox** | 43 | ND | **Naled** | 48 | ND | **Trifloxystrobin** | 46 | ND |
| **Etoxazole** | 276 | ND | **Oxamyl** | 1500 | ND | | | |

Samantha Smith
Sam Smith
10/27/2021
3:13:00 PM

PREPARED BY / DATE

Daniel Weidensaul
Daniel Weidensaul
10/27/2021
3:23:00 PM

APPROVED BY / DATE

### Definitions

LOQ = Limit of Quantification
ppb = Parts per Billion

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# CERTIFICATE OF ANALYSIS

Prepared for:

## O_CBD_DOIL_ORG_1200

**Beak and Skiff Research**

| Batch ID or Lot Number: | Test: | Reported: | Location: |
|---|---|---|---|
| **T0042** | **Metals** | **10/26/21** | 4473 Cherry Valley Tpke<br>Lafayette, NY 13084 |

| Matrix: | Test ID: | Started: | USDA License: |
|---|---|---|---|
| Unit | T000170370 | 10/25/21 | N/A |

| Status: | Method: | Received: | Sampler ID: |
|---|---|---|---|
| N/A | TM19 (ICP-MS): Heavy Metals | 10/20/2021 @ 10:27 AM | N/A |

## HEAVY METALS DETERMINATION

| Compound | Dynamic Range (ppm) | Result (ppm) |
|---|---|---|
| **Arsenic** | 0.043 - 4.29 | ND |
| **Cadmium** | 0.043 - 4.26 | ND |
| **Mercury** | 0.041 - 4.06 | ND |
| **Lead** | 0.044 - 4.41 | ND |

**Notes**

Ryan Weems
26-Oct-21
1:11 PM
PREPARED BY / DATE

Sam Smith
26-Oct-21
1:13 PM
APPROVED BY / DATE

### Definitions

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

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# CERTIFICATE OF ANALYSIS

prepared for: BEAK AND SKIFF RESEARCH
*4473 CHERRY VALLEY TPKE*
*LAFAYETTE, NY 13084*

## O_CBD_DOIL_ORG_1200

| | | | |
|---|---|---|---|
| **Batch ID:** | T0042 | **Test ID:** | T000170369 |
| **Matrix:** | Finished Product | **Received:** | 10/20/2021 @ 10:27 AM |
| **Test:** | Microbial Contaminants | **Started:** | 10/20/2021 |
| **Method:** | TM25 (qPCR)<br>TM24, TM26, TM27, TM28 (Culture Plating) | **Reported:** | 10/24/2021 |

## MICROBIAL CONTAMINANTS

| Contaminant | Method | LOD | LLOQ | ULOQ | Result |
|---|---|---|---|---|---|
| **Total Aerobic Count*** | TM-26 Culture Plating | 10^2 CFU/g | 10^3 CFU/g | 1.5x10^5 CFU/g | **None Detected** |
| **Total Coliforms*** | TM-27 Culture Plating | 10^1 CFU/g | 10^2 CFU/g | 1.5x10^4 CFU/g | **None Detected** |
| **Total Yeast and Molds*** | TM-24 Culture Plating | 10^1 CFU/g | 10^2 CFU/g | 1.5x10^4 CFU/g | **None Detected** |
| ***E. coli*** | TM-28 Culture Plating | 1 CFU/g | NA | NA | **Absent** |
| ***E. coli* (STEC)** | TM-25 PCR | 1 CFU/g | NA | NA | **Absent** |
| ***Salmonella*** | TM-25 PCR | 1 CFU/g | NA | NA | **Absent** |

** Values recorded in scientific notation, a common microbial practice of expressing numbers that are too large to be conveniently written in decimal form.*
*Examples: 10^2 = 100 CFU*
*10^3 = 1,000 CFU*
*10^4 = 10,000 CFU*
*10^5 = 100,000 CFU*

**NOTES:**
*Free from visual mold, mildew, and foreign matter*

**DEFINITIONS:**
*CFU/g = Colony Forming Units per Gram.*
*LOD = Limit of Detection*
*ULOQ = Upper Limit of Quantitation*
*LLOQ = Lower Limit of Quantitation*

## FINAL APPROVAL

Jackson Osaghae-Nosa
10/23/2021
2:34:00 PM
PREPARED BY / DATE

Courtney Richards
10/24/2021
12:02:00 AM
APPROVED BY / DATE

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