SC Labs®

# Hemp Quality Assurance Testing
# CERTIFICATE OF ANALYSIS

**DATE ISSUED 06/17/2025**

## SAMPLE DETAILS

### SAMPLE NAME: TFR-04-3000
Infused, Topical

### CULTIVATOR / MANUFACTURER
**Business Name:**
**License Number:**
**Address:**

### DISTRIBUTOR / TESTED FOR
**Business Name:** cbdMD
**License Number:**
**Address:**


### SAMPLE DETAIL
**Batch Number:** 51171L1
**Sample ID:** 250612L016

**Date Collected:** 06/12/2025
**Date Received:** 06/12/2025
**Batch Size:**
**Sample Size:** 1.0 unit
**Unit Mass:** 90 grams per Unit
**Serving Size:** 1 gram per Serving

Scan QR code to verify authenticity of results.

## CANNABINOID ANALYSIS - SUMMARY

**Total THC: Not Detected**

**Total CBD: 4459.770 mg/unit**

**Sum of Cannabinoids: 4538.070 mg/unit**

**Total Cannabinoids: 4538.070 mg/unit**

Total THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during the decarboxylation step:
Total THC = $\Delta^9$-THC + (THCa (0.877))
Total CBD = CBD + (CBDa (0.877))
Sum of Cannabinoids = $\Delta^9$-THC + THCa + CBD + CBDa + CBG + CBGa + THCV + THCVa + CBC + CBCa + CBDV + CBDVa + $\Delta^8$-THC + CBL + CBN
Total Cannabinoids = ($\Delta^9$-THC+0.877*THCa) + (CBD+0.877*CBDa) + (CBG+0.877*CBGa) + (THCV+0.877*THCVa) + (CBC+0.877*CBCa) + (CBDV+0.877*CBDVa) + $\Delta^8$-THC + CBL + CBN

## TERPENOID ANALYSIS - SUMMARY

39 TESTED, TOP 3 HIGHLIGHTED

**Total Terpenoids: 7.4659%**



Menthol 73.046 mg/g  Camphor 1.517 mg/g  Isopulegol 0.096 mg/g

## SAFETY ANALYSIS - SUMMARY

**$\Delta^9$-THC per Unit: PASS**

For quality assurance purposes. Not a Regulatory Hemp Lab Test Report. These results relate only to the sample included on this report. This report shall not be reproduced, except in full, without written approval of the laboratory.

**Sample Certification:** California Code of Regulations Title 4 Division 19. Department of Cannabis Control Business and Professions Code. Reference: Sections 26100, 26104 and 26110, Business and Professions Code.

**Decision Rule:** Statements of conformity (e.g. Pass/Fail) to specifications are made in this report without taking measurement uncertainty into account. Where statements of conformity are made in this report, the following decision rules are applied: PASS - Results within limits/specifications, FAIL - Results exceed limits/specifications.

**References:** limit of detection (LOD), limit of quantification (LOQ), not detected (ND), not tested (NT), µg/g = ppm, µg/kg = ppb

Approved by: Josh Wurzer
Job Title: Chief Compliance Officer
Date: 06/17/2025

Amendment to Certificate of Analysis 250612L016-003

## Cannabinoid Analysis

Tested by high-performance liquid chromatography with diode-array detection (HPLC-DAD).

**Method:** QSP 1157 - Analysis of Cannabinoids by HPLC-DAD

### TOTAL THC: Not Detected

Total THC ($\Delta^9$-THC+0.877*THCa)

### TOTAL CBD: 4459.770 mg/unit

Total CBD (CBD+0.877*CBDa)

### TOTAL CANNABINOIDS: 4538.070 mg/unit

Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) + $\Delta^8$-THC + CBL + CBN

### TOTAL CBG: 40.860 mg/unit

Total CBG (CBG+0.877*CBGa)

### TOTAL THCV: ND

Total THCV (THCV+0.877*THCVa)

### TOTAL CBC: 1.080 mg/unit

Total CBC (CBC+0.877*CBCa)

### TOTAL CBDV: 17.190 mg/unit

Total CBDV (CBDV+0.877*CBDVa)

