

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Organic CBD Tincture - Natural
PRODUCT STRENGTH: 900mg
TINCTURE BATCH: 220614A, 220527F, 220629B
BEST BY DATE: 6/8/2024
HEMP EXTRACT LOT: BCA-000389-220607

Physical Attributes

Test	Method	Specification	Results
Color	Internal	Golden to Amber	PASS
Odor	Internal	Characteristic - Olive and Hemp	PASS
Appearance	Internal	Golden to Amber oil in brown glass bottle with dropper.	PASS
Primary Package Eval.	Internal	Container clean and free of filth. Container caps tight and shrink bands intact	PASS
Secondary Package Eval.	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	*NLT (product strength) mg / bottle	32.4mg	PASS
Potency - D9-THC	HPLC-UV DAD	LOQ: 10 ppm (.001-0.3%)	ND	PASS
Expanded Pesticide Panel	HPLC-QQQ	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	ND	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 Panel	ICP-MS	Arsenic (As): ≤1.5 ppm Cadmium (Cd): ≤0.5 ppm Lead (Pb): ≤0.5 ppm Mercury (Hg): ≤1.5 ppm	ND	PASS
Mycotoxins	ICP-MS	Total Aflatoxins <20 ppb† Aftoxin B1 < 5 ppb Ochratoxin < 5ppb	ND	PASS
Residual Solvents	GC-HS-MSD	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	ND	PASS

*Level of Quantitation, † Parts Per Million ‡ Part Per Billion CFU/g=Colony Forming Units per Gram
 *Nothing Less Than
 10²=100 CFU
 10³=1,000 CFU

Quality Certified



Name

8/10/22

Date

900 Natural

Batch ID or Lot Number: 220614A, 220527F	Test: Potency	Reported: 24Jun2022	USDA License: N/A
Matrix: Concentrate	Test ID: T000211077	Started: 23Jun2022	Sampler ID: N/A
	Method(s): TM14 (HPLC-DAD)	Received: 21Jun2022	Status: N/A

Cannabinoids	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.006	0.017	ND	ND	
Cannabichromenic Acid (CBCA)	0.005	0.016	ND	ND	
Cannabidiol (CBD)	0.013	0.044	3.530	35.30	
Cannabidiolic Acid (CBDA)	0.013	0.045	ND	ND	
Cannabidivarin (CBDV)	0.003	0.010	0.020	0.20	
Cannabidivarinic Acid (CBDVA)	0.006	0.019	ND	ND	
Cannabigerol (CBG)	0.003	0.010	0.260	2.60	
Cannabigerolic Acid (CBGA)	0.013	0.041	ND	ND	
Cannabinol (CBN)	0.004	0.013	ND	ND	
Cannabinolic Acid (CBNA)	0.009	0.028	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.016	0.049	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.014	0.044	ND	ND	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.013	0.039	ND	ND	
Tetrahydrocannabivarin (THCV)	0.003	0.009	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.011	0.035	ND	ND	
Total Cannabinoids			3.810	38.10	
Total Potential THC			ND	ND	
Total Potential CBD			3.530	35.30	

Final Approval


 Daniel Weidensaul
 24Jun2022
 01:26:00 PM MDT

PREPARED BY / DATE



 Jacob Miller
 24Jun2022
 01:28:00 PM MDT

APPROVED BY / DATE


<https://results.botanacor.com/api/v1/coas/uuid/eecf286e-fc8c-465b-bbb7-378f08c5914d>
Definitions

% = % (w/w) = Percent (weight of analyte / weight of product). ND = None Detected (defined by dynamic range of the method).
 Total Potential Delta 9-THC or CBD is calculated to take into account the loss of a carboxyl group during decarboxylation step, using the following formulas: Total Potential Delta 9-THC = Delta 9-THC + (Delta 9-THCa *(0.877)) and Total CBD = CBD + (CBDA *(0.877)).

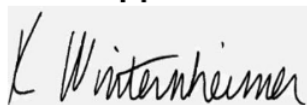
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 Cert #4329.02
 eecf286efc8c465bbb7378f08c5914d.1

900 mg 5G Broad Spectrum Tincture Bulk in EVOO

Batch ID or Lot Number: BCA-000389-220607	Test: Pesticides	Reported: 16Jun2022	USDA License: NA
Matrix: Concentrate	Test ID: T000209812	Started: 14Jun2022	Sampler ID: NA
	Method(s): TM17 (LC-QQ LC MS/MS)	Received: 10Jun2022	Status: NA

