

STRAIGHT HEMP

CERTIFICATE OF ANALYSIS

PRODUCT: CBD Balm
BATCH/LOT: B0050

PRODUCTION DATE: 12/2021
EXPIRATION DATE: 12/2023

TEST	METHOD	SPECIFICATION	RESULTS
Strength & Composition			
Identity	Organoleptic	Conforming	PASS
Identity	HPLC/LCMS	Chemical Fingerprint	PASS
Total Cannabidiol (CBD) ⁱ	HPLC/LCMS	17.6 – 21.2 mg/g	17.61 mg/g
Total Tetrahydrocannabinol (THC) ⁱⁱ	HPLC/LCMS	NMT 0.30%	0.05%
Terpene assay ⁱⁱⁱ	HS-GC/MS	n/e	3.7%
Microbiological^{iv}			
Total Plate Count	TM-26	NMT 10,000 cfu/g	PASS
Total Yeast & Mold	TM-24	NMT 1,000 cfu/g	PASS
Total Coliforms	TM-27	NMT 100 cfu/g	PASS
<i>E. coli</i>	TM-25	Absent/25g	PASS
<i>Salmonella</i>	TM-25	Absent/25g	PASS
Mycotoxins			
Alfatoxin B1	LCMS	NMT 20 ppb	PASS
Alfatoxin B2	LCMS	NMT 20 ppb	PASS
Alfatoxin G1	LCMS	NMT 20 ppb	PASS
Alfatoxin G2	LCMS	NMT 20 ppb	PASS
Ochratoxin	LCMS	NMT 20 ppb	PASS
Heavy Metals^v			
Arsenic (As)	ICP/MS	NMT 1.0 ppm	PASS
Cadmium (Cd)	ICP/MS	NMT 0.5 ppm	PASS
Lead (Pb)	ICP/MS	NMT 0.5 ppm	PASS
Mercury (Hg)	ICP/MS	NMT 0.1 ppm	PASS

ⁱ Total CBD = CBD + (0.877*CBDA) to account for loss of acid group during decarboxylation

ⁱⁱ Total THC = THC + (0.877*THCa) to account for loss of acid group during decarboxylation

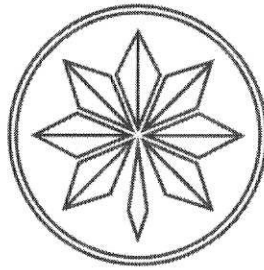
ⁱⁱⁱ Sum of terpene assay (n=22)

^{iv} Microbiological limits based on USP, WHO, and/or NSF/ANSI

^v Limits for As and Pb set below CA Prop 65 *no significant risk level*; Cd and Hg set below USP permitted daily exposure for 110lb body weight. Complies with 6 CCR 1010-21

NMT = Not More Than

MRL = Method Reporting Limit



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BATCH/LOT: B0050

PRODUCTION DATE: 12/2021
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TEST	METHOD	SPECIFICATION	RESULTS
Residual Solvents ^{vi}			
Acetone	GC-MS	Below MRL	PASS
Benzene	GC-MS	Below MRL	PASS
Butanes	GC-MS	Below MRL	PASS
Ethanol	GC-MS	Below MRL	PASS
Ethyl Acetate	GC-MS	Below MRL	PASS
Heptanes	GC-MS	Below MRL	PASS
Hexane	GC-MS	Below MRL	PASS
Isopropyl Alcohol	GC-MS	Below MRL	PASS
Methanol	GC-MS	Below MRL	PASS
Pentane	GC-MS	Below MRL	PASS
Propane	GC-MS	Below MRL	PASS
Toluene	GC-MS	Below MRL	PASS
Xylenes	GC-MS	Below MRL	PASS

Pesticides
Multi-residue panel UPLC-MS/MS Below MRL^{vii} PASS

STRAIGHT HEMP

NMT = Not More Than

MRL = Method Reporting Limit

n/e = not established


David Cole
Director of Quality

4/12/22
Date

^{vi} 21 solvent panel may also include: 1,1-Dichloroethene, 1,2-Dichloroethane, Acetonitrile, Chloroform, Ethyl Ether, Ethylene Oxide, Methylene Chloride, Trichloroethylene.