**CANNABINOID TEST RESULTS -** 06/12/2025

| COMPOUND | LOD/LOQ (mg/g) | MEASUREMENT UNCERTAINTY (mg/g) | RESULT (mg/g) | RESULT (%) |
|---|---|---|---|---|
| CBD | *0.004 / 0.011* | *±1.8483* | 49.553 | 4.9553 |
| CBG | *0.002 / 0.006* | *±0.0220* | 0.454 | 0.0454 |
| CBN | *0.001 / 0.007* | *±0.0061* | 0.213 | 0.0213 |
| CBDV | *0.002 / 0.012* | *±0.0078* | 0.191 | 0.0191 |
| CBC | *0.003 / 0.010* | *±0.0004* | 0.012 | 0.0012 |
| $\Delta^9$-THC | *0.002 / 0.014* | *N/A* | ND | ND |
| $\Delta^8$-THC | *0.01 / 0.02* | *N/A* | ND | ND |
| THCa | *0.001 / 0.005* | *N/A* | ND | ND |
| THCV | *0.002 / 0.012* | *N/A* | ND | ND |
| THCVa | *0.002 / 0.019* | *N/A* | ND | ND |
| CBDa | *0.001 / 0.026* | *N/A* | ND | ND |
| CBDVa | *0.001 / 0.018* | *N/A* | ND | ND |
| CBGa | *0.002 / 0.007* | *N/A* | ND | ND |
| CBL | *0.003 / 0.010* | *N/A* | ND | ND |
| CBCa | *0.001 / 0.015* | *N/A* | ND | ND |
| **SUM OF CANNABINOIDS** | | | 50.423 mg/g | 5.0423% |

**Unit Mass: 90 grams per Unit / Serving Size: 1 gram per Serving**

| | | | |
|---|---|---|---|
| $\Delta^9$-THC per Unit | *1100 per-package limit* | ND | PASS |
| $\Delta^9$-THC per Serving | | ND | |
| Total THC per Unit | | ND | |
| Total THC per Serving | | ND | |
| CBD per Unit | | 4459.770 mg/unit | |
| CBD per Serving | | 49.553 mg/serving | |
| Total CBD per Unit | | 4459.770 mg/unit | |
| Total CBD per Serving | | 49.553 mg/serving | |
| Sum of Cannabinoids per Unit | | 4538.070 mg/unit | |
| Sum of Cannabinoids per Serving | | 50.423 mg/serving | |
| Total Cannabinoids per Unit | | 4538.070 mg/unit | |
| Total Cannabinoids per Serving | | 50.423 mg/serving | |

## Terpenoid Analysis

Terpene analysis utilizing gas chromatography-flame ionization detection (GC-FID).

**Method:** QSP 1192 - Analysis of Terpenoids by GC-FID

### 1 Menthol
A monoterpenoid alcohol with a fragrance that can be described as fresh, cool and herbal. It is responsible for the distinct odor of mint. It is frequently added to cigarettes and mouthwash as a flavorant. Found in mint, sunflower, micromeria, mountain mint, rose geranium, pennyroyal, tarragon, savory, basil, juniper, couch grass, rhubarb, acinos (basil thyme), ironwort, muña...etc.

### 2 Camphor
A monoterpenoid ketone with a pungent fragrance that is as reminiscent of mothballs. It is commonly derived from *Cinnamomum* camphora, from which it lends its lame. It is a constituent of turpentine and has been used by certain cultures as an embalming fluid due to its antimicrobial effects. Found in camphor laurel, rosemary, East African camphorwood, goldenasters, coriander, feverfew, tarragon, nutmeg, sweet wormwood, yerba buena, mountain mint, hyssop, forskohlii, tansy, thyme, turmeric...etc.

### 3 Isopulegol
A monoterpenoid with a fragrance that can be described as woody and minty. It is also a constituent of toxic secretions of exploding ants. Found in eucalyptus, rosemary, citrus, lemon-verbena, micromeria, lemon balm...etc.

