

# **Hemp Quality Assurance Testing**

# **CERTIFICATE OF ANALYSIS**

**DATE ISSUED 04/13/2021** 

#### SAMPLE NAME: cbdMD 30 count 450 mg Capsules

Infused, Non-Inhalable

**CULTIVATOR / MANUFACTURER** 

**Business Name:** License Number:

Address:

SAMPLE DETAIL

Batch Number: 10961A1 Sample ID: 210407R005

**DISTRIBUTOR / TESTED FOR** 

Business Name: cbdMD License Number: Address:

Date Collected: 04/07/2021 Date Received: 04/07/2021

Batch Size:

Sample Size: 1.0 units

Unit Mass: 0.748 grams per Unit

Serving Size:





Scan QR code to verify authenticity of results.

#### **CANNABINOID ANALYSIS - SUMMARY**

**Total THC: Not Detected** 

Total CBD: 14.914 mg/unit

Sum of Cannabinoids: 15.165 mg/unit

Total Cannabinoids: 15.166 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 =  $\Delta$ 9THC + (THCa (0.877))

Total CBD = CBD + (CBDa (0.877))

Sum of Cannabinoids =  $\Delta$ 9THC + THCa + CBD + CBDa + CBG + CBGa + THCV + THCVa + CBC + CBCa + CBDV + CBDVa +  $\Delta$ 8THC + CBL + CBN Total Cannabinoids = (Δ9THC+0.877\*THCa) + (CBD+0.877\*CBDa) +

(CBG+0.877\*CBGa) + (THCV+0.877\*THCVa) + (CBC+0.877\*CBCa) + (CBDV+0.877\*CBDVa) + Δ8THC + CBL + CBN

Moisture: NT

Density: NT

Viscosity: NT

#### TERPENOID ANALYSIS - SUMMARY

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 0.0475%

Limonene 0.475 mg/g

α Pinene <LOQ</p>

Myrcene <LOQ

## **SAFETY ANALYSIS - SUMMARY**

∆9THC per Unit: **⊘PASS** 

Pesticides: PASS

Heavy Metals: PASS

Foreign Material: NT

Mycotoxins: PASS

Microbial Impurities (PCR): PASS

Water Activity: NT

Residual Solvents: PASS

Microbial Impurities (Plating): NT

Vitamin E: NT

For quality assurance purposes. Not a Pre-Harvest 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

Sample Certification: California Code of Regulations Title 16 Effect Date January 16, 2019. Authority: Section 26013, 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)



# **Hemp Quality Assurance Testing**

# **CERTIFICATE OF ANALYSIS**

CBDMD 30 COUNT 450 MG CAPSULES | DATE ISSUED 04/13/2021



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 (Δ9THC+0.877\*THCa)

TOTAL CBD: 14.914 mg/unit

Total CBD (CBD+0.877\*CBDa)

TOTAL CANNABINOIDS: 15.166 mg/unit

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

TOTAL CBG: 0.164 mg/unit

Total CBG (CBG+0.877\*CBGa)

**TOTAL THCV: ND** 

Total THCV (THCV+0.877\*THCVa)

TOTAL CBC: ND

Total CBC (CBC+0.877\*CBCa)

TOTAL CBDV: 0.030 mg/unit

Total CBDV (CBDV+0.877\*CBDVa)

#### **CANNABINOID TEST RESULTS - 04/11/2021**

| COMPOUN      | D LOD/LOQ<br>(mg/g) | MEASUREMENT<br>UNCERTAINTY (mg/g) | RESULT<br>(mg/g) | RESULT<br>(%) |
|--------------|---------------------|-----------------------------------|------------------|---------------|
| CBD          | 0.004 / 0.011       | ±0.9550                           | 19.938           | 1.9938        |
| CBG          | 0.002 / 0.006       | ±0.0136                           | 0.219            | 0.0219        |
| CBN          | 0.001 / 0.007       | ±0.0028                           | 0.077            | 0.0077        |
| CBDV         | 0.002 / 0.012       | ±0.0021                           | 0.040            | 0.0040        |
| <b>Д9ТНС</b> | 0.002 / 0.014       | N/A                               | ND               | ND            |
| Δ8ΤΗС        | 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            |
| СВС          | 0.003 / 0.010       | N/A                               | ND               | ND            |
| CBCa         | 0.001 / 0.015       | N/A                               | ND               | ND            |
| SUM OF C     | ANNABINOIDS         |                                   | 20.274 mg/g      | 2.0274%       |