^{vii} 50 residue panel

Prepared for:

CBD Balm

Straight Hemp


Batch ID or Lot Number: B0050	Test: Potency	Reported: 12/27/21	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
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Matrix: Concentrate	Test ID: T000182949	Started: 12/22/21	USDA License: N/A
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Status: N/A	Method: TM14 (HPLC-DAD): Potency - Broad Spectrum Analysis, 0.01% THC (Colorado Panel)	Received: 12/17/2021 @ 12:24 PM	Sampler ID: N/A
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CANNABINOID PROFILE

Compound	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)	Notes
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.002	0.008	ND	ND	N/A
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.002	0.008	0.049	0.49	
Cannabidiolic acid (CBDA)	0.017	0.055	0.054*	0.54*	
Cannabidiol (CBD)	0.017	0.053	1.714	17.14	
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.016	0.057	ND	ND	
Cannabinolic Acid (CBNA)	0.009	0.033	ND	ND	
Cannabinol (CBN)	0.004	0.015	ND	ND	
Cannabigerolic acid (CBGA)	0.013	0.048	ND	ND	
Cannabigerol (CBG)	0.003	0.011	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.011	0.040	ND	ND	
Tetrahydrocannabivarin (THCV)	0.003	0.010	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.007	0.023	ND	ND	
Cannabidivarin (CBDV)	0.004	0.013	0.029	0.29	
Cannabichromenic Acid (CBCA)	0.005	0.018	ND	ND	
Cannabichromene (CBC)	0.006	0.020	0.036	0.36	
Total Cannabinoids			1.882	18.82	
Total Potential THC**			0.049	0.49	
Total Potential CBD**			1.761	17.61	

 Jacob Miller
27-Dec-2021
06:15 PM

 Ryan Weems
27-Dec-21
6:19 PM

PREPARED BY / DATE

APPROVED BY / DATE

Definitions

% = % (w/w) = Percent (Weight of Analyte / Weight of Product)

* Indicates a value below the Limit of Quantitation (LOQ) and above the Limit of Detection (LOD).

** Total Potential THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step.

Total THC = THC + (THCa *(0.877)) and

Total CBD = CBD + (CBDa *(0.877))

Total Cannabinoids result reflects the absolute sum of all cannabinoids detected.

ND = None Detected (Defined by Dynamic Range of the method)

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CDPHE Certified

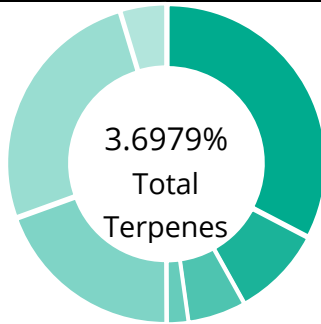


Certificate #4329.02

CBD Balm

Batch ID:	B0050	Test ID:	T000182950
Type:	Topical	Submitted:	12/17/2021 @ 12:24 PM
Test:	Terpenes	Started:	12/22/2021
Method:	TM22 (GC-MS)	Reported:	12/27/2021

TERPENE PROFILE



Compound	%(w/w)	mg/g
(-)-alpha-Bisabolol	0.0000	0.000
Camphene	0.0900	0.900
delta-3-Carene	0.0960	0.960
beta-Caryophyllene	0.0760	0.760
(-)-Caryophyllene Oxide	0.0000	0.000
p-Cymene	0.1225	1.225
Eucalyptol	1.6923	16.923
Geraniol	0.0000	0.000
alpha-Humulene	0.0000	0.000
(-)-Isopulegol	0.0000	0.000
d-Limonene	0.3182	3.182
Linalool	0.4214	4.214
beta-Myrcene	0.0000	0.000
cis-Nerolidol	0.0000	0.000
trans-Nerolidol	0.0000	0.000
Ocimene	0.0085	0.085
beta-Ocimene	0.0000	0.000
alpha-Pinene	0.5320	5.320
(-)-beta-Pinene	0.1507	1.507
alpha-Terpinene	0.0349	0.349
gamma-Terpinene	0.1200	1.200
Terpinolene	0.0354	0.354
Total	3.6979	36.979


