Hemp Quality Assurance Testing

CERTIFICATE OF ANALYSIS

DATE ISSUED 08/20/2021

SAMPLE NAME: cbdMD Fruit Punch 25 mg

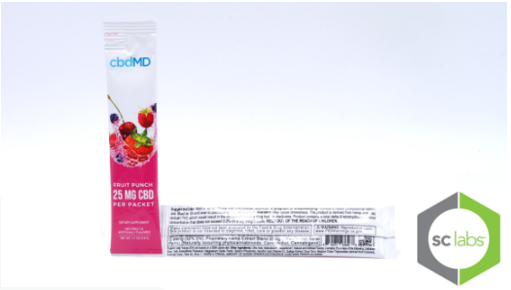
Infused, Hemp Infused

CULTIVATOR / MANUFACTURER

Business Name:
License Number:
Address:

DISTRIBUTOR / TESTED FOR

Business Name: cbdMD
License Number:
Address:



SAMPLE DETAIL

Batch Number: 21181F
Sample ID: 210813R041

Date Collected: 08/13/2021
Date Received: 08/13/2021
Batch Size:
Sample Size: 16.0 units
Unit Mass: 2.8 grams per Unit
Serving Size:

Scan QR code to verify authenticity of results.

CANNABINOID ANALYSIS - SUMMARY

Total THC: Not Detected

Total CBD: 29.565 mg/unit

Sum of Cannabinoids: 31.293 mg/unit

Total Cannabinoids: 31.292 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 = Δ9THC + (THCa (0.877))
Total CBD = CBD + (CBDa (0.877))
Sum of Cannabinoids = Δ9THC + THCa + CBD + CBDa + CBG + CBGa + THCV + THCVa + CBC + CBCa + CBDV + CBDVa + Δ8THC + 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

TERPENOID ANALYSIS - SUMMARY

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 0.1057%

Limonene 1.057 mg/g | α Phellandrene <LOQ | p-Cymene <LOQ

SAFETY ANALYSIS - SUMMARY

Pesticides: PASS
Mycotoxins: PASS
Residual Solvents: PASS
Heavy Metals: PASS
Microbiology (PCR): PASS
Microbiology (Plating): PASS

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 approval of the laboratory.

Sample Certification: Action Limits used in this report are a compilation of guidance from state regulatory agencies in all states. Action limits for required tests are either state-specific, or the lower of any conflicting state regulations based upon the panel requested.

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), too numerous to count >250 cfu/plate (TNTC), colony-forming unit (cfu)

Approved by: Josh Wurzer, President
Date: 08/20/2021

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 (Δ9THC+0.877*THCa)

TOTAL CBD: 29.565 mg/unit
Total CBD (CBD+0.877*CBDa)

TOTAL CANNABINOIDS: 31.292 mg/unit
Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) + Δ8THC + CBL + CBN

TOTAL CBG: 1.674 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: 0.053 mg/unit
Total CBDV (CBDV+0.877*CBDVa)

CANNABINOID TEST RESULTS - 08/15/2021

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
CBD	*0.004 / 0.011*	*±0.5058*	10.559	1.0559
CBG	*0.002 / 0.006*	*±0.0372*	0.598	0.0598
CBDV	*0.002 / 0.012*	*±0.0010*	0.019	0.0019
Δ9THC	*0.002 / 0.014*	*N/A*	ND	ND
Δ8THC	*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
CBN	*0.001 / 0.007*	*N/A*	ND	ND
CBC	*0.003 / 0.010*	*N/A*	ND	ND
CBCa	*0.001 / 0.015*	*N/A*	ND	ND
SUM OF CANNABINOIDS			11.176 mg/g	1.1176%

Unit Mass: 2.8 grams per Unit

Δ9THC per Unit	ND
Total THC per Unit	ND
CBD per Unit	29.565 mg/unit
Total CBD per Unit	29.565 mg/unit
Sum of Cannabinoids per Unit	31.293 mg/unit
Total Cannabinoids per Unit	31.292 mg/unit

Terpenoid Analysis

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

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

1 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.

2 α Phellandrene
One of two isomers of the monoterpene Phellandrene. It is named after eucalyptus phellandra, which has been renamed to E. radiata. The fragrance can be described as a spicy mint with a hint of citrus. Found in eucalyptus radiata, E. dives, bitter fennel, false fennel, elemi, palmarosa, frankincense, ceylon, cinnamon, dill, turmeric...etc.

3 p-Cymene
A monoterpene with a fragrance that can be described as woody and citrusy. Found in Ajowan, allspice, angelica, basil, bay leaf, bergamot, blackberry, cinnamon, clove oil, dill leaf...etc.

TERPENOID TEST RESULTS - 08/18/2021

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Limonene	*0.005 / 0.016*	*±0.0151*	1.057	0.1057
α Phellandrene	*0.006 / 0.020*	*N/A*	<LOQ	<LOQ
p-Cymene	*0.005 / 0.016*	*N/A*	<LOQ	<LOQ
Guaiol	*0.009 / 0.030*	*N/A*	<LOQ	<LOQ
α Pinene	*0.005 / 0.017*	*N/A*	ND	ND
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
Myrcene	*0.008 / 0.025*	*N/A*	ND	ND
3 Carene	*0.005 / 0.018*	*N/A*	ND	ND
α Terpinene	*0.005 / 0.017*	*N/A*	ND	ND
Eucalyptol	*0.006 / 0.018*	*N/A*	ND	ND
Ocimene	*0.011 / 0.038*	*N/A*	ND	ND
γ Terpinene	*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
α 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
Cedrol	*0.008 / 0.027*	*N/A*	ND	ND
α Bisabolol	*0.008 / 0.026*	*N/A*	ND	ND
TOTAL TERPENOIDS			1.057 mg/g	0.1057%