## Unit Mass: 0.748 grams per Unit

| Δ9THC per Unit               | 1120 per-package limit | ND             | PASS |
|------------------------------|------------------------|----------------|------|
| Total THC per Unit           |                        | ND             |      |
| CBD per Unit                 |                        | 14.914 mg/unit |      |
| Total CBD per Unit           |                        | 14.914 mg/unit |      |
| Sum of Cannabinoids per Unit |                        | 15.165 mg/unit |      |
| Total Cannabinoids per Unit  |                        | 15.166 mg/unit |      |

| MOISTURE TEST RESULT | DENSITY TEST RESULT | VISCOSITY TEST RESULT |
|----------------------|---------------------|-----------------------|
| Not Tested           | Not Tested          | Not Tested            |
|                      |                     |                       |
|                      |                     |                       |
|                      |                     |                       |





# **CERTIFICATE OF ANALYSIS**

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# **Terpenoid Analysis**

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

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



#### Limonene

A monoterpene with a fragrance that can be described as orangey, citrusy, sweet and tart. It is most commonly found in nature as D-Limonene and is a primary contributor to the distinct scent of orange peels, from which it is commonly derived. Found in numerous pines, red maple, silver maple, aspens, cottonwoods, hemlocks, sumac, cedar, junipers...etc.



## $\alpha$ Pinene

One of two isomers of the monoterpene Pinene, the most abundant terpene in the natural world. It is responsible for the distinct aroma of many coniferous trees, particularly pines, from which it derives its name. It is a primary constituent of turpentine. Found in pines, rose gun, parsley, frankincense, guava, juniper, rosemary, nutmeg, blue gum, valerian...etc.



## Myrcene

A monoterpene with a fragrance that can be described as peppery, spicy, herbal, floral and woody. Although it has a pleasant odor, it is typically used by the perfume industry as precursor for developing other fragrances. Found in hops, houttuynia, bay, thyme, lemon grass, mango, verbena, cardamom, citrus...etc.

