

# CERTIFICATE OF ANALYSIS

## CUSTOMER INFORMATION

**Customer:** Shenandoah Valley Hemp  
**Sample Received On:** 12/01/2023  
**Date COA Released:** 12/08/2023

## SAMPLE INFORMATION

**Sample Name:** Calm 750  
**Sample Description:** Tincture  
**Sample ID:** SAMPLE- 16247  
**Batch ID:** 0781630020056963



| CANNABINOID POTENCY |               |               |                         | Date Tested: 12/05/2023<br>Operator: Dan Blader |
|---------------------|---------------|---------------|-------------------------|-------------------------------------------------|
| ANALYTE             | LOD<br>(mg/g) | LOQ<br>(mg/g) | Concentration<br>(mg/g) | Concentration<br>(%)                            |
| CBD                 | 0.04          | 0.13          | 26.81                   | 2.68                                            |
| CBDA                | 0.04          | 0.13          | ND                      | ND                                              |
| delta9 THC          | 0.04          | 0.13          | 0.79                    | 0.08                                            |
| delta9 THCA         | 0.04          | 0.13          | ND                      | ND                                              |
| CBG                 | 0.04          | 0.13          | 0.43                    | 0.04                                            |
| CBGA                | 0.04          | 0.13          | ND                      | ND                                              |
| CBC                 | 0.04          | 0.13          | 1.73                    | 0.17                                            |
| CBCA                | 0.04          | 0.13          | ND                      | ND                                              |
| CBDV                | 0.04          | 0.13          | ND                      | ND                                              |
| CBDVA               | 0.04          | 0.13          | ND                      | ND                                              |
| THCV                | 0.04          | 0.13          | ND                      | ND                                              |
| THCVA               | 0.04          | 0.13          | ND                      | ND                                              |
| CBN                 | 0.04          | 0.13          | ND                      | ND                                              |
| delta8 THC          | 0.04          | 0.13          | ND                      | ND                                              |
| Total CBD           |               |               | 26.81                   | 2.68                                            |
| Total THC           |               |               | 0.79                    | 0.08                                            |

The sample was analyzed for cannabinoids following *SOP-VA-1149 Cannabinoid Potency*.

Total CBD = CBDA \* 0.877 + CBD

Total delta-9 THC = THCA \* 0.877 + delta-9 THC

The Measurement Uncertainty for Total THC at 0.3% is +/-0.05%. The range for Total THC is 0.25%-0.35%.

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| TERPENE PROFILE    |                      | Date Tested: 12/06/2023<br>Operator: Shawn Manns |
|--------------------|----------------------|--------------------------------------------------|
| ANALYTE            | Concentration (mg/g) | Concentration (%)                                |
| α-Pinene           | 0.00                 | 0.00                                             |
| Camphene           | 0.00                 | 0.00                                             |
| β-Pinene           | 0.00                 | 0.00                                             |
| Myrcene            | 0.00                 | 0.00                                             |
| α-Terpinene        | 0.00                 | 0.00                                             |
| Limonene           | 0.00                 | 0.00                                             |
| Ocimene            | 0.00                 | 0.00                                             |
| γ-Terpinene        | 0.00                 | 0.00                                             |
| Terpinolene        | 0.00                 | 0.00                                             |
| Linalool           | 4.19                 | 0.42                                             |
| α-Humulene         | 0.00                 | 0.00                                             |
| β-Caryophyllene    | 0.00                 | 0.00                                             |
| Δ3-Carene          | 0.00                 | 0.00                                             |
| Cineole/Eucalyptol | 0.00                 | 0.00                                             |
| Isopulegol         | 0.00                 | 0.00                                             |
| α-Bisabolol        | 0.00                 | 0.00                                             |
| p-Cymene           | 0.00                 | 0.00                                             |

The sample was analyzed for terpenes using Head-Space GasChromatography with Mass Spectrometric detection (GC-MS) following *SOP-VA-1539*. The LOQ for the method is 10ppm or 0.001%.

