



# Hemp Quality Assurance Testing

## CERTIFICATE OF ANALYSIS

DATE ISSUED 09/11/2023

### SAMPLE NAME: 5mg Peanut Butter Hard Chews

Infused, Solid Edible

#### CULTIVATOR / MANUFACTURER

Business Name:

License Number:

Address:

#### DISTRIBUTOR / TESTED FOR

Business Name: cbdMD

License Number:

Address:

#### SAMPLE DETAIL

Batch Number: 240815MAR23081505P

B

Sample ID: 230908M087

Date Collected: 09/08/2023

Date Received: 09/08/2023

Batch Size:

Sample Size: 1.0 units

Unit Mass: 114.95 grams per Unit

Serving Size: 4.2574 grams per Serving



Scan QR code to verify authenticity of results.

### CANNABINOID ANALYSIS - SUMMARY

Total THC: **Not Detected**

Total THC is calculated using the following formulas to take into account the loss of a carboxyl group during the decarboxylation step:

Total THC =  $\Delta^9\text{-THC} + (\text{THCa} (0.877))$

Total CBD = CBD + (CBDa (0.877))

Sum of Cannabinoids =  $\Delta^9\text{-THC} + \text{THCa} + \text{CBD} + \text{CBDa} + \text{CBG} + \text{CBGa} +$

$\text{THCV} + \text{THCVa} + \text{CBC} + \text{CBCa} + \text{CBDV} + \text{CBDVa} + \Delta^8\text{-THC} + \text{CBL} + \text{CBN}$

Total Cannabinoids =  $(\Delta^9\text{-THC} + 0.877\text{-THCa}) + (\text{CBD} + 0.877\text{-CBDa}) +$

$(\text{CBG} + 0.877\text{-CBGa}) + (\text{THCV} + 0.877\text{-THCVa}) + (\text{CBC} + 0.877\text{-CBCa}) +$

$(\text{CBDV} + 0.877\text{-CBDVa}) + \Delta^8\text{-THC} + \text{CBL} + \text{CBN}$

Total CBD: **156.562 mg/unit**

Sum of Cannabinoids: **167.827 mg/unit**

Total Cannabinoids: **167.827 mg/unit**

### SAFETY ANALYSIS - SUMMARY

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

$\Delta^9\text{-THC}$  per Serving: **PASS**

Pesticides: **PASS**

Mycotoxins: **PASS**

Residual Solvents: **PASS**

Heavy Metals: **PASS**

Microbiology (PCR): **PASS**

Microbiology (Plating): **ND**

Foreign Material: **PASS**

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

LOC verified by: Randi Vuong  
Job Title: Lead Laboratory Technician  
Date: 09/11/2023

Approved by: Josh Wurzer  
Job Title: Chief Compliance Officer  
Date: 09/11/2023



## 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: 156.562 mg/unit

Total CBD (CBD+0.877\*CBDa)

### TOTAL CANNABINOIDs: 167.827 mg/unit

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

### TOTAL CBG: 6.322 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: <LOQ

Total CBDV (CBDV+0.877\*CBDVa)

### CANNABINOID TEST RESULTS - 09/09/2023

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
CBD	0.004 / 0.011	$\pm 0.0508$	1.362	0.1362
CBG	0.002 / 0.006	$\pm 0.0027$	0.055	0.0055
CBN	0.001 / 0.007	$\pm 0.0012$	0.043	0.0043
CBDV	0.002 / 0.012	N/A	<LOQ	<LOQ
$\Delta^9$ -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
CBC	0.003 / 0.010	N/A	ND	ND
CBCa	0.001 / 0.015	N/A	ND	ND
<b>SUM OF CANNABINOIDs</b>			<b>1.460 mg/g</b>	<b>0.146%</b>

Unit Mass: 114.95 grams per Unit / Serving Size: 4.2574 grams per Serving

$\Delta^9$ -THC per Unit	110 per package limit	ND	PASS
$\Delta^9$ -THC per Serving		ND	PASS
Total THC per Unit		ND	
Total THC per Serving		ND	
CBD per Unit	156.562 mg/unit		
CBD per Serving	5.799 mg/serving		
Total CBD per Unit	156.562 mg/unit		
Total CBD per Serving	5.799 mg/serving		
Sum of Cannabinoids per Unit	167.827 mg/unit		
Sum of Cannabinoids per Serving	6.216 mg/serving		
Total Cannabinoids per Unit	167.827 mg/unit		
Total Cannabinoids per Serving	6.216 mg/serving		



