

# CERTIFICATE OF ANALYSIS

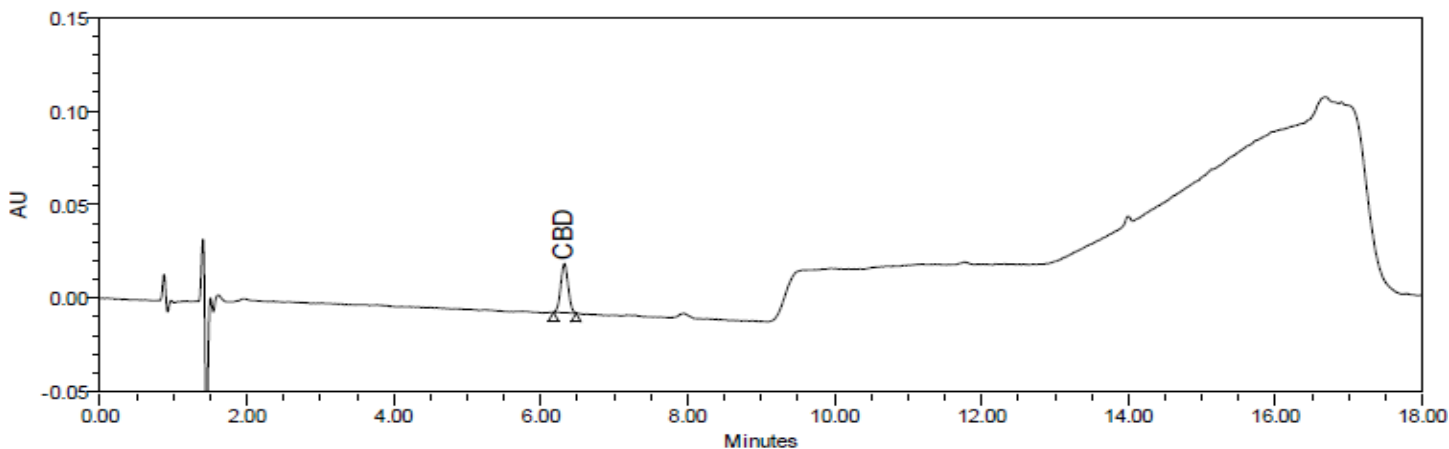
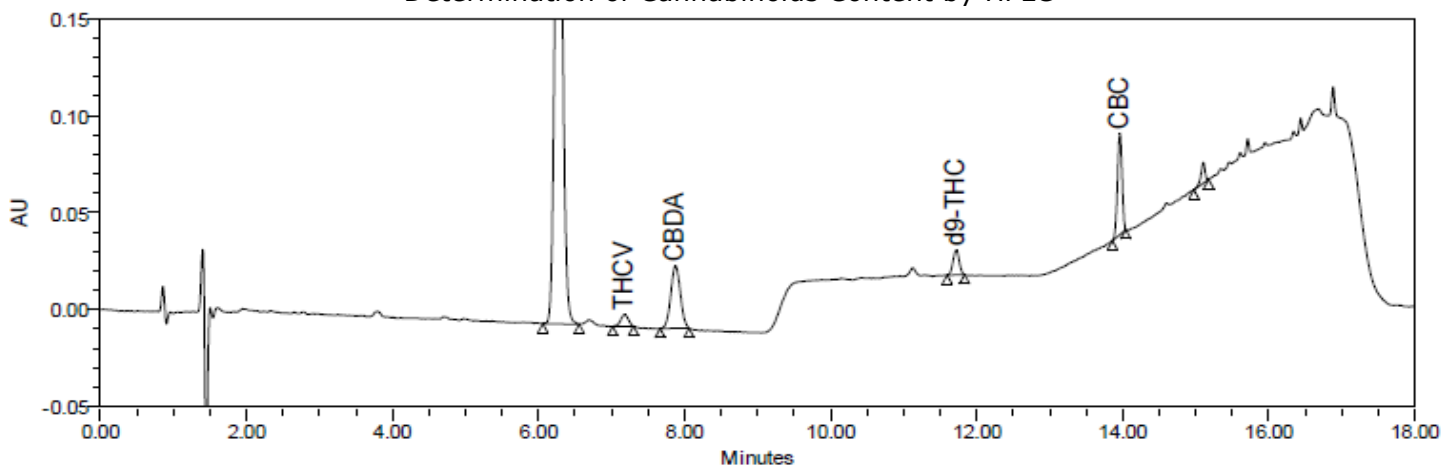


