



STRAIGHT HEMP

CERTIFICATE OF ANALYSIS

PRODUCT: CBD Balm
BATCH/LOT: B0049

PRODUCTION DATE: 09/2021
EXPIRATION DATE: 09/2023

TEST	METHOD	SPECIFICATION	RESULTS
Strength & Composition			
Identity	Organoleptic	Conforming	PASS
Identity	HPLC/LCMS	Chemical Fingerprint	PASS
Total Cannabidiol (CBD) ⁱ	HPLC/LCMS	17.8 – 21.2 mg/g	19.79 mg/g
Total Tetrahydrocannabinol (THC) ⁱⁱ	HPLC/LCMS	NMT 0.30%	0.06%
Terpene assay ⁱⁱⁱ	HS-GC/MS	n/e	3.16%
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



STRAIGHT HEMP

CERTIFICATE OF ANALYSIS

PRODUCT: CBD Balm
BATCH/LOT: B0049

PRODUCTION DATE: 09/2021
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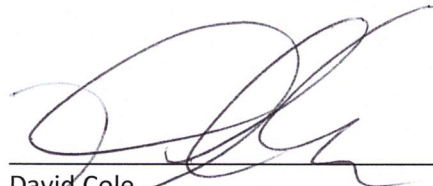
TEST	METHOD	SPECIFICATION	RESULTS
Residual Solvents ^{vi}			
Acetone	GC-MS	Below MRL	PASS
Benzene	GC-MS	Below MRL	PASS
Butanes	GC-MS	Below MRL	PASS
Ethanol	GC-MS	Below MRL	PASS
Ethyl Acetate	GC-MS	Below MRL	PASS
Heptanes	GC-MS	Below MRL	PASS
Hexane	GC-MS	Below MRL	PASS
Isopropyl Alcohol	GC-MS	Below MRL	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

NMT = Not More Than

MRL = Method Reporting Limit

n/e = not established


David Cole
Director of Quality

9/20/21
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: B0049	Test: Potency	Reported: 9/15/21	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
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Matrix: Concentrate	Test ID: T000162480	Started: 9/13/21	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: 09/09/2021 @ 09:16 AM	Sampler ID: N/A
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CANNABINOID PROFILE

Compound	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)	Notes
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.003	0.007	ND	ND	N/A
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.003	0.008	0.057	0.57	
Cannabidiolic acid (CBDA)	0.019	0.061	0.056*	0.56*	
Cannabidiol (CBD)	0.019	0.060	1.930	19.30	
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.019	0.054	ND	ND	
Cannabinolic Acid (CBNA)	0.011	0.031	ND	ND	
Cannabinol (CBN)	0.005	0.014	ND	ND	
Cannabigerolic acid (CBGA)	0.016	0.046	ND	ND	
Cannabigerol (CBG)	0.004	0.011	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.014	0.039	ND	ND	
Tetrahydrocannabivarin (THCV)	0.003	0.010	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.008	0.026	ND	ND	
Cannabidivarin (CBDV)	0.004	0.014	ND	ND	
Cannabichromenic Acid (CBCA)	0.006	0.018	ND	ND	
Cannabichromene (CBC)	0.007	0.019	0.044	0.44	
Total Cannabinoids			2.087	20.87	
Total Potential THC**			0.057	0.57	
Total Potential CBD**			1.979	19.79	


Hannah Wright
15-Sep-2021
03:34 PM


Ryan Weems
15-Sep-21
3:35 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

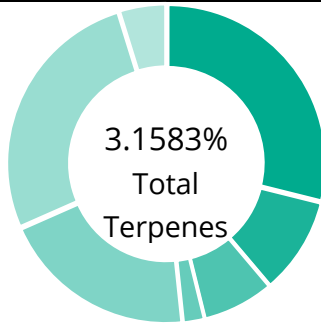


Certificate #4329.02

CBD Balm

Batch ID:	B0049	Test ID:	T000162481
Type:	Topical	Submitted:	09/09/2021 @ 09:16 AM
Test:	Terpenes	Started:	9/13/2021
Method:	TM22 (GC-MS)	Reported:	9/14/2021

TERPENE PROFILE



Compound	%(w/w)	mg/g
(-)-alpha-Bisabolol	0.0000	0.000
Camphene	0.0731	0.731
delta-3-Carene	0.0978	0.978
beta-Caryophyllene	0.0641	0.641
(-)-Caryophyllene Oxide	0.0000	0.000
p-Cymene	0.0974	0.974
Eucalyptol	1.4951	14.951
Geraniol	0.0000	0.000
alpha-Humulene	0.0000	0.000
(-)-Isopulegol	0.0000	0.000
d-Limonene	0.2677	2.677
Linalool	0.3576	3.576
beta-Myrcene	0.0000	0.000
cis-Nerolidol	0.0123	0.123
trans-Nerolidol	0.0000	0.000
Ocimene	0.0061	0.061
beta-Ocimene	0.0000	0.000
alpha-Pinene	0.3855	3.855
(-)-beta-Pinene	0.1325	1.325
alpha-Terpinene	0.0292	0.292
gamma-Terpinene	0.1077	1.077
Terpinolene	0.0322	0.322
	3.1583	31.583


PREDOMINANT TERPENES

alpha-Pinene	0.3855
(-)-beta-Pinene	0.1325
beta-Myrcene	0.0000
delta-3-Carene	0.0978
alpha-Terpinene	0.0292
d-Limonene	0.2677
Linalool	0.3576
beta-Caryophyllene	0.0641
alpha-Humulene	0.0000
(-)-alpha-Bisabolol	0.0000

NOTES:

N/A

FINAL APPROVAL


 Daniel Weidensaul
 14-Sep-2021
 4:51 PM


 Ryan Weems
 14-Sep-2021
 4:52 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: B0049	Test: Microbial Contaminants	Reported: 9/12/21	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: Finished Product	Test ID: T000162483	Started: 9/8/21	USDA License: N/A
Status: N/A	Methods: TM25 (qPCR) TM24, TM26, TM27(Culture Plating): Microbial (Colorado Panel)	Received: 09/09/2021 @ 09:16 AM	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 ² CFU/g	10 ² CFU/g	1.5x10 ⁴ CFU/g	None Detected	
Total Yeast and Mold*	TM-24, Culture Plating	10 ² 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
 9/12/2021
 11:02:00 AM


 Sarah Henning
 9/12/2021
 1:33:00 PM

PREPARED BY / DATE

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: B0049	Test: Mycotoxins	Reported: 9/13/21	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: Concentrate	Test ID: T000162486	Started: 9/10/21	USDA License: N/A
Status: N/A	Method: TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins (Colorado Panel)	Received: 09/09/2021 @ 09:16 AM	Sampler ID: N/A

MYCOTOXIN DETERMINATION

Compound	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	1.9 - 125.7	ND	N/A
Aflatoxin B1	1 - 32.8	ND	
Aflatoxin B2	0.9 - 32.7	ND	
Aflatoxin G1	1 - 32.5	ND	
Aflatoxin G2	1 - 31.9	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	


 Sam Smith
 13-Sep-21
 6:13 AM

PREPARED BY / DATE


 Alex Smith
 13-Sep-21
 7:07 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: B0049	Test: Metals	Reported: 9/15/21	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: Unit Co	Test ID: T000162484	Started: 9/14/21	USDA License: N/A
Status: N/A	Method: TM19 (ICP-MS): Heavy Metals (Colorado Panel)	Received: 09/09/2021 @ 09:16 AM	Sampler ID: N/A

HEAVY METALS DETERMINATION

Compound	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.051 - 5.07	ND	
Cadmium	0.047 - 4.69	ND	
Mercury	0.045 - 4.51	ND	
Lead	0.048 - 4.82	ND	


 Sam Smith
 15-Sep-21
 11:29 AM


 Ryan Weems
 15-Sep-21
 11:31 AM

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APPROVED BY / DATE

Definitions

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Prepared for:


CBD Balm
Straight Hemp

Batch ID or Lot Number: B0049	Test: Residual Solvents	Reported: 9/16/21	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: N/A	Test ID: T000162485	Started: 9/8/21	USDA License: N/A
Status: N/A	Methods: TM04 (GC-MS): Residual Solvents (Colorado Panel)	Received: 09/09/2021 @ 09:16 AM	Sampler ID: N/A

RESIDUAL SOLVENTS DETERMINATION

Solvent	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	84 - 1690	*ND	
Butanes (Isobutane, n-Butane)	165 - 3308	*ND	
Methanol	66 - 1311	*ND	
Pentane	93 - 1865	*ND	
Ethanol	102 - 2045	*ND	
Acetone	105 - 2094	*ND	
Isopropyl Alcohol	111 - 2224	*ND	
Hexane	6 - 125	*ND	
Ethyl Acetate	106 - 2128	*ND	
Benzene	0 - 4	*ND	
Heptanes	100 - 1993	*ND	
Toluene	19 - 381	*ND	
Xylenes (m,p,o-Xylenes)	137 - 2740	*ND	


 Daniel Weidensaul
 16-Sep-21
 12:22 PM


 Karen Winternheimer
 16-Sep-21
 12:24 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: B0049	Test: Pesticides	Reported: 9/15/21	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: Concentrate	Test ID: T000162482	Started: 9/14/21	USDA License: N/A
Status: N/A	Method: TM17(LC-QQQ LC MS/MS):	Received: 09/09/2021 @ 09:16 AM	Sampler ID: N/A

PESTICIDE DETERMINATION

Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)
Acephate	43	ND	Fenoxycarb	43	ND	Paclobutrazol	43	ND
Acetamiprid	40	ND	Fipronil	48	ND	Permethrin	287	ND
Avermectin	283	ND	Flonicamid	39	ND	Phosmet	44	ND
Azoxystrobin	43	ND	Fludioxonil	296	ND	Prophos	283	ND
Bifenazate	45	ND	Hexythiazox	47	ND	Propoxur	40	ND
Boscalid	59	ND	Imazalil	256	ND	Pyridaben	285	ND
Carbaryl	39	ND	Imidacloprid	38	ND	Spinosad A	35	ND
Carbofuran	40	ND	Kresoxim-methyl	150	ND	Spinosad D	50	ND
Chlorantraniliprole	56	ND	Malathion	292	ND	Spiromesifen	231	ND
Chlorpyrifos	500	ND	Metalaxyl	42	ND	Spirotetramat	329	ND
Clofentezine	276	ND	Methiocarb	40	ND	Spiroxamine 1	17	ND
Diazinon	282	ND	Methomyl	42	ND	Spiroxamine 2	23	ND
Dichlorvos	254	ND	MGK 264 1	161	ND	Tebuconazole	286	ND
Dimethoate	41	ND	MGK 264 2	133	ND	Thiacloprid	42	ND
E-Fenpyroximate	236	ND	Myclobutanil	40	ND	Thiamethoxam	43	ND
Etofenprox	43	ND	Naled	40	ND	Trifloxystrobin	43	ND
Etoxazole	269	ND	Oxamyl	1500	ND			


 Sam Smith
 9/15/2021
 10:08:00 AM


 Alex Benson
 9/15/2021
 2:50:00 PM

PREPARED BY / DATE

APPROVED BY / DATE

Definitions

LOQ = Limit of Quantification
 ppb = Parts per Billion

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