## Pesticide Analysis

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

### PESTICIDE TEST RESULTS - 09/11/2023 PASS

COMPOUND	LOD/LOQ ( $\mu\text{g/g}$ )	ACTION LIMIT ( $\mu\text{g/g}$ )	MEASUREMENT UNCERTAINTY ( $\mu\text{g/g}$ )	RESULT ( $\mu\text{g/g}$ )	RESULT
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
Aldicarb	0.03 / 0.08	$\geq$ LOD	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
Carbofuran	0.02 / 0.05	$\geq$ LOD	N/A	ND	PASS
Chlorantraniliprole	0.04 / 0.12	40	N/A	ND	PASS
Chlordane*	0.03 / 0.08	$\geq$ LOD	N/A	ND	PASS
Chlorfenapyr*	0.03 / 0.10	$\geq$ LOD	N/A	ND	PASS
Chlorpyrifos	0.02 / 0.06	$\geq$ LOD	N/A	ND	PASS
Clofentezine	0.03 / 0.09	0.5	N/A	ND	PASS
Coumaphos	0.02 / 0.07	$\geq$ LOD	N/A	ND	PASS
Cyfluthrin	0.12 / 0.38	1	N/A	ND	PASS
Cypermethrin	0.11 / 0.32	1	N/A	ND	PASS
Daminozide	0.02 / 0.07	$\geq$ LOD	N/A	ND	PASS
Diazinon	0.02 / 0.05	0.2	N/A	ND	PASS
Dichlorvos (DDVP)	0.03 / 0.09	$\geq$ LOD	N/A	ND	PASS
Dimethoate	0.03 / 0.08	$\geq$ LOD	N/A	ND	PASS
Dimethomorph	0.03 / 0.09	20	N/A	ND	PASS
Ethoprophos	0.03 / 0.10	$\geq$ LOD	N/A	ND	PASS
Etofenprox	0.02 / 0.06	$\geq$ LOD	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
Fenoxy carb	0.03 / 0.08	$\geq$ LOD	N/A	ND	PASS
Fenpyroximate	0.02 / 0.06	2	N/A	ND	PASS
Fipronil	0.03 / 0.08	$\geq$ LOD	N/A	ND	PASS
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
Imazalil	0.02 / 0.06	$\geq$ LOD	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
Metalauxyl	0.02 / 0.07	15	N/A	ND	PASS
Methiocarb	0.02 / 0.07	$\geq$ LOD	N/A	ND	PASS

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Pesticide Analysis *Continued*PESTICIDE TEST RESULTS - 09/11/2023 *continued* PASS

COMPOUND	LOD/LOQ ( $\mu\text{g/g}$ )	ACTION LIMIT ( $\mu\text{g/g}$ )	MEASUREMENT UNCERTAINTY ( $\mu\text{g/g}$ )	RESULT ( $\mu\text{g/g}$ )	RESULT
Methomyl	0.03 / 0.10	0.1	N/A	ND	PASS
Mevinphos	0.03 / 0.09	$\geq$ LOD	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
Pacllobutrazol	0.02 / 0.05	$\geq$ LOD	N/A	ND	PASS
Parathion-methyl	0.03 / 0.10	$\geq$ LOD	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
Piperonyl Butoxide	0.02 / 0.07	8	$\pm 0.006$	0.29	PASS
Prallethrin	0.03 / 0.08	0.4	N/A	ND	PASS
Propiconazole	0.02 / 0.07	20	N/A	ND	PASS
Propoxur	0.03 / 0.09	$\geq$ LOD	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
Spiroxamine	0.03 / 0.08	$\geq$ LOD	N/A	ND	PASS
Tebuconazole	0.02 / 0.07	2	N/A	ND	PASS
Thiacloprid	0.03 / 0.10	$\geq$ LOD	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 TEST RESULTS - 09/11/2023 PASS

COMPOUND	LOD/LOQ ( $\mu\text{g/kg}$ )	ACTION LIMIT ( $\mu\text{g/kg}$ )	MEASUREMENT UNCERTAINTY ( $\mu\text{g/kg}$ )	RESULT ( $\mu\text{g/kg}$ )	RESULT
Aflatoxin B1	2.0 / 6.0		N/A	ND	
Aflatoxin B2	1.8 / 5.6		N/A	ND	
Aflatoxin G1	1.0 / 3.1		N/A	ND	
Aflatoxin G2	1.2 / 3.5		N/A	ND	
Total Aflatoxin		20		ND	PASS
Ochratoxin A	6.3 / 19.2	20	N/A	ND	PASS