12661 HOOVER STREET GARDEN GROVE, CA 92841 | P. 714-754-4372 | F. 714-668-9972 | WWW.ALKEMIST.COM

**Report Issued To:** Vital Plan, Inc.  
1122 Oberline Rd  
Raleigh NC 27605  
USA

**Sample Name:** Full-Spectrum Hemp Oil - 1200mg (Peppermint)  
**Description:** Oil; Clear Oil  
**Lot #:** V2K04S  
**AL #:** 19325WEJ\_1  
**Analysis ID:** 127822  
**Received:** 11/21/19

## Determination of Cannabinoids Content by HPLC



| Ret. Time (min)         | Compound Name                                       | Prep 1 (%) | Prep 2 (%) | Average (%) | Average (mg/mL) | Specification | Result |
|-------------------------|---|------------|------------|-------------|-----------------|---------------|--------|
| 3.8                     | Cannabidivarin (CBDV)                               | ND         | ND         | ND          | ND              | N/A           | N/A    |
| 4.8                     | Cannabidivarinic Acid (CBDVA)                       | ND         | ND         | ND          | ND              | N/A           | N/A    |
| 6.4                     | Cannabidiol (CBD)                                   | 4.302      | 4.362      | 4.332       | 41.139          | NLT 40 mg/mL  | Pass   |
| 6.9                     | Cannabigerol (CBG)                                  | ND         | ND         | ND          | ND              | N/A           | N/A    |
| 7.3                     | Tetrahydrocannabidivarin (THCV)                     | 0.085      | 0.091      | 0.088       | 0.834           | N/A           | N/A    |
| 8.1                     | Cannabidiolic Acid (CBDA)                           | 0.294      | 0.291      | 0.292       | 2.775           | N/A           | N/A    |
| 10.3                    | Cannabigerolic Acid (CBGA)                          | ND         | ND         | ND          | ND              | N/A           | N/A    |
| 10.6                    | Cannabinol (CBN)                                    | ND         | ND         | ND          | ND              | N/A           | N/A    |
| 11.9                    | $\Delta^9$ -Tetrahydrocannabinol ( $\Delta^9$ -THC) | 0.156      | 0.152      | 0.154       | 1.460           | N/A           | N/A    |
| 12.5                    | $\Delta^8$ -Tetrahydrocannabinol ( $\Delta^8$ -THC) | ND         | ND         | ND          | ND              | N/A           | N/A    |
| 14.1                    | Cannabichromene (CBC)                               | 0.184      | 0.186      | 0.185       | 1.755           | N/A           | N/A    |
| 15.3                    | $\Delta^9$ -Tetrahydrocannabinolic Acid A (THCA-A)  | ND         | ND         | ND          | ND              | N/A           | N/A    |
| Total phytocannabinoids |   | 5.020      | 5.081      | 5.050       | 47.934          | N/A           | N/A    |

**Analysis Date :** 11/26/19      **Analyzed By:** C Deneuve

**Authorized By:** Colin Gray,  
Lead Analytical Chemist

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**Chromatographic Conditions:**

Method: ATM-815-0300  
Column: AP253 Kinetex 2.6µm C18 100A (150 x 4.6 mm)  
Temperature: 30°C  
Flow Rate: 1 mL/min  
Injection Volume: 5 µL  
UV Detection: 228 nm  
Mobile Phase: 0.1% Formic Acid in Water  
0.1% Formic Acid in Methanol:Acetonitrile (75:25)  
HPLC Instrument: Alliance\_1

**Sample Preparation:**

Transferred 125 mg to 25 mL volumetric flask and filled to volume with methanol. Vortexed 30 seconds and sonicated 15 minutes at room temperature. Filtered through 0.2 µm syringe filter. Transferred into HPLC vial for analysis.