Pesticides	Dynamic Range (ppb)	Result (ppb)	Pesticides	Dynamic Range (ppb)	Result (ppb)
Abamectin	365 - 2660	ND	Malathion	304 - 2758	ND
Acephate	45 - 2774	ND	Metalaxyl	51 - 2788	ND
Acetamiprid	43 - 2778	ND	Methiocarb	39 - 2735	ND
Azoxystrobin	40 - 2739	ND	Methomyl	42 - 2747	ND
Bifenazate	42 - 2765	ND	MGK 264 1	187 - 1618	ND
Boscalid	15 - 2744	ND	MGK 264 2	129 - 1129	ND
Carbaryl	40 - 2776	ND	Myclobutanil	37 - 2661	ND
Carbofuran	43 - 2761	ND	Naled	28 - 2666	ND
Chlorantraniliprole	46 - 2731	ND	Oxamyl	3 - 2768	ND
Chlorpyrifos	47 - 2776	ND	Paclobutrazol	41 - 2732	ND
Clofentezine	306 - 2776	ND	Permethrin	340 - 2681	ND
Diazinon	298 - 2777	ND	Phosmet	41 - 2752	ND
Dichlorvos	311 - 2758	ND	Prophos	290 - 2708	ND
Dimethoate	45 - 2766	ND	Propoxur	39 - 2744	ND
E-Fenpyroximate	296 - 2737	ND	Pyridaben	302 - 2767	ND
Etofenprox	42 - 2726	ND	Spinosad A	36 - 2242	ND
Etoxazole	299 - 2708	ND	Spinosad D	55 - 497	ND
Fenoxycarb	45 - 2737	ND	Spiromesifen	306 - 2722	ND
Fipronil	39 - 2733	ND	Spirotetramat	292 - 2784	ND
Flonicamid	4 - 2732	ND	Spiroxamine 1	17 - 1160	ND
Fludioxonil	260 - 2633	ND	Spiroxamine 2	21 - 1502	ND
Hexythiazox	49 - 2737	ND	Tebuconazole	259 - 2755	ND
Imazalil	286 - 2760	ND	Thiacloprid	41 - 2763	ND
Imidacloprid	51 - 2800	ND	Thiamethoxam	45 - 2752	ND
Kresoxim-methyl	53 - 2822	ND	Trifloxystrobin	41 - 2736	ND

Final Approval


Karen Winternheimer
16Jun2022
04:48:00 PM MDT

PREPARED BY / DATE



Daniel Weidensaul
16Jun2022
05:01:00 PM MDT

APPROVED BY / DATE


<https://results.botanacor.com/api/v1/coas/uuid/f3024b12-9b3e-454e-8b15-031fa6dc723d>
Definitions

ND = None Detected (defined by dynamic range of the method)
Dynamic Range = Limit of Quantitation (LOQ) through Upper Limit of Method Range
ppb = Parts Per Billion

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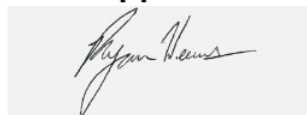
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900 mg 5G Broad Spectrum Tincture Bulk in EVOO

Batch ID or Lot Number: BCA-000389-220607	Test: Heavy Metals	Reported: 14Jun2022	USDA License: NA
Matrix: Unit Co	Test ID: T000209813	Started: 14Jun2022	Sampler ID: NA
	Method(s): TM19 (ICP-MS); Heavy Metals	Received: 10Jun2022	Status: NA

Heavy Metals	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.05 - 4.58	ND	
Cadmium	0.05 - 4.53	ND	
Mercury	0.04 - 4.43	ND	
Lead	0.05 - 4.66	ND	

Final Approval



Ryan Weems
 14Jun2022
 02:50:00 PM MDT

PREPARED BY / DATE



Daniel Weidensaul
 14Jun2022
 02:53:00 PM MDT

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/f6748d30-6fdd-4791-80a7-c909ec3f3a99>

Definitions

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Cert #4329.02

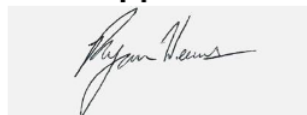
CDPHE Certified

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900 mg 5G Broad Spectrum Tincture Bulk in EVOO

Batch ID or Lot Number: BCA-000389-220607	Test: Potency	Reported: 14Jun2022	USDA License: N/A
Matrix: Concentrate	Test ID: T000209811	Started: 13Jun2022	Sampler ID: N/A
	Method(s): TM14 (HPLC-DAD); Potency - Standard Cannabinoid Analysis	Received: 10Jun2022	Status: Active

Cannabinoids	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.017	0.054	ND	ND	
Cannabichromenic Acid (CBCA)	0.015	0.049	ND	ND	
Cannabidiol (CBD)	0.047	0.139	3.405	34.05	
Cannabidiolic Acid (CBDA)	0.048	0.143	ND	ND	
Cannabidivarin (CBDV)	0.011	0.033	<LOQ	0.12	
Cannabidivarinic Acid (CBDVA)	0.020	0.060	ND	ND	
Cannabigerol (CBG)	0.009	0.030	0.221	2.21	
Cannabigerolic Acid (CBGA)	0.039	0.127	ND	ND	
Cannabinol (CBN)	0.012	0.040	ND	ND	
Cannabinolic Acid (CBNA)	0.027	0.087	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.047	0.152	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.042	0.138	ND	ND	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.038	0.122	ND	ND	
Tetrahydrocannabivarin (THCV)	0.009	0.028	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.033	0.108	ND	ND	
Total Cannabinoids			3.638	36.38	
Total Potential THC			ND	ND	
Total Potential CBD			3.405	34.05	