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

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



## Residual Solvents Analysis

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

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

### RESIDUAL SOLVENTS TEST RESULTS - 09/10/2023 PASS

COMPOUND	LOD/LOQ ( $\mu\text{g/g}$ )	ACTION LIMIT ( $\mu\text{g/g}$ )	MEASUREMENT UNCERTAINTY ( $\mu\text{g/g}$ )	RESULT ( $\mu\text{g/g}$ )	RESULT
Propane	10 / 20	5000	N/A	ND	PASS
n-Butane	10 / 50	5000	N/A	ND	PASS
n-Pentane	20 / 50	5000	N/A	ND	PASS
n-Hexane	2 / 5	290	N/A	ND	PASS
n-Heptane	20 / 60	5000	N/A	ND	PASS
Benzene	0.03 / 0.09	1	N/A	ND	PASS
Toluene	7 / 21	890	N/A	ND	PASS
Total Xylenes	50 / 160	2170	N/A	ND	PASS
Methanol	50 / 200	3000	N/A	ND	PASS
Ethanol	20 / 50	5000	N/A	ND	PASS
2-Propanol (Isopropyl Alcohol)	10 / 40	5000	N/A	ND	PASS
Acetone	20 / 50	5000	N/A	ND	PASS
Ethyl Ether	20 / 50	5000	N/A	ND	PASS
Ethylene Oxide	0.3 / 0.8	1	N/A	ND	PASS
Ethyl Acetate	20 / 60	5000	N/A	ND	PASS
Chloroform	0.1 / 0.2	1	N/A	ND	PASS
Dichloromethane (Methylene Chloride)	0.3 / 0.9	1	N/A	ND	PASS
Trichloroethylene	0.1 / 0.3	1	N/A	ND	PASS
1,2-Dichloroethane	0.05 / 0.1	1	N/A	ND	PASS
Acetonitrile	2 / 7	410	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 - 09/10/2023 PASS

COMPOUND	LOD/LOQ ( $\mu\text{g/g}$ )	ACTION LIMIT ( $\mu\text{g/g}$ )	MEASUREMENT UNCERTAINTY ( $\mu\text{g/g}$ )	RESULT ( $\mu\text{g/g}$ )	RESULT
Arsenic	0.02 / 0.1	1.5	N/A	ND	PASS
Cadmium	0.02 / 0.05	0.5	N/A	ND	PASS
Lead	0.04 / 0.1	0.5	N/A	ND	PASS
Mercury	0.002 / 0.01	3	N/A	ND	PASS



## Microbiology Analysis

### PCR AND PLATING

Analysis conducted by polymerase chain reaction (PCR) and fluorescence detection of microbiological contaminants.

**Method:** QSP 1221 - Analysis of Microbiological Contaminants

### MICROBIOLOGY TEST RESULTS (PCR) - 09/11/2023 PASS

COMPOUND	ACTION LIMIT	RESULT	RESULT
Shiga toxin-producing <i>Escherichia coli</i>	Not Detected in 1g	ND	PASS
<i>Salmonella</i> spp.	Not Detected in 1g	ND	PASS
<i>Listeria monocytogenes</i>		ND	



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## Microbiology Analysis *Continued*

### MICROBIOLOGY TEST RESULTS (PLATING) - 09/11/2023 ND

COMPOUND	RESULT (cfu/g)
Total Aerobic Bacteria	ND
Total Yeast and Mold	ND

Analysis conducted by 3M™ Petrifilm™ and plate counts of microbiological contaminants.

**Method:** QSP 6794 - Plating with 3M™ Petrifilm™

## Foreign Material Analysis

### FOREIGN MATERIAL TEST RESULTS - 09/09/2023 PASS

COMPOUND	ACTION LIMIT	RESULT
Total Sample Area Covered by Sand, Soil, Cinders, or Dirt	>25%	PASS
Total Sample Area Covered by Mold	>25%	PASS
Total Sample Area Covered by an Imbedded Foreign Material	>25%	PASS
Insect Fragment Count	> 1 per 3 grams	PASS
Hair Count	> 1 per 3 grams	PASS
Mammalian Excreta Count	> 1 per 3 grams	PASS

Visual analysis includes, but is not limited to, sand, soil, cinders, dirt, mold, hair, insect fragments, and mammalian excreta.

**Method:** QSP 1226 - Analysis of Foreign Material in Cannabis and Cannabis Products

## Water Activity Analysis

### WATER ACTIVITY TEST RESULTS - 09/10/2023 PASS

COMPOUND	LOD/LOQ (Aw)	ACTION LIMIT (Aw)	MEASUREMENT UNCERTAINTY (Aw)	RESULT (Aw)	RESULT
Water Activity	0.030 / 0.250	0.85	±0.0247	0.508	PASS

**Method:** QSP 1227 - Analysis of Water Activity in Cannabis and Cannabis Products