PREDOMINANT TERPENES


alpha-Pinene	0.5320
(-)-beta-Pinene	0.1507
beta-Myrcene	0.0000
delta-3-Carene	0.0960
alpha-Terpinene	0.0349
d-Limonene	0.3182
Linalool	0.4214
beta-Caryophyllene	0.0760
alpha-Humulene	0.0000
(-)-alpha-Bisabolol	0.0000

NOTES:

N/A

FINAL APPROVAL


 Jacob Miller
 27-Dec-2021
 3:55 PM


 Ryan Weems
 27-Dec-2021
 3:57 PM

PREPARED BY / DATE

APPROVED BY / DATE

Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of Botanacor Laboratories, LLC. ISO/IEC 17025:2005 Accredited

A2LA Certificate Number 4329.02



Certificate #4329.02


Prepared for:

CBD Balm
Straight Hemp

Batch ID or Lot Number: B0050	Test: Microbial Contaminants	Reported: 12/27/21	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: Finished Product	Test ID: T000182952	Started: 12/20/21	USDA License: N/A
Status: N/A	Methods: TM25 (qPCR) TM24, TM26, TM27(Culture Plating): Microbial (Colorado Panel)	Received: 12/17/2021 @ 12:24 PM	Sampler ID: N/A

MICROBIAL CONTAMINANTS DETERMINATION

Contaminant	Method	LOD	LLOQ	ULOQ	Result	Notes
Total Aerobic Count*	TM-26, Culture Plating	10 ² CFU/g	10 ³ CFU/g	1.5x10 ⁵ CFU/g	None Detected	Free from visual mold, mildew, and foreign matter
Total Coliforms*	TM-27, Culture Plating	10 ¹ CFU/g	10 ² CFU/g	1.5x10 ⁴ CFU/g	None Detected	
Total Yeast and Mold*	TM-24, Culture Plating	10 ¹ CFU/g	10 ² CFU/g	1.5x10 ⁴ CFU/g	None Detected	
E. coli (STEC)	TM-25, PCR	1 CFU/25 g	NA	NA	Absent	
Salmonella	TM-25, PCR	1 CFU/25 g	NA	NA	Absent	


 Brett Hudson
 12/23/2021
 2:21:00 PM

PREPARED BY / DATE


 Carly Bader
 12/27/2021
 11:47:00 AM

APPROVED BY / DATE

Definitions

LOD = Limit of Detection | LLOQ = Lower Limit of Quantitation | ULOQ = Upper Limit of Quantitation

 CFU/g = Colony Forming Units per Gram | STEC = Shiga Toxin-Producing *E. coli*

* Values recorded in scientific notation, a common microbial practice of expressing numbers that are too large to be conveniently written in decimal form.

 Examples: 10² = 100 CFU
 10³ = 1,000 CFU
 10⁴ = 10,000 CFU
 10⁵ = 100,000 CFU

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Prepared for:


CBD Balm

Straight Hemp

Batch ID or Lot Number: B0050	Test: Mycotoxins	Reported: 12/22/21	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: Concentrate	Test ID: T000182955	Started: 12/21/21	USDA License: N/A
Status: N/A	Method: TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins (Colorado Panel)	Received: 12/17/2021 @ 12:24 PM	Sampler ID: N/A

MYCOTOXIN DETERMINATION

Compound	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	4.5 - 131.1	ND	N/A
Aflatoxin B1	1.1 - 34.2	ND	
Aflatoxin B2	1.1 - 34.1	ND	
Aflatoxin G1	1.1 - 34.4	ND	
Aflatoxin G2	1 - 33.2	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	


 Sam Smith
 22-Dec-21
 9:43 AM

PREPARED BY / DATE


 Ryan Weems
 22-Dec-21
 9:45 AM

APPROVED BY / DATE

Definitions

ND = None Detected (Defined by Dynamic Range of the method)

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Prepared for:


CBD Balm

Straight Hemp

Batch ID or Lot Number: B0050	Test: Metals	Reported: 12/22/21	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: Unit Co	Test ID: T000182953	Started: 12/22/21	USDA License: N/A
Status: N/A	Method: TM19 (ICP-MS): Heavy Metals (Colorado Panel)	Received: 12/17/2021 @ 12:24 PM	Sampler ID: N/A

