

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Organic CBD Tincture - Natural
PRODUCT STRENGTH: 900mg
TINCTURE BATCH: 3006
BEST BY DATE: 4/12/2024

Physical Attributes

Test	Method	Specification	Results
Color	Joy Internal	Golden to Amber	PASS
Odor	Joy Internal	Characteristic - Olive and Hemp	PASS
Appearance	Joy Internal	Golden to Amber oil in brown glass bottle with dropper.	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	*NLT (product strength) mg / bottle	1062mg	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† Afltoxin 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  _____ 11/1/2022
 Name Date

OTONAT900-3006

Batch ID or Lot Number: 221012D	Test: Potency	Reported: 14Oct2022	USDA License: N/A
Matrix: Concentrate	Test ID: T000224610	Started: 13Oct2022	Sampler ID: N/A
	Method(s): TM14 (HPLC-DAD)	Received: 13Oct2022	Status: N/A

Cannabinoids

	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.005	0.016	ND	ND	
Cannabichromenic Acid (CBCA)	0.004	0.015	ND	ND	
Cannabidiol (CBD)	0.014	0.042	3.850	38.50	
Cannabidiolic Acid (CBDA)	0.014	0.043	ND	ND	
Cannabidivarin (CBDV)	0.003	0.010	0.020	0.20	
Cannabidivarinic Acid (CBDVA)	0.006	0.018	ND	ND	
Cannabigerol (CBG)	0.003	0.009	0.190	1.90	
Cannabigerolic Acid (CBGA)	0.011	0.039	ND	ND	
Cannabinol (CBN)	0.003	0.012	ND	ND	
Cannabinolic Acid (CBNA)	0.008	0.026	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.013	0.046	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.012	0.042	ND	ND	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.011	0.037	ND	ND	
Tetrahydrocannabivarin (THCV)	0.002	0.008	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.009	0.033	ND	ND	
Total Cannabinoids			4.060	40.60	
Total Potential THC			ND	ND	
Total Potential CBD			3.850	38.50	

Final Approval



Karen Winternheimer
15Oct2022
07:37:00 PM MDT

PREPARED BY / DATE



Sam Smith
15Oct2022
07:38:00 PM MDT

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/cce27fad-2c9a-4e10-b33c-d0fc0c2b7c4a>

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)).

Testing results are based solely upon the sample submitted to SC Laboratories, Inc., in the condition it was received. SC Laboratories, Inc., 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 SC Laboratories, Inc. ISO/IEC 17025:2017 Accredited by A2LA.



Cert #4329.02
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OTONAT900-3006

Batch ID or Lot Number: 221012D	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 1 of 5
Reported: 20Oct2022	Started: 19Oct2022	Received: 18Oct2022	


**Residual Solvents -
Colorado Compliance**

Test ID: T000224970


Methods: TM04 (GC-MS): Residual

Solvents	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	84 - 1681	ND	
Butanes (Isobutane, n-Butane)	175 - 3502	ND	
Methanol	55 - 1101	ND	
Pentane	93 - 1864	ND	
Ethanol	90 - 1795	ND	
Acetone	92 - 1841	ND	
Isopropyl Alcohol	93 - 1862	ND	
Hexane	6 - 113	ND	
Ethyl Acetate	92 - 1843	ND	
Benzene	0.2 - 3.7	ND	
Heptanes	94 - 1874	ND	
Toluene	17 - 332	ND	
Xylenes (m,p,o-Xylenes)	124 - 2480	ND	

Final Approval


Sam Smith
20Oct2022
08:51:00 AM MDT

PREPARED BY / DATE


Karen Winternheimer
20Oct2022
08:54:00 AM MDT

APPROVED BY / DATE

OTONAT900-3006


Batch ID or Lot Number: 221012D	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 2 of 5
Reported: 20Oct2022	Started: 19Oct2022	Received: 18Oct2022	

Mycotoxins - Colorado Compliance

Test ID: T000224971
Methods: TM18 (UHPLC-QQQ)
LCMS/MS: Mycotoxins

	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	1.37 - 125.83	ND	N/A
Aflatoxin B1	0.90 - 32.04	ND	
Aflatoxin B2	2.43 - 31.54	ND	
Aflatoxin G1	1.03 - 31.76	ND	
Aflatoxin G2	1.25 - 31.64	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Final Approval


Samantha Smith
21Oct2022
10:29:00 AM MDT
PREPARED BY / DATE


Karen Winternheimer
21Oct2022
10:31:00 AM MDT
APPROVED BY / DATE


Microbial Contaminants - Colorado Compliance

Test ID: T000224968
Methods: TM25 (qPCR) TM24, TM26, TM27 (Culture Plating): Microbial (Colorado Panel)

	Method	LOD	Quantitation Range	Result	Notes
STEC	TM25: PCR	10 ⁰ CFU/25g	NA	Absent	Free from visual mold, mildew, and foreign matter
Salmonella	TM25: PCR	10 ⁰ CFU/25g	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