#### TERPENOID TEST RESULTS - 04/13/2021

| COMPOUND                 | LOD/LOQ<br>(mg/g) | MEASUREMENT<br>UNCERTAINTY (mg/g) | RESULT<br>(mg/g)                                | RESULT<br>(%)       |
|--------------------------|-------------------|-----------------------------------|---|---------------------|
| Limonene                 | 0.005 / 0.016     | ±0.0068                           | 0.475   | 0.0475              |
| α Pinene                 | 0.005 / 0.017     | N/A                               | <loq< td=""><td><loq< td=""></loq<></td></loq<> | <loq< td=""></loq<> |
| Myrcene                  | 0.008 / 0.025     | N/A                               | <loq< td=""><td><loq< td=""></loq<></td></loq<> | <loq< td=""></loq<> |
| Camphene                 | 0.005 / 0.015     | N/A                               | ND  | ND                  |
| Sabinene                 | 0.004 / 0.014     | N/A                               | ND  | ND                  |
| β Pinene                 | 0.004 / 0.014     | N/A                               | ND  | ND                  |
| $\alpha$ Phellandrene    | 0.006 / 0.020     | N/A                               | ND  | ND                  |
| 3 Carene                 | 0.005 / 0.018     | N/A                               | ND  | ND                  |
| $\alpha\text{Terpinene}$ | 0.005 / 0.017     | N/A                               | ND  | ND                  |
| p-Cymene                 | 0.005 / 0.016     | N/A                               | ND  | ND                  |
| Eucalyptol               | 0.006 / 0.018     | N/A                               | ND  | ND                  |
| Ocimene                  | 0.011/0.038       | N/A                               | ND  | ND                  |
| γTerpinene               | 0.006 / 0.018     | N/A                               | ND  | ND                  |
| Sabinene Hydrate         | 0.006 / 0.022     | N/A                               | ND  | ND                  |
| Fenchone                 | 0.009 / 0.028     | N/A                               | ND  | ND                  |
| Terpinolene              | 0.008 / 0.026     | N/A                               | ND  | ND                  |
| Linalool                 | 0.009 / 0.032     | N/A                               | ND  | ND                  |
| Fenchol                  | 0.010 / 0.034     | N/A                               | ND  | ND                  |
| (-)-Isopulegol           | 0.005 / 0.016     | N/A                               | ND  | ND                  |
| Camphor                  | 0.006 / 0.019     | N/A                               | ND  | ND                  |
| Isoborneol               | 0.004 / 0.012     | N/A                               | ND  | ND                  |
| Borneol                  | 0.005 / 0.016     | N/A                               | ND  | ND                  |
| Menthol                  | 0.008 / 0.025     | N/A                               | ND  | ND                  |
| Terpineol                | 0.016 / 0.055     | N/A                               | ND  | ND                  |
| Nerol                    | 0.003 / 0.011     | N/A                               | ND  | ND                  |
| Citronellol              | 0.003 / 0.010     | N/A                               | ND  | ND                  |
| R-(+)-Pulegone           | 0.003 / 0.011     | N/A                               | ND  | ND                  |
| Geraniol                 | 0.002 / 0.007     | N/A                               | ND  | ND                  |
| Geranyl Acetate          | 0.004 / 0.014     | N/A                               | ND  | ND                  |
| $\alpha$ Cedrene         | 0.005 / 0.016     | N/A                               | ND  | ND                  |
| β Caryophyllene          | 0.004 / 0.012     | N/A                               | ND  | ND                  |
| trans-β-Farnesene        | 0.008 / 0.025     | N/A                               | ND  | ND                  |
| α Humulene               | 0.009/0.029       | N/A                               | ND  | ND                  |
| Valencene                | 0.009 / 0.030     | N/A                               | ND  | ND                  |
| Nerolidol                | 0.009 / 0.028     | N/A                               | ND  | ND                  |
| Caryophyllene Oxide      | 0.010 / 0.033     | N/A                               | ND  | ND                  |
| Guaiol                   | 0.009 / 0.030     | N/A                               | ND  | ND                  |
| Cedrol                   | 0.008 / 0.027     | N/A                               | ND  | ND                  |
| α Bisabolol              | 0.008 / 0.026     | N/A                               | ND  | ND                  |
| TOTAL TERPENOIDS         |                   |                                   | 0.475 mg/g                                      | 0.0475%             |





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CBDMD 30 COUNT 450 MG CAPSULES | DATE ISSUED 04/13/2021





# **Pesticide Analysis**

## **CATEGORY 1 AND 2 PESTICIDES**

Pesticide and plant growth regulator analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS) or gas chromatography-mass spectrometry (GC-MS). \*GC-MS utilized where indicated.

**Method:** QSP 1212 - Analysis of Pesticides and Mycotoxins by LC-MS or QSP 1213 - Analysis of Pesticides by GC-MS

## CATEGORY 1 PESTICIDE TEST RESULTS - 04/13/2021 PASS

|   | COMPOUND          | LOD/LOQ<br>(µg/g) | ACTION LIMIT<br>(µg/g) | MEASUREMENT<br>UNCERTAINTY (μg/g) | RESULT<br>(µg/g) | RESULT |
|---|-------------------|-------------------|------------------------|-----------------------------------|------------------|--------|
| Ī | Aldicarb          | 0.03 / 0.08       | ≥LOD                   | N/A                               | ND               | PASS   |
| Ī | Carbofuran        | 0.02 / 0.05       | ≥LOD                   | N/A                               | ND               | PASS   |
|   | Chlordane*        | 0.03 / 0.08       | ≥LOD                   | N/A                               | ND               | PASS   |
| Ī | Chlorfenapyr*     | 0.03 / 0.10       | ≥LOD                   | N/A                               | ND               | PASS   |
| Ī | Chlorpyrifos      | 0.02 / 0.06       | ≥LOD                   | N/A                               | ND               | PASS   |
|   | Coumaphos         | 0.02 / 0.07       | ≥LOD                   | N/A                               | ND               | PASS   |
| Ī | Daminozide        | 0.02 / 0.07       | ≥LOD                   | N/A                               | ND               | PASS   |
|   | DDVP (Dichlorvos) | 0.03 / 0.09       | ≥LOD                   | N/A                               | ND               | PASS   |
|   | Dimethoate        | 0.03 / 0.08       | ≥LOD                   | N/A                               | ND               | PASS   |
| Ī | Ethoprop(hos)     | 0.03 / 0.10       | ≥LOD                   | N/A                               | ND               | PASS   |
|   | Etofenprox        | 0.02 / 0.06       | ≥LOD                   | N/A                               | ND               | PASS   |
|   | Fenoxycarb        | 0.03 / 0.08       | ≥LOD                   | N/A                               | ND               | PASS   |
| Ī | Fipronil          | 0.03 / 0.08       | ≥LOD                   | N/A                               | ND               | PASS   |
| Ī | lmazalil          | 0.02 / 0.06       | ≥LOD                   | N/A                               | ND               | PASS   |
|   | Methiocarb        | 0.02 / 0.07       | ≥LOD                   | N/A                               | ND               | PASS   |
| Ī | Methyl parathion  | 0.03 / 0.10       | ≥LOD                   | N/A                               | ND               | PASS   |
| Ī | Mevinphos         | 0.03 / 0.09       | ≥LOD                   | N/A                               | ND               | PASS   |
|   | Paclobutrazol     | 0.02 / 0.05       | ≥LOD                   | N/A                               | ND               | PASS   |
|   | Propoxur          | 0.03 / 0.09       | ≥LOD                   | N/A                               | ND               | PASS   |
| 4 | Spiroxamine       | 0.03 / 0.08       | ≥LOD                   | N/A                               | ND               | PASS   |
|   | Thiacloprid       | 0.03 / 0.10       | ≥LOD                   | N/A                               | ND               | PASS   |
|   |                   |                   |                        |                                   |                  |        |

