

CERTIFICATE OF ANALYSIS

PRODUCT NAME: CBD Softgels
PRODUCT STRENGTH: 25 mg CBD
BATCH: 21264A
BEST BY DATE: HEMP 06/24/2023
EXTRACT LOT: 21E0000845

Click on the links to view third-party reports

Physical Attributes

Test	Method	Specification	Results
Color	Joy Internal	Golden to Amber	PASS
Odor	Joy Internal	No odor	PASS
Appearance	Joy Internal	Dry, ovoid softgel capsules in container with lid and shrink-band	PASS
Primary Package Eval.	Joy Internal	Container clean and free of filth. Container caps tight and shrink bands intact	PASS
Secondary Package Eval.	Joy Internal	Labeling Compliance Checked, Cartons sturdy and clean. Sufficient cushion material exists. Box taped and secure.	PASS

Review of Third-Party Analysis

Panel	Method	Specification	Results*	Pass/Fail
Potency - Total CBD	HPLC-UV DAD	*LOQ: ≥ 25 mg / softgel	32.219 mg	PASS
Potency - D9-THC	HPLC-UV DAD	LOQ: $<0.01\%$ (broad spectrum)	ND	PASS
Expanded Pesticide Panel	HPLC-QQQ	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	Below LOQ	PASS
Microbial Escherichia coli (STEC)	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 **CFU/25 gram	Absent	PASS
Microbial Salmonella	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram	Absent	PASS
Microbial Yeast and Mold	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ 10^2 CFU/gram	Below LOQ	PASS
Microbial Total Coliforms*	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ 10^2 CFU/gram	Below LOQ	PASS
Microbial Total Aerobic Count*	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ 10^3 CFU/gram	Below LOQ	PASS
Heavy Metals	ICP-MS	Arsenic (As): ≤ 1.5 ppm† Cadmium (Cd): ≤ 0.5 ppm Lead (Pb): ≤ 0.5 ppm Mercury (Hg): ≤ 1.5 ppm	Below LOQ	PASS
Mycotoxins	ICP-MS	Total Aflatoxins <20 ppb†† Afltoxin B1 < 5 ppb Ochratoxin < 5 ppb	Below LOQ	PASS
Residual Solvents	GC-HS-MSD	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	Below LOQ	PASS

* Level of Quantification
 **CFU/g=Colony Forming Units per Gram
 † Parts Per Million †† Part Per Billion

Values expressed using scientific notation.
 Examples:
 $10^2=100$
 $10^3=1,000$

Quality Certified

Kayla Kolber

Quality Assurance Technician

Kayla Kolber

09/27/2021

Date

SG25


Batch ID or Lot Number: **21E0000845** Test: **Potency** Reported: **7/30/21**


Matrix: Test ID: Started: USDA License:
 Unit T000153142 7/28/21 N/A

Status: Method: Received: Sampler ID:
 N/A TM14 (HPLC-DAD): Potency - Broad Spectrum Analysis, 0.01% THC (Colorado Panel) 07/22/2021 @ 10:29 AM N/A

CANNABINOID PROFILE

Compound	LOD (mg)	LOQ (mg)	Result (mg)	Result (mg/g)	Notes
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.007	0.018	ND	ND	# of Servings = 1 Sample Weight=0.548g
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.007	0.020	ND	ND	
Cannabidiolic acid (CBDA)	0.065	0.237	ND	ND	
Cannabidiol (CBD)	0.064	0.231	32.219	58.84	
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.083	0.240	ND	ND	
Cannabinolic Acid (CBNA)	0.047	0.137	ND	ND	
Cannabinol (CBN)	0.022	0.063	ND	ND	
Cannabigerolic acid (CBGA)	0.069	0.201	ND	ND	
Cannabigerol (CBG)	0.017	0.048	2.071	3.78	
Tetrahydrocannabivarinic Acid (THCVA)	0.059	0.170	ND	ND	
Tetrahydrocannabivarin (THCV)	0.015	0.044	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.027	0.099	ND	ND	
Cannabidivarin (CBDV)	0.015	0.055	0.052*	0.09*	
Cannabichromenic Acid (CBCA)	0.027	0.078	ND	ND	
Cannabichromene (CBC)	0.029	0.085	ND	ND	
Total Cannabinoids			34.342	62.72	
Total Potential THC**			ND	ND	
Total Potential CBD**			32.219	58.84	

 Ryan Weems
 30-Jul-2021
 09:48 AM

 Taylor Brevik
 30-Jul-21
 9:53 AM

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.

$$\text{Total THC} = \text{THC} + (\text{THCa} * (0.877)) \text{ and}$$

$$\text{Total CBD} = \text{CBD} + (\text{CBDA} * (0.877))$$

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

SG25

Batch ID:	21E0000845	Test ID:	T000153143
Type:	Concentrate	Submitted:	07/22/2021 @ 10:29 AM
Test:	Pesticides	Started:	7/26/2021
Method:	TM17 (UHPLC-QQQ LC MS/MS)	Reported:	7/28/2021