**TERPENOID TEST RESULTS -** 06/16/2025

| COMPOUND | LOD/LOQ (mg/g) | MEASUREMENT UNCERTAINTY (mg/g) | RESULT (mg/g) | RESULT (%) |
|---|---|---|---|---|
| Menthol | *0.008 / 0.025* | *±2.2790* | **73.046** | **7.3046** |
| Camphor | *0.006 / 0.036* | *±0.0420* | **1.517** | **0.1517** |
| Isopulegol | *0.005 / 0.036* | *±0.0030* | **0.096** | **0.0096** |
| α-Bisabolol | *0.008 / 0.026* | *N/A* | **ND** | **ND** |
| α-Cedrene | *0.005 / 0.016* | *N/A* | **ND** | **ND** |
| α-Humulene | *0.009 / 0.180* | *N/A* | **ND** | **ND** |
| α-Phellandrene | *0.006 / 0.036* | *N/A* | **ND** | **ND** |
| α-Pinene | *0.005 / 0.036* | *N/A* | **ND** | **ND** |
| α-Terpinene | *0.005 / 0.017* | *N/A* | **ND** | **ND** |
| β-Caryophyllene | *0.004 / 0.012* | *N/A* | **ND** | **ND** |
| β-Ocimene | *0.006 / 0.025* | *N/A* | **ND** | **ND** |
| β-Pinene | *0.004 / 0.014* | *N/A* | **ND** | **ND** |
| Borneol | *0.005 / 0.016* | *N/A* | **ND** | **ND** |
| Camphene | *0.005 / 0.015* | *N/A* | **ND** | **ND** |
| Caryophyllene Oxide | *0.010 / 0.033* | *N/A* | **ND** | **ND** |
| Cedrol | *0.008 / 0.027* | *N/A* | **ND** | **ND** |
| Citronellol | *0.003 / 0.036* | *N/A* | **ND** | **ND** |
| $\Delta^3$-Carene | *0.005 / 0.018* | *N/A* | **ND** | **ND** |
| Eucalyptol | *0.006 / 0.018* | *N/A* | **ND** | **ND** |
| Fenchol | *0.010 / 0.036* | *N/A* | **ND** | **ND** |
| Fenchone | *0.009 / 0.036* | *N/A* | **ND** | **ND** |
| γ-Terpinene | *0.006 / 0.018* | *N/A* | **ND** | **ND** |
| Geraniol | *0.002 / 0.036* | *N/A* | **ND** | **ND** |
| Geranyl Acetate | *0.004 / 0.036* | *N/A* | **ND** | **ND** |
| Guaiol | *0.009 / 0.030* | *N/A* | **ND** | **ND** |
| Isoborneol | *0.004 / 0.012* | *N/A* | **ND** | **ND** |
| Limonene | *0.005 / 0.036* | *N/A* | **ND** | **ND** |
| Linalool | *0.009 / 0.036* | *N/A* | **ND** | **ND** |
| Myrcene | *0.008 / 0.025* | *N/A* | **ND** | **ND** |
| Nerol | *0.003 / 0.036* | *N/A* | **ND** | **ND** |
| Nerolidol | *0.006 / 0.021* | *N/A* | **ND** | **ND** |
| p-Cymene | *0.005 / 0.016* | *N/A* | **ND** | **ND** |
| Pulegone | *0.003 / 0.011* | *N/A* | **ND** | **ND** |
| Sabinene | *0.004 / 0.014* | *N/A* | **ND** | **ND** |
| Sabinene Hydrate | *0.006 / 0.036* | *N/A* | **ND** | **ND** |
| Terpineol | *0.009 / 0.031* | *N/A* | **ND** | **ND** |
| Terpinolene | *0.008 / 0.036* | *N/A* | **ND** | **ND** |
| trans-β-Farnesene | *0.008 / 0.025* | *N/A* | **ND** | **ND** |
| Valencene | *0.009 / 0.180* | *N/A* | **ND** | **ND** |
| **TOTAL TERPENOIDS** | | | **74.659 mg/g** | **7.4659%** |

**NOTES**
Reason for Amendment: Result Change - Dilution Sample serving mass provided by client. Sample unit mass provided by client.

**KCA Laboratories**
232 North Plaza Drive
Nicholasville, KY 40356

+1-833-KCA-LABS
https://kcalabs.com
KDA Lic.# P_0058



# TFR-03-3000

Sample ID: SA-250528-62696
Batch: 51171L1
Type: Finished Product - Topical
Matrix: Topical - Gel
Unit Mass (g): 148

Received: 05/30/2025
Completed: 06/06/2025

**Client**
cbdMD
2101 Westinghouse Blvd
Charlotte, NC 28273
USA
Lic. #: HP315

## Heavy Metals by ICP-MS

| Analyte | LOD (ppm) | LOQ (ppm) | Result (ppm) |
|---|---|---|---|
| Arsenic | 0.002 | 0.02 | ND |
| Cadmium | 0.001 | 0.02 | ND |
| Lead | 0.002 | 0.02 | ND |
| Mercury | 0.012 | 0.05 | ND |

ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; P = Pass; F = Fail; RL = Reporting Limit; Values over action limits may be estimates

Generated By: Ryan Bellone
Commercial Director
Date: 06/06/2025

Tested By: Chris Farman
Scientist
Date: 06/04/2025

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# Certificate of Analysis



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## Pesticides by LC-MS/MS and GC-MS/MS

| Analyte | LOD (ppb) | LOQ (ppb) | Result (ppb) | Analyte | LOD (ppb) | LOQ (ppb) | Result (ppb) |
|---|---|---|---|---|---|---|---|
| Abamectin | 30 | 100 | ND | Hexythiazox | 30 | 100 | ND |
| Acephate | 30 | 100 | ND | Imazalil | 30 | 100 | ND |
| Acequinocyl | 30 | 100 | ND | Imidacloprid | 30 | 100 | ND |
| Acetamiprid | 30 | 100 | ND | Kresoxim methyl | 30 | 100 | ND |
| Aldicarb | 30 | 100 | ND | Malathion | 30 | 100 | ND |
| Azoxystrobin | 30 | 100 | ND | Metalaxyl | 30 | 100 | ND |
| Bifenazate | 30 | 100 | ND | Methiocarb | 30 | 100 | ND |
| Bifenthrin | 30 | 100 | ND | Methomyl | 30 | 100 | ND |
| Boscalid | 30 | 100 | ND | Mevinphos | 30 | 100 | ND |
| Carbaryl | 30 | 100 | ND | Myclobutanil | 30 | 100 | ND |
| Carbofuran | 30 | 100 | ND | Naled | 30 | 100 | ND |
| Chloranthraniliprole | 30 | 100 | ND | Oxamyl | 30 | 100 | ND |
| Chlorfenapyr | 30 | 100 | ND | Paclobutrazol | 30 | 100 | ND |
| Chlorpyrifos | 30 | 100 | ND | Permethrin | 30 | 100 | ND |
| Clofentezine | 30 | 100 | ND | Phosmet | 30 | 100 | ND |
| Coumaphos | 30 | 100 | ND | Piperonyl Butoxide | 30 | 100 | ND |
| Cypermethrin | 30 | 100 | ND | Propiconazole | 30 | 100 | ND |
| Daminozide | 30 | 100 | ND | Propoxur | 30 | 100 | ND |
| Diazinon | 30 | 100 | ND | Pyrethrins | 30 | 100 | ND |
| Dichlorvos | 30 | 100 | ND | Pyridaben | 30 | 100 | ND |
| Dimethoate | 30 | 100 | ND | Spinetoram | 30 | 100 | ND |
| Dimethomorph | 30 | 100 | ND | Spinosad | 30 | 100 | ND |
| Ethoprophos | 30 | 100 | ND | Spiromesifen | 30 | 100 | ND |
| Etofenprox | 30 | 100 | ND | Spirotetramat | 30 | 100 | ND |
| Etoxazole | 30 | 100 | ND | Spiroxamine | 30 | 100 | ND |
| Fenhexamid | 30 | 100 | ND | Tebuconazole | 30 | 100 | ND |
| Fenoxycarb | 30 | 100 | ND | Thiacloprid | 30 | 100 | ND |
| Fenpyroximate | 30 | 100 | ND | Thiamethoxam | 30 | 100 | ND |
| Fipronil | 30 | 100 | ND | Trifloxystrobin | 30 | 100 | ND |
| Flonicamid | 30 | 100 | ND | | | | |
| Fludioxonil | 30 | 100 | ND | | | | |

ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; P = Pass; F = Fail; RL = Reporting Limit; Values over action limits may be estimates

Generated By: Ryan Bellone
Commercial Director
Date: 06/06/2025

Tested By: Anthony Mattingly
Scientist
Date: 06/03/2025

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# Certificate of Analysis



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Batch: 51171L1
Type: Finished Product - Topical
Matrix: Topical - Gel
Unit Mass (g): 148