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| PESTICIDES          |               | Date Tested: 12/04/2023<br>Operator: Shawn Manns |
|---------------------|---------------|--------------------------------------------------|
| ANALYTE             | RESULTS (PPM) |                                                  |
| Abamectin           | ND            |                                                  |
| Acephate            | ND            |                                                  |
| Acetamiprid         | ND            |                                                  |
| Acequinocyl         | ND            |                                                  |
| Azoxystrobin        | ND            |                                                  |
| Aldicarb            | ND            |                                                  |
| Bifenazate          | ND            |                                                  |
| Bifenthrin          | ND            |                                                  |
| Boscalid            | ND            |                                                  |
| Carbaryl            | ND            |                                                  |
| Carbofuran          | ND            |                                                  |
| Chlorantraniliprole | ND            |                                                  |
| Chlorfenapyr        | ND            |                                                  |
| Chlorpyrifos        | ND            |                                                  |
| Clofentezine        | ND            |                                                  |
| Cyfluthrin          | ND            |                                                  |
| Cypermethrin        | ND            |                                                  |
| Daminozide          | ND            |                                                  |
| Diazinon            | ND            |                                                  |
| Dichlorvos          | ND            |                                                  |
| Dimethoate          | ND            |                                                  |
| Ethoprophos         | ND            |                                                  |
| Etofenprox          | ND            |                                                  |
| Etoxazole           | ND            |                                                  |
| Fenpyroximate       | ND            |                                                  |
| Fenoxycarb          | ND            |                                                  |
| Fipronil            | ND            |                                                  |
| Flonicamid          | ND            |                                                  |
| Fludioxonil         | ND            |                                                  |
| Hexythiazox         | ND            |                                                  |
| Imazalil            | ND            |                                                  |

| PESTICIDES         |               | Date Tested: 12/04/2023<br>Operator: Shawn Manns |
|--------------------|---------------|--------------------------------------------------|
| ANALYTE            | RESULTS (PPM) |                                                  |
| Imidacloprid       | ND            |                                                  |
| Kresoxim-methyl    | ND            |                                                  |
| Malathion          | ND            |                                                  |
| Metalaxyl          | ND            |                                                  |
| Methyl Parathion   | ND            |                                                  |
| Methomyl           | ND            |                                                  |
| Methiocarb         | ND            |                                                  |
| MGK-264            | ND            |                                                  |
| Myclobutanil       | ND            |                                                  |
| Naled              | ND            |                                                  |
| Oxamyl             | ND            |                                                  |
| Paclobutrazol      | ND            |                                                  |
| Prallethrin        | ND            |                                                  |
| Permethrin         | ND            |                                                  |
| Phosmet            | ND            |                                                  |
| Piperonyl butoxide | ND            |                                                  |
| Propiconazole      | ND            |                                                  |
| Propoxur           | ND            |                                                  |
| Pyrethrin          | ND            |                                                  |
| Pyridaben          | ND            |                                                  |
| Spinosad           | ND            |                                                  |
| Spiromesifen       | ND            |                                                  |
| Spirotetramat      | ND            |                                                  |
| Spiroxamine        | ND            |                                                  |
| Thiacloprid        | ND            |                                                  |
| Thiamethoxam       | ND            |                                                  |
| Tebuconazole       | ND            |                                                  |
| Trifloxystrobin    | ND            |                                                  |

The sample was analyzed for pesticides using LiquidChromatography with Mass Spectrometric detection (LC-MS/MS) following *SOP-VA-1581*. The LOQ for the method is 25ppb or 0.025ppm.

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| HEAVY METALS                                    |       |       |               |
|-------------------------------------------------|-------|-------|---------------|
| Date Tested: 12/07/2023<br>Operator: Dan Blader |       |       |               |
| ANALYTE                                         | LOD   | LOQ   | RESULTS (PPM) |
| Arsenic                                         | 0.009 | 0.015 | ND            |
| Cadmium                                         | 0.003 | 0.005 | ND            |
| Lead                                            | 0.005 | 0.013 | ND            |
| Mercury                                         | 0.019 | 0.03  | 0.061         |

The sample was analyzed for heavy metals in Inductively Coupled Plasma Mass Spectrometry (ICP-MS) following *SOP-VA-1165*.