PESTICIDE RESIDUE

Compound	Dynamic Range (ppb)	Result (ppb)	Compound	Dynamic Range (ppb)	Result (ppb)
Acephate	42 - 2343	ND*	Malathion	282 - 2343	ND*
Acetamiprid	40 - 2343	ND*	Metalaxyl	39 - 2343	ND*
Abamectin	>256	ND*	Methiocarb	39 - 2343	ND*
Azoxystrobin	41 - 2343	ND*	Methomyl	41 - 2343	ND*
Bifenazate	39 - 2343	ND*	MGK 264 1	161 - 2343	ND*
Boscalid	40 - 2343	ND*	MGK 264 2	115 - 2343	ND*
Carbaryl	39 - 2343	ND*	Myclobutanil	44 - 2343	ND*
Carbofuran	43 - 2343	ND*	Naled	44 - 2343	ND*
Chlorantraniliprole	50 - 2343	ND*	Oxamyl	37 - 2343	ND*
Chlorpyrifos	43 - 2343	ND*	Paclobutrazol	43 - 2343	ND*
Clofentezine	273 - 2343	ND*	Permethrin	269 - 2343	ND*
Diazinon	278 - 2343	ND*	Phosmet	39 - 2343	ND*
Dichlorvos	>236	ND*	Prophos	249 - 2343	ND*
Dimethoate	40 - 2343	ND*	Propoxur	42 - 2343	ND*
E-Fenpyroximate	322 - 2343	ND*	Pyridaben	304 - 2343	ND*
Etofenprox	40 - 2343	ND*	Spinosad A	29 - 2343	ND*
Etoxazole	297 - 2343	ND*	Spinosad D	79 - 2343	ND*
Fenoxycarb	>40	ND*	Spiromesifen	>271	ND*
Fipronil	48 - 2343	ND*	Spirotetramat	>303	ND*
Flonicamid	42 - 2343	ND*	Spiroxamine 1	17 - 2343	ND*
Fludioxonil	>274	ND*	Spiroxamine 2	22 - 2343	ND*
Hexythiazox	36 - 2343	ND*	Tebuconazole	309 - 2343	ND*
Imazalil	262 - 2343	ND*	Thiacloprid	40 - 2343	ND*
Imidacloprid	43 - 2343	ND*	Thiamethoxam	40 - 2343	ND*
Kresoxim-methyl	43 - 2343	ND*	Trifloxystrobin	41 - 2343	ND*

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

N/A

FINAL APPROVAL



 Taylor Brevik
 28-Jul-2021
 9:34 AM



 Sam Smith
 28-Jul-2021
 9:37 AM

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Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. 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.



Certificate #4329.02

SG25


Batch ID or Lot Number: 21264A	Test: Microbial Contaminants	Reported: 9/25/21
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Matrix: Finished Product	Test ID: T000165100	Started: 9/22/21	USDA License: N/A
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Status: N/A	Methods: TM25 (qPCR) TM24, TM26, TM27(Culture Plating): Microbial (Colorado Panel)	Received: 09/22/2021 @ 10:51 AM	Sampler ID: N/A
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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	


Jackson Osaghae-Nosa
9/25/2021
1:53:00 PM


Courtney Richards
9/25/2021
10:06:00 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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Certificate #4329.02

SG25

Batch ID or Lot Number: **21E0000845** Test: **Metals** Reported: **8/4/21**

Matrix: Test ID: Started: USDA License:
 Unit Co T000153145 7/28/21 N/A

Status: Method: Received: Sampler ID:
 N/A TM19 (ICP-MS): Heavy Metals 07/22/2021 @ 10:29 AM N/A
 (Colorado Panel)

HEAVY METALS DETERMINATION

Compound	Dynamic Range (ppb)	Result (ppb)	Notes
Arsenic	0.052 - 5.23	ND	Amendment to certificate T000153145, certificate updated to Colorado Compliance format.
Cadmium	0.044 - 4.42	ND	
Mercury	0.044 - 4.38	ND	
Lead	0.044 - 4.37	ND	

 Ryan Weems
 4-Aug-21
 10:45 AM

 Sam Smith
 4-Aug-21
 10:53 AM

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Definitions

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

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SG25

Batch ID or Lot Number: 21E0000845	Test: Mycotoxins	Reported: 7/29/21	
Matrix: Concentrate	Test ID: T000153147	Started: 7/28/21	USDA License: N/A
Status: N/A	Method: TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins (Colorado Panel)	Received: 07/22/2021 @ 10:29 AM	Sampler ID: N/A

MYCOTOXIN DETERMINATION

Compound	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	4.2 - 138.3	ND	N/A
Aflatoxin B1	1.1 - 35	ND	
Aflatoxin B2	1.1 - 35	ND	
Aflatoxin G1	1.2 - 33.6	ND	
Aflatoxin G2	1.2 - 33.2	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	


 Sam Smith
 29-Jul-21
 8:42 AM


 Chris Jungling
 29-Jul-21
 3:32 PM

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APPROVED BY / DATE

Definitions

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SG25

Batch ID or Lot Number: 21E0000845	Test: Residual Solvents	Reported: 7/28/21	
Matrix: N/A	Test ID: T000153146	Started: 7/27/21	USDA License: N/A
Status: N/A	Methods: TM04 (GC-MS): Residual Solvents (Colorado Panel)	Received: 07/22/2021 @ 10:29 AM	Sampler ID: N/A

RESIDUAL SOLVENTS DETERMINATION

Solvent	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	140 - 2796	*ND	
Butanes (Isobutane, n-Butane)	330 - 6602	*ND	
Methanol	116 - 2325	*ND	
Pentane	159 - 3176	*ND	
Ethanol	180 - 3610	*ND	
Acetone	181 - 3628	*ND	
Isopropyl Alcohol	195 - 3892	*ND	
Hexane	11 - 218	*ND	
Ethyl Acetate	182 - 3649	*ND	
Benzene	0 - 7	*ND	
Heptanes	173 - 3462	*ND	
Toluene	33 - 662	*ND	
Xylenes (m,p,o-Xylenes)	242 - 4833	*ND	

 Taylor Brevik
28-Jul-21
1:15 PM

 Sam Smith
28-Jul-21
1:19 PM

PREPARED BY / DATE

APPROVED BY / DATE

Definitions

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

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