**Report Summary:**

Conclusion: This "Full-Spectrum Hemp Oil - 1200mg (Peppermint)" test sample contains 41 mg/mL of CBD on the as is basis.  
OOS Reference: N/A  
Density: 949.75 mg/mL  
Notebook Reference: LC132 p. 154

**Analysis Date : 11/26/19      Analyzed By: C Deneuve**

**Authorized By: Colin Gray,  
Lead Analytical Chemist**

## Vital Plan

AZ 85022  
ryan.burke@vitalplan.com  
(336) 708-6774  
Lic. #

Sample: 1911DEL1549.6422

Strain: Green Cherry  
Lot#: V2K04S; Batch#: V2K04S; Batch Size: - grams  
Sample Received: 11/15/2019; Report Created: 12/06/2019  
Testing Completed: 12/05/2019

## Full Spectrum Hemp Oil (Peppermint) - 1200mg

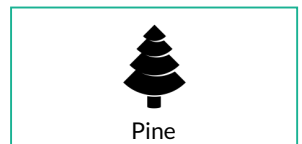
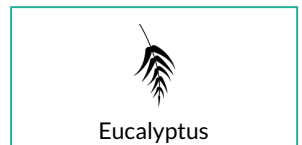
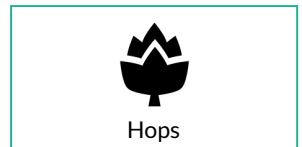
Ingestible, Tincture  
Lab Internal ID:



## Terpenes

| Analyte         | LOQ<br>PPM | Mass<br>PPM | Mass<br>% |                                 |
|-----------------|------------|-------------|-----------|---------------------------------|
| α-Pinene        | 10.000     | 51.000      | 0.005     | <div style="width: 5%;"></div>  |
| Camphene        | 10.000     | 13.000      | 0.001     | <div style="width: 1%;"></div>  |
| β-Myrcene       | 10.000     | 290.000     | 0.029     | <div style="width: 29%;"></div> |
| β-Pinene        | 10.000     | 68.000      | 0.007     | <div style="width: 7%;"></div>  |
| δ-3-Carene      | 10.000     | 15.000      | 0.002     | <div style="width: 2%;"></div>  |
| α-Terpinene     | 10.000     | 14.000      | 0.001     | <div style="width: 1%;"></div>  |
| trans-Ocimene   | 10.000     | 20.000      | 0.002     | <div style="width: 2%;"></div>  |
| δ-Limonene      | 10.000     | 260.000     | 0.026     | <div style="width: 26%;"></div> |
| p-Cymene        | 10.000     | ND          | ND        |                                 |
| cis-Ocimene     | 10.000     | 16.000      | 0.002     | <div style="width: 2%;"></div>  |
| Eucalyptol      | 10.000     | 170.000     | 0.017     | <div style="width: 17%;"></div> |
| γ-Terpinene     | 10.000     | 19.000      | 0.002     | <div style="width: 2%;"></div>  |
| Terpinolene     | 10.000     | 16.000      | 0.002     | <div style="width: 2%;"></div>  |
| Linalool        | 10.000     | 51.000      | 0.005     | <div style="width: 5%;"></div>  |
| Isopulegol      | 10.000     | 19.000      | 0.002     | <div style="width: 2%;"></div>  |
| Menthol         | 10.000     | NR          | NR        |                                 |
| Geraniol        | 10.000     | 27.000      | 0.003     | <div style="width: 3%;"></div>  |
| β-Caryophyllene | 10.000     | 280.000     | 0.028     | <div style="width: 28%;"></div> |
| α-Humulene      | 10.000     | 92.000      | 0.009     | <div style="width: 9%;"></div>  |
| cis-Nerolidol   | 10.000     | 12.000      | 0.001     | <div style="width: 1%;"></div>  |
| trans-Nerolidol | 10.000     | 34.000      | 0.003     | <div style="width: 3%;"></div>  |
| Guaiol          | 10.000     | 41.000      | 0.004     | <div style="width: 4%;"></div>  |
| α-Bisabolol     | 10.000     | 27.000      | 0.003     | <div style="width: 3%;"></div>  |

## Primary Aromas



**0.15%**  
**1,535.000 PPM**  
Total Terpenes

LOQ = Limit of Quantitation; The reported result is based on a sample weight with the applicable moisture content for that sample; Unless otherwise stated all quality control samples performed within specifications established by the Laboratory. ND = Not Detected; NT = Not Tested; NR = Not Reported



If you liked our service, please tell a friend. If you didn't, please tell us!