Received: 05/30/2025
Completed: 06/06/2025

**Client**
cbdMD
2101 Westinghouse Blvd
Charlotte, NC 28273
USA
Lic. #: HP315

## Mycotoxins by LC-MS/MS

| Analyte | LOD (ppb) | LOQ (ppb) | Result (ppb) |
|---|---|---|---|
| B1 | 1 | 5 | ND |
| B2 | 1 | 5 | ND |
| G1 | 1 | 5 | ND |
| G2 | 1 | 5 | ND |
| Ochratoxin A | 1 | 5 | ND |

ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; P = Pass; F = Fail; RL = Reporting Limit; Values over action limits may be estimates

Generated By: Ryan Bellone
Commercial Director
Date: 06/06/2025

Tested By: Anthony Mattingly
Scientist
Date: 06/03/2025

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Lic. #: HP315

## Microbials by PCR and Plating

| Analyte | LOD (CFU/g) | Result (CFU/g) | Result (Qualitative) |
|---|---|---|---|
| Total aerobic count | 10 | ND | |
| Listeria mono. | 1 | | Not Detected per 1 gram |
| Salmonella spp. | 1 | | Not Detected per 1 gram |
| Shiga-toxin producing E. coli (STEC) | 1 | | Not Detected per 1 gram |
| Total yeast and mold count (TYMC) | 10 | ND | |

ND = Not Detected; NT = Not Tested; LOD = Limit of Detection; LOQ = Limit of Quantitation; CFU = Colony Forming Units; P = Pass; F = Fail; RL = Reporting Limit

Generated By: Ryan Bellone
Commercial Director
Date: 06/06/2025

Tested By: Sara Cook
Laboratory Technician
Date: 06/04/2025

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Lic. #: HP315

## Residual Solvents by HS-GC-MS

| Analyte | LOD (ppm) | LOQ (ppm) | Result (ppm) | Analyte | LOD (ppm) | LOQ (ppm) | Result (ppm) |
|---|---|---|---|---|---|---|---|
| Acetone | 167 | 500 | ND | Ethylene Oxide | 0.5 | 1 | ND |
| Acetonitrile | 14 | 41 | ND | Heptane | 167 | 500 | ND |
| Benzene | 0.5 | 1 | ND | n-Hexane | 10 | 29 | ND |
| Butane | 167 | 500 | ND | Isobutane | 167 | 500 | ND |
| 1-Butanol | 167 | 500 | ND | Isopropyl Acetate | 167 | 500 | ND |
| 2-Butanol | 167 | 500 | ND | Isopropyl Alcohol | 167 | 500 | >5000 |
| 2-Butanone | 167 | 500 | ND | Isopropylbenzene | 167 | 500 | ND |
| Chloroform | 2 | 6 | ND | Methanol | 100 | 300 | <LOQ |
| Cyclohexane | 129 | 388 | ND | 2-Methylbutane | 10 | 29 | ND |
| 1,2-Dichloroethane | 0.5 | 1 | ND | Methylene Chloride | 20 | 60 | ND |
| 1,2-Dimethoxyethane | 4 | 10 | ND | 2-Methylpentane | 10 | 29 | ND |
| Dimethyl Sulfoxide | 167 | 500 | ND | 3-Methylpentane | 10 | 29 | ND |
| N,N-Dimethylacetamide | 37 | 109 | ND | n-Pentane | 167 | 500 | ND |
| 2,2-Dimethylbutane | 10 | 29 | ND | 1-Pentanol | 167 | 500 | ND |
| 2,3-Dimethylbutane | 10 | 29 | ND | n-Propane | 167 | 500 | ND |
| N,N-Dimethylformamide | 30 | 88 | ND | 1-Propanol | 167 | 500 | ND |
| 2,2-Dimethylpropane | 167 | 500 | ND | Pyridine | 7 | 20 | ND |
| 1,4-Dioxane | 13 | 38 | ND | Tetrahydrofuran | 24 | 72 | ND |
| Ethanol | 167 | 500 | ND | Toluene | 30 | 89 | ND |
| 2-Ethoxyethanol | 6 | 16 | ND | Trichloroethylene | 3 | 8 | ND |
| Ethyl Acetate | 167 | 500 | ND | Xylenes (o-, m-, and p-) | 73 | 217 | ND |
| Ethyl Ether | 167 | 500 | ND | | | | |
| Ethylbenzene | 3 | 7 | ND | | | | |

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Generated By: Ryan Bellone
Commercial Director
Date: 06/06/2025

Tested By: Kelsey Rogers
Scientist
Date: 06/04/2025