Final Approval


Ryan Weems
14Jun2022
12:07:00 PM MDT

PREPARED BY / DATE



Karen Winternheimer
14Jun2022
12:11:00 PM MDT

APPROVED BY / DATE


<https://results.botanacor.com/api/v1/coas/uuid/08cc1533-84b5-4a8e-80c5-f618bbdeb67b>
Definitions

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Cert #4329.02

 CDPHE Certified
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900 Natural

Batch ID or Lot Number: 220614A, 220527F	Test: Microbial Contaminants	Reported: 27Jun2022	USDA License: NA
Matrix: Finished Product	Test ID: T000211078	Started: 22Jun2022	Sampler ID: NA
	Method(s): TM25 (PCR) TM24, TM26, TM27 (Culture Plating)	Received: 21Jun2022	Status: NA

Microbial
Contaminants

Contaminants	Method	LOD	Quantitation Range	Result	Notes
STEC	TM25: PCR	10 ⁰ CFU/g	NA	Absent	Free from visual mold, mildew, and foreign matter
<i>Salmonella</i>	TM25: PCR	10 ⁰ CFU/g	NA	Absent	
Total Yeast and Mold*	TM24: Culture Plating	10 ¹ CFU/g	1.0x10 ² - 1.5x10 ⁴	None Detected	
Total Aerobic Count*	TM26: Culture Plating	10 ² CFU/g	1.0x10 ³ - 1.5x10 ⁵	None Detected	
Total Coliforms*	TM27: Culture Plating	10 ¹ CFU/g	1.0x10 ² - 1.5x10 ⁴	None Detected	

Final Approval


 Carly Bader
 25Jun2022
 12:50:00 PM MDT



 Eden Thompson-Wright
 27Jun2022
 09:32:00 AM MDT


PREPARED BY / DATE

APPROVED BY / DATE

<https://results.botanacor.com/api/v1/coas/uuid/f833dab2-7a86-42a0-9d13-d17ec12a16cd>
Definitions

* 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
 CFU/g = Colony Forming Units per Gram, LOD = Limit of Detection
 ULOQ = Upper Limit of Quantitation, LLOQ = Lower Limit of Quantitation
 STEC = Shiga Toxin-Producing E. coli

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900 mg 5G Broad Spectrum Tincture Bulk in EVOO

Batch ID or Lot Number: BCA-000389-220607	Test: Mycotoxins	Reported: 14Jun2022	USDA License: N/A
Matrix: Concentrate	Test ID: T000209815	Started: 13Jun2022	Sampler ID: N/A
	Method(s): TM18 (UHPLC-QQQ LCMS/MS); Mycotoxins	Received: 10Jun2022	Status: Active

Mycotoxins	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	3.75 - 130.56	ND	N/A
Aflatoxin B1	1.02 - 32.57	ND	
Aflatoxin B2	1.05 - 32.35	ND	
Aflatoxin G1	0.99 - 32.70	ND	
Aflatoxin G2	1.05 - 32.66	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Final Approval



Jacob Miller
14Jun2022
02:49:00 PM MDT

PREPARED BY / DATE



Ryan Weems
14Jun2022
02:52:00 PM MDT

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/c59f3eb4-008d-41b3-a826-15b3a83185b3>

Definitions

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Cert #4329.02

CDPHE Certified

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900 mg 5G Broad Spectrum Tincture Bulk in EVOO

Batch ID or Lot Number: BCA-000389-220607	Test: Residual Solvents	Reported: 14Jun2022	USDA License: N/A
Matrix: Concentrate	Test ID: T000209814	Started: 14Jun2022	Sampler ID: N/A
	Method(s): TM04 (GC-MS): Residual Solvents	Received: 10Jun2022	Status: Active

Residual Solvents	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	91 - 1825	ND	
Butanes (Isobutane, n-Butane)	139 - 2779	ND	
Methanol	57 - 1131	ND	
Pentane	81 - 1620	ND	
Ethanol	82 - 1640	ND	
Acetone	88 - 1752	ND	
Isopropyl Alcohol	93 - 1850	ND	
Hexane	6 - 114	ND	
Ethyl Acetate	91 - 1828	ND	
Benzene	0.2 - 3.7	ND	
Heptanes	89 - 1783	ND	
Toluene	17 - 332	ND	
Xylenes (m,p,o-Xylenes)	121 - 2428	ND	

Final Approval



Jacob Miller
 14Jun2022
 05:51:00 PM MDT

PREPARED BY / DATE



Ryan Weems
 14Jun2022
 05:55:00 PM MDT

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/8bdc2347-eb59-41b2-b5b8-b052adf9cddb>

Definitions

ND = None Detected (defined by dynamic range of the method)
 Dynamic Range = Limit of Quantitation (LOQ) through Upper Limit of Method Range

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Cert #4329.02

CDPHE Certified

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