## CATEGORY 2 PESTICIDE TEST RESULTS - 04/13/2021 PASS

| Abamectin           | 0.03 / 0.10 | 0.3 | N/A | ND | PASS |
|---------------------|-------------|-----|-----|----|------|
| Acephate            | 0.02 / 0.07 | 5   | N/A | ND | PASS |
| Acequinocyl         | 0.02 / 0.07 | 4   | N/A | ND | PASS |
| Acetamiprid         | 0.02 / 0.05 | 5   | N/A | ND | PASS |
| Azoxystrobin        | 0.02 / 0.07 | 40  | N/A | ND | PASS |
| Bifenazate          | 0.01/0.04   | 5   | N/A | ND | PASS |
| Bifenthrin          | 0.02 / 0.05 | 0.5 | N/A | ND | PASS |
| Boscalid            | 0.03 / 0.09 | 10  | N/A | ND | PASS |
| Captan              | 0.19/0.57   | 5   | N/A | ND | PASS |
| Carbaryl            | 0.02 / 0.06 | 0.5 | N/A | ND | PASS |
| Chlorantraniliprole | 0.04 / 0.12 | 40  | N/A | ND | PASS |
| Clofentezine        | 0.03/0.09   | 0.5 | N/A | ND | PASS |
| Cyfluthrin          | 0.12 / 0.38 | 1   | N/A | ND | PASS |
| Cypermethrin        | 0.11/0.32   | 1   | N/A | ND | PASS |
| Diazinon            | 0.02 / 0.05 | 0.2 | N/A | ND | PASS |
| Dimethomorph        | 0.03/0.09   | 20  | N/A | ND | PASS |
| Etoxazole           | 0.02 / 0.06 | 1.5 | N/A | ND | PASS |
| Fenhexamid          | 0.03 / 0.09 | 10  | N/A | ND | PASS |
| Fenpyroximate       | 0.02 / 0.06 | 2   | N/A | ND | PASS |



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# Pesticide Analysis Continued

## **CATEGORY 1 AND 2 PESTICIDES**

Pesticide and plant growth regulator analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS) or gas chromatography-mass spectrometry (GC-MS). \*GC-MS utilized where indicated.