HEAVY METALS DETERMINATION

Compound	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.047 - 4.66	ND	
Cadmium	0.049 - 4.87	ND	
Mercury	0.048 - 4.76	ND	
Lead	0.048 - 4.82	ND	

 Ryan Weems
22-Dec-21
3:27 PM

PREPARED BY / DATE

 Sam Smith
22-Dec-21
3:31 PM

APPROVED BY / DATE

Definitions

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Prepared for:


CBD Balm
Straight Hemp

Batch ID or Lot Number: B0050	Test: Residual Solvents	Reported: 12/21/21	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: N/A	Test ID: T000182954	Started: 12/20/21	USDA License: N/A
Status: N/A	Methods: TM04 (GC-MS): Residual Solvents (Colorado Panel)	Received: 12/17/2021 @ 12:24 PM	Sampler ID: N/A

RESIDUAL SOLVENTS DETERMINATION

Solvent	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	65 - 1303	*ND	
Butanes (Isobutane, n-Butane)	160 - 3197	*ND	
Methanol	53 - 1059	*ND	
Pentane	78 - 1555	*ND	
Ethanol	84 - 1674	*ND	
Acetone	88 - 1758	*ND	
Isopropyl Alcohol	91 - 1816	*ND	
Hexane	5 - 104	*ND	
Ethyl Acetate	88 - 1765	*ND	
Benzene	0.2 - 3.6	*ND	
Heptanes	85 - 1703	*ND	
Toluene	16 - 329	*ND	
Xylenes (m,p,o-Xylenes)	122 - 2446	*ND	


 Sam Smith
 21-Dec-21
 12:44 PM


 Ryan Weems
 21-Dec-21
 12:57 PM

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Definitions

* ND = None Detected (Defined by Dynamic Range of the method)

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Prepared for:

CBD Balm
Straight Hemp

Batch ID or Lot Number: B0050	Test: Pesticides	Reported: 12/27/21	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
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Matrix: Concentrate	Test ID: T000182951	Started: 12/22/21	USDA License: N/A
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Status: N/A	Method: TM17(LC-QQQ LC MS/MS):	Received: 12/17/2021 @ 12:24 PM	Sampler ID: N/A
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PESTICIDE DETERMINATION

Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)
Acephate	42	ND	Fenoxycarb	40	ND	Paclobutrazol	46	ND
Acetamiprid	41	ND	Fipronil	25	ND	Permethrin	305	ND
Avermectin	351	ND	Fonicamid	44	ND	Phosmet	37	ND
Azoxystrobin	42	ND	Fludioxonil	306	ND	Prophos	278	ND
Bifenazate	38	ND	Hexythiazox	41	ND	Propoxur	42	ND
Boscalid	43	ND	Imazalil	261	ND	Pyridaben	297	ND
Carbaryl	40	ND	Imidacloprid	43	ND	Spinosad A	33	ND
Carbofuran	41	ND	Kresoxim-methyl	150	ND	Spinosad D	51	ND
Chlorantraniliprole	15	ND	Malathion	283	ND	Spiromesifen	287	ND
Chlorpyrifos	500	ND	Metaxyl	41	ND	Spirotetramat	296	ND
Clofentezine	286	ND	Methiocarb	42	ND	Spiroxamine 1	17	ND
Diazinon	277	ND	Methomyl	40	ND	Spiroxamine 2	24	ND
Dichlorvos	290	ND	MGK 264 1	177	ND	Tebuconazole	277	ND
Dimethoate	40	ND	MGK 264 2	118	ND	Thiacloprid	42	ND
E-Fenpyroximate	302	ND	Myclobutanil	46	ND	Thiamethoxam	44	ND
Etofenprox	43	ND	Naled	45	ND	Trifloxystrobin	43	ND
Etoxazole	307	ND	Oxamyl	1500	ND			


 Karen Winternheimer
 12/24/2021
 10:01:00 AM


 Courtney Richards
 12/27/2021
 1:00:00 PM

PREPARED BY / DATE

APPROVED BY / DATE

Definitions

LOQ = Limit of Quantification
 ppb = Parts per Billion

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