## Test Certificate

 Description: Full-Spectrum Hemp Oil - 1200mg (Peppermint)  
 Sample ID: V2K04S  
 Lot No:  
 Part Code:  
 Location:  
 PO No: Ryan (Paid)  
 Received: 11/9/2019

 Client: Ryan Burke  
 Vital Plan  
 13000 Weston Pkwy  
 Suite 100-B  
 Cary, NC 27513

 Lab No: 91625-01  
 Completed: 11/14/2019

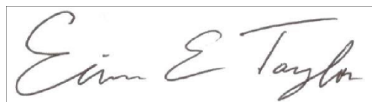
| Analysis                      | Result | Per Unit     | Specifications  | Method     |
|-------------------------------|--------|--------------|-----------------|------------|
| Total Aerobic Microbial Count | <10    | CFU/g        | <= 10,000 CFU/g | USP <2021> |
| E.coli                        | Absent | per 10 grams | Absent          | USP <2022> |
| Staphylococcus Aureus         | Absent | per 10 grams | Absent          | USP <2022> |
| Salmonella                    | Absent | per 10 grams | Absent          | USP <2022> |
| Total Yeast & Mold            | <10    | CFU/g        | <= 1,000 CFU/g  | USP <2021> |
| Yeast *                       | <10    | CFU/g        | <= 1,000 CFU/g  | USP <2021> |
| Mold *                        | <10    | CFU/g        | <= 1,000 CFU/g  | USP <2021> |

\* For informational purposes only.

**THESE RESULTS APPLY ONLY TO THE SAMPLE SUBMITTED AND NOT TO THE PRODUCT FROM WHICH IT WAS TAKEN. THESE RESULTS ARE PROVIDED ONLY FOR THE BENEFIT OF CLIENT, WITHOUT REPRESENTATION OR WARRANTY OF ANY KIND, EXCEPT FOR THE EXPRESS LIMITED WARRANTY PROVIDED SOLELY TO CLIENT IN ADVANCED LABORATORIES' TERMS OF SERVICE.**

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Results Approved By:



Erin Taylor-Quality Technician I

Dated: 11/14/2019

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## Test Certificate

 Description: Full-Spectrum Hemp Oil - 1200mg (Peppermint)  
 Sample ID: V2K04S  
 Lot No:  
 Part Code:  
 Location:  
 PO No: Ryan  
 Received: 11/11/2019

 Client: Ryan Burke  
 Vital Plan  
 13000 Weston Pkwy  
 Suite 100-B  
 Cary, NC 27513

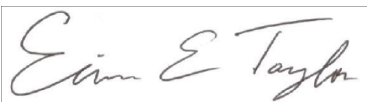
 Lab No: 91638-01  
 Completed: 11/18/2019

| Analysis  | Result  | Per Unit | Specifications | Method           |
|-----------|---------|----------|----------------|------------------|
| ‡ Mercury | < 0.001 | ppm      | <= 0.2 ppm     | ICP-MS USP <730> |
| ‡ Lead    | 0.017   | ppm      | <= 1 ppm       | ICP-MS USP <730> |
| ‡ Arsenic | < 0.001 | ppm      | <= 2 ppm       | ICP-MS USP <730> |
| ‡ Cadmium | < 0.001 | ppm      | <= 1 ppm       | ICP-MS USP <730> |

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Results Approved By:



Erin Taylor-Quality Technician I

Dated: 11/18/2019

Tests marked with ‡ were done at Advanced Laboratories, Inc. - 40 W Louise Ave, Salt Lake City, UT 84115

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