**Method:** QSP 1212 - Analysis of Pesticides and Mycotoxins by LC-MS or QSP 1213 - Analysis of Pesticides by GC-MS

## CATEGORY 2 PESTICIDE TEST RESULTS - 04/13/2021 continued PASS

| COMPOUND                 | LOD/LOQ<br>(µg/g) | ACTION LIMIT<br>(µg/g) | MEASUREMENT<br>UNCERTAINTY (μg/g) | RESULT<br>(µg/g) | RESULT |
|--------------------------|-------------------|------------------------|-----------------------------------|------------------|--------|
| Flonicamid               | 0.03 / 0.10       | 2                      | N/A                               | ND               | PASS   |
| Fludioxonil              | 0.03 / 0.10       | 30                     | N/A                               | ND               | PASS   |
| Hexythiazox              | 0.02 / 0.07       | 2                      | N/A                               | ND               | PASS   |
| Imidacloprid             | 0.04/0.11         | 3                      | N/A                               | ND               | PASS   |
| Kresoxim-methyl          | 0.02 / 0.07       | 1                      | N/A                               | ND               | PASS   |
| Malathion                | 0.03 / 0.09       | 5                      | N/A                               | ND               | PASS   |
| Metalaxyl                | 0.02 / 0.07       | 15                     | N/A                               | ND               | PASS   |
| Methomyl                 | 0.03 / 0.10       | 0.1                    | N/A                               | ND               | PASS   |
| Myclobutanil             | 0.03 / 0.09       | 9                      | N/A                               | ND               | PASS   |
| Naled                    | 0.02 / 0.07       | 0.5                    | N/A                               | ND               | PASS   |
| Oxamyl                   | 0.04 / 0.11       | 0.2                    | N/A                               | ND               | PASS   |
| Pentachloronitrobenzene* | 0.03 / 0.09       | 0.2                    | N/A                               | ND               | PASS   |
| Permethrin               | 0.04 / 0.12       | 20                     | N/A                               | ND               | PASS   |
| Phosmet                  | 0.03 / 0.10       | 0.2                    | N/A                               | ND               | PASS   |
| Piperonylbutoxide        | 0.02 / 0.07       | 8                      | N/A                               | ND               | PASS   |
| Prallethrin              | 0.03 / 0.08       | 0.4                    | N/A                               | ND               | PASS   |
| Propiconazole            | 0.02 / 0.07       | 20                     | N/A                               | ND               | PASS   |
| Pyrethrins               | 0.04 / 0.12       | 1                      | N/A                               | ND               | PASS   |
| Pyridaben                | 0.02 / 0.07       | 3                      | N/A                               | ND               | PASS   |
| Spinetoram               | 0.02 / 0.07       | 3                      | N/A                               | ND               | PASS   |
| Spinosad                 | 0.02 / 0.07       | 3                      | N/A                               | ND               | PASS   |
| Spiromesifen             | 0.02 / 0.05       | 12                     | N/A                               | ND               | PASS   |
| Spirotetramat            | 0.02 / 0.06       | 13                     | N/A                               | ND               | PASS   |
| Tebuconazole             | 0.02 / 0.07       | 2                      | N/A                               | ND               | PASS   |
| Thiamethoxam             | 0.03 / 0.10       | 4.5                    | N/A                               | ND               | PASS   |
| Trifloxystrobin          | 0.03 / 0.08       | 30                     | N/A                               | ND               | PASS   |



# **Mycotoxin Analysis**

Mycotoxin analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS).

 $\textbf{Method:} \ \mathsf{QSP} \ \mathsf{1212} \text{ -} \ \mathsf{Analysis} \ \mathsf{of} \ \mathsf{Pesticides} \ \mathsf{and} \ \mathsf{Mycotoxins} \ \mathsf{by} \\ \mathsf{LC\text{-}MS}$ 

## MYCOTOXIN TEST RESULTS - 04/13/2021 O PASS

|   | COMPOUND        | LOD/LOQ<br>(µg/kg) | ACTION LIMIT (μg/kg) | MEASUREMENT<br>UNCERTAINTY (μg/kg) | RESULT<br>(µg/kg) | RESULT |
|---|-----------------|--------------------|----------------------|------------------------------------|-------------------|--------|
|   | Aflatoxin B1    | 2.0 / 6.0          |                      | N/A                                | ND                |        |
| Ī | Aflatoxin B2    | 1.8 / 5.6          |                      | N/A                                | ND                |        |
|   | Aflatoxin G1    | 1.0 / 3.1          |                      | N/A                                | ND                |        |
| Ī | Aflatoxin G2    | 1.2 / 3.5          |                      | N/A                                | ND                |        |
| Ī | Total Aflatoxin |                    | 20                   |                                    | ND                | PASS   |
|   | Ochratoxin A    | 6.3 / 19.2         | 20                   | N/A                                | ND                | PASS   |





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# **Residual Solvents Analysis**

## **CATEGORY 1 AND 2 RESIDUAL SOLVENTS**

Residual Solvent analysis utilizing gas chromatography-mass spectrometry (GC-MS).