Eden Thompson-Wright
21Oct2022
03:19:00 PM MDT
PREPARED BY / DATE


Brianne Maillot
21Oct2022
04:17:00 PM MDT
APPROVED BY / DATE

OTONAT900-3006


Batch ID or Lot Number: 221012D	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 3 of 5
Reported: 20Oct2022	Started: 19Oct2022	Received: 18Oct2022	


**Heavy Metals -
Colorado Compliance**

Test ID: T000224969
Methods: TM19 (ICP-MS): Heavy

Metals	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.04 - 4.19	ND	
Cadmium	0.04 - 4.28	ND	
Mercury	0.04 - 3.79	ND	
Lead	0.04 - 4.13	ND	

Final Approval


 Sam Smith
 25Oct2022
 08:37:00 AM MDT
 PREPARED BY / DATE


 Karen Winternheimer
 25Oct2022
 08:42:00 AM MDT
 APPROVED BY / DATE

OTONAT900-3006

Batch ID or Lot Number: 221012D	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 4 of 5
Reported: 20Oct2022	Started: 19Oct2022	Received: 18Oct2022	


Pesticides

Test ID: T000224967

Methods: TM17

(LC-QQ LC MS/MS)	Dynamic Range (ppb)	Result (ppb)		Dynamic Range (ppb)	Result (ppb)	
Abamectin	251 - 2634	ND		Malathion	288 - 2733	ND
Acephate	35 - 2752	ND		Metalaxyl	40 - 2748	ND
Acetamiprid	36 - 2688	ND		Methiocarb	42 - 2801	ND
Azoxystrobin	40 - 2741	ND		Methomyl	34 - 2705	ND
Bifenazate	38 - 2718	ND		MGK 264 1	144 - 1597	ND
Boscalid	41 - 2823	ND		MGK 264 2	113 - 1138	ND
Carbaryl	40 - 2721	ND		Myclobutanil	45 - 2760	ND
Carbofuran	41 - 2709	ND		Naled	47 - 2735	ND
Chlorantraniliprole	43 - 2763	ND		Oxamyl	38 - 2691	ND
Chlorpyrifos	56 - 2830	ND		Paclobutrazol	43 - 2705	ND
Clofentezine	279 - 2735	ND		Permethrin	282 - 2780	ND
Diazinon	277 - 2745	ND		Phosmet	42 - 2720	ND
Dichlorvos	258 - 2688	ND		Prophos	287 - 2746	ND
Dimethoate	37 - 2672	ND		Propoxur	40 - 2714	ND
E-Fenpyroximate	283 - 2752	ND		Pyridaben	289 - 2762	ND
Etofenprox	42 - 2757	ND		Spinosad A	30 - 2259	ND
Etoxazole	288 - 2732	ND		Spinosad D	43 - 500	ND
Fenoxycarb	45 - 2766	ND		Spiromesifen	270 - 2789	ND
Fipronil	58 - 2756	ND		Spirotetramat	260 - 2788	ND
Flonicamid	39 - 2707	ND		Spiroxamine 1	16 - 1183	ND
Fludioxonil	286 - 2787	ND		Spiroxamine 2	20 - 1603	ND
Hexythiazox	39 - 2786	ND		Tebuconazole	294 - 2729	ND
Imazalil	259 - 2800	ND		Thiacloprid	36 - 2683	ND
Imidacloprid	42 - 2697	ND		Thiamethoxam	40 - 2711	ND
Kresoxim-methyl	17 - 2783	ND		Trifloxystrobin	41 - 2738	ND

Final Approval


 Sam Smith
 26Oct2022
 11:01:00 AM MDT
 PREPARED BY / DATE


 Karen Winternheimer
 26Oct2022
 11:05:00 AM MDT
 APPROVED BY / DATE

OTNAT900-3006

Batch ID or Lot Number: 221017D	Test: Microbial Contaminants	Reported: 24Oct2022	USDA License: N/A
Matrix: Finished Product	Test ID: T000225110	Started: 19Oct2022	Sampler ID: N/A
	Method(s): TM25 (qPCR) TM24, TM26, TM27 (Culture Plating): Microbial (Colorado Panel)	Received: 19Oct2022	Status: Active

Microbial

Contaminants	Method	LOD	Quantitation Range	Result	Notes
STEC	TM25: PCR	10 ⁰ CFU/25g	NA	Absent	Free from visual mold, mildew, and foreign matter
<i>Salmonella</i>	TM25: PCR	10 ⁰ CFU/25g	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	<LLOQ	
Total Coliforms*	TM27: Culture Plating	10 ¹ CFU/g	1.0x10 ² - 1.5x10 ⁴	None Detected	

Final Approval



Eden Thompson-Wright
24Oct2022
02:39:00 PM MDT



Brett Hudson
24Oct2022
05:47:00 PM MDT



PREPARED BY / DATE

APPROVED BY / DATE

<https://results.botanacor.com/api/v1/coas/uuid/5e4d5d54-c56d-432b-a890-a5633a7fe36e>

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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Cert #4329.02

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