| MYCOTOXINS                                       |               |
|--------------------------------------------------|---------------|
| Date Tested: 12/05/2023<br>Operator: Shawn Manns |               |
| ANALYTE                                          | RESULTS (PPB) |
| Ochratoxin A                                     | ND            |
| Aflatoxin B1                                     | ND            |
| Aflatoxin B2                                     | ND            |
| Aflatoxin G1                                     | ND            |
| Aflatoxin G2                                     | ND            |

The sample was analyzed for mycotoxins using Liquid Chromatography with Mass Spectrometric detection (LC-MS/MS) following *SOP-VA-1581*. The LOQ for the method is 25ppb or 0.025ppm.

| RESIDUAL SOLVENTS                                |     |      |               |             |
|--------------------------------------------------|-----|------|---------------|-------------|
| Date Tested: 12/06/2023<br>Operator: Shawn Manns |     |      |               |             |
| ANALYTE                                          | LOD | LOQ  | RESULTS (PPM) | RESULTS (%) |
| Acetone                                          | 2.0 | 10.0 | ND            | 0.00        |
| Acetonitrile                                     | 1.0 | 2.0  | ND            | 0.00        |
| Benzene                                          | 1.0 | 2.0  | ND            | 0.00        |
| Chloroform                                       | 0.5 | 2.0  | ND            | 0.00        |
| Cyclohexane                                      | 1.0 | 2.0  | ND            | 0.00        |
| 1,2-Dichloroethane                               | 1.0 | 2.0  | ND            | 0.00        |
| Diethyl Ether                                    | 1.0 | 2.0  | ND            | 0.00        |
| Ethanol                                          | 2.0 | 10.0 | ND            | 0.00        |
| Ethyl acetate                                    | 1.0 | 2.0  | ND            | 0.00        |
| Methanol                                         | 2.0 | 10.0 | ND            | 0.00        |
| Methylene chloride                               | 1.0 | 2.0  | ND            | 0.00        |
| n-Heptane                                        | 1.0 | 2.0  | ND            | 0.00        |
| n-Hexane                                         | 1.0 | 2.0  | ND            | 0.00        |
| n-Pentane                                        | 2.0 | 10.0 | ND            | 0.00        |
| 2-Propanol (isopropanol)                         | 2.0 | 10.0 | ND            | 0.00        |
| Toluene                                          | 0.5 | 2.0  | ND            | 0.00        |
| Total Xylene                                     | 1.0 | 2.0  | ND            | 0.00        |
| Trichloroethylene                                | 0.5 | 2.0  | ND            | 0.00        |

The sample was analyzed for residual solvents using Head-Space Gas Chromatography with Mass Spectrometric detection (GC-MS) following *SOP-VA-1301*.

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| MICROBIOLOGICAL IMPURITY            |        | Date Tested: 12/07/2023<br>Operator: Sarah Earles |
|-------------------------------------|--------|---------------------------------------------------|
| Microbe                             | CFU/g  |                                                   |
| Total Aerobic Microbial Count(TAMC) | ND     |                                                   |
| Total Yeast and Mold Count(TYMC)    | ND     |                                                   |
| Microbe                             | CFU/g  |                                                   |
| E. coli                             | Absent |                                                   |
| Salmonella                          | Absent |                                                   |

The sample was analyzed for microbial contamination using either qPCR or Petrifilm that follow SOP-701, 702, 703-GA or SOP-VA-1382.

ND = Not Detected, LOD = Limit of Detection, LOQ = Limit of Quantification

PPM = Parts per Million = mg/kg, PPB = Parts per Billion = ug/kg, CFU/g = Colony Forming Units per gram

Results below the LOQ are reported as ND.

Action limits are set by the Virginia Board of Pharmacy, Regulations Governing Pharmaceutical Processors. 18VAC 110-60-300.

Where statements of conformity are reported ('pass' vs 'fail'), the simple acceptance decision rule is applied.

*Testing results are based solely on the sample submitted to Green Analytics Virginia in the condition it was received. This product has been tested by Green Analytics Virginia using valid testing methodologies. Values reported relate only to the product tested. Values reported may be an average of multiple test results. Green Analytics Virginia makes no claims as to the efficacy, safety, or other risks with any detected or non-detected levels of any compound reported herein. This Certificate of Analysis shall not be reproduced except in full with the express written consent of the Green Analytics Virginia.*

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