Method: QSP 1204 - Analysis of Residual Solvents by GC-MS

## CATEGORY 1 RESIDUAL SOLVENTS TEST RESULTS - 04/12/2021 PASS

| COMPOUND           | LOD/LOQ<br>(µg/g) | ACTION LIMIT<br>(µg/g) | MEASUREMENT<br>UNCERTAINTY (μg/g) | RESULT<br>(µg/g) | RESULT |
|--------------------|-------------------|------------------------|-----------------------------------|------------------|--------|
| 1,2-Dichloroethane | 0.05 / 0.1        | 1                      | N/A                               | ND               | PASS   |
| Benzene            | 0.03 / 0.09       | 1                      | N/A                               | ND               | PASS   |
| Chloroform         | 0.1 / 0.2         | 1                      | N/A                               | ND               | PASS   |
| Ethylene Oxide     | 0.3 / 0.8         | 1                      | N/A                               | ND               | PASS   |
| Methylene chloride | 0.3 / 0.9         | 1                      | N/A                               | ND               | PASS   |
| Trichloroethylene  | 0.1 / 0.3         | 1                      | N/A                               | ND               | PASS   |

## CATEGORY 2 RESIDUAL SOLVENTS TEST RESULTS - 04/12/2021 O PASS

|   | Acetone           | 20/50    | 5000 | N/A | ND | PASS |
|---|-------------------|----------|------|-----|----|------|
|   | Acetonitrile      | 2/7      | 410  | N/A | ND | PASS |
|   | Butane            | 10/50    | 5000 | N/A | ND | PASS |
| Ī | Ethanol           | 20/50    | 5000 | N/A | ND | PASS |
|   | Ethyl acetate     | 20/60    | 5000 | N/A | ND | PASS |
| Ī | Ethyl ether       | 20/50    | 5000 | N/A | ND | PASS |
| Ī | Heptane           | 20/60    | 5000 | N/A | ND | PASS |
|   | Hexane            | 2/5      | 290  | N/A | ND | PASS |
| Ī | Isopropyl Alcohol | 10 / 40  | 5000 | N/A | ND | PASS |
| Ī | Methanol          | 50/200   | 3000 | N/A | ND | PASS |
|   | Pentane           | 20/50    | 5000 | N/A | ND | PASS |
|   | Propane           | 10/20    | 5000 | N/A | ND | PASS |
|   | Toluene           | 7/21     | 890  | N/A | ND | PASS |
|   | Total Xylenes     | 50 / 160 | 2170 | N/A | ND | PASS |



# **Heavy Metals Analysis**

Heavy metal analysis utilizing inductively coupled plasma-mass spectrometry (ICP-MS).

Method: QSP 1160 - Analysis of Heavy Metals by ICP-MS

## HEAVY METALS TEST RESULTS - 04/13/2021 **⊘** PASS

| COMPOUND | LOD/LOQ<br>(µg/g) | ACTION LIMIT<br>(µg/g) | MEASUREMENT<br>UNCERTAINTY (μg/g) | RESULT<br>(µg/g) | RESULT |
|----------|-------------------|------------------------|-----------------------------------|------------------|--------|
| Cadmium  | 0.02 / 0.05       | 0.5                    | N/A                               | ND               | PASS   |
| Lead     | 0.04 / 0.1        | 0.5                    | N/A                               | ND               | PASS   |
| Arsenic  | 0.02 / 0.1        | 1.5                    | N/A                               | ND               | PASS   |
| Mercury  | 0.002 / 0.01      | 3                      | N/A                               | ND               | PASS   |



# Microbial Impurities Analysis

PCR

Analysis conducted by polymerase chain reaction (PCR) and fluorescence detection of microbial impurities.

Method: QSP 1221 - Analysis of Microbial Impurities



## MICROBIAL IMPURITIES TEST RESULTS (PCR) - 04/13/2021 PASS

| COMPOUND                               | ACTION LIMIT | RESULT | RESULT |
|--|--------------|--------|--------|
| Shiga toxin-producing Escherichia coli | Detect       | ND     | PASS   |
| Salmonella spp.                        | Detect       | ND     | PASS   |
| Listeria monocytogenes                 |              | ND     |        |