DANU

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Organic Full Spectrum CBD Tincture - Tropical
PRODUCT STRENGTH: 900mg
TINCTURE BATCH: 220614B
BEST BY DATE: 6/8/2024
HEMP EXTRACT LOT: C0908-001

Physical Atttributes

Test	Method	Specification	Results
Color	Internal	Golden to Amber	PASS
Odor	Internal	Characteristic - Coconut and Hemp, Tropical	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	LOQ**: ≥ product strength mg / bottle	**33.25mg**	PASS
Potency - D9-THC	HPLC-UV DAD	LOQ: <0.3% total THC (Full spectrum)	**<0.3%**	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

*Only applies to products with labels claiming certified organic
**Level of Quantification
***Colony Forming Units per Gram
† Parts Per Million †† Part Per Billion

Values expressed in scientific notation.

Examples:
10^2=100
10^3=1,000

Quality Certified — Name — 6/8/2022 — Date

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CERTIFICATE OF ANALYSIS

900 Tropcial

Batch ID or Lot Number:	Test:	Reported:	USDA License:
220614B	**Potency**	**24Jun2022**	N/A
Matrix:	Test ID:	Started:	Sampler ID:
Concentrate	T000211079	23Jun2022	N/A
	Method(s):	Received:	Status:
	TM14 (HPLC-DAD)	21Jun2022	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	3.500	35.00	
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			**3.780**	**37.80**	
Total Potential THC			ND	ND	
Total Potential CBD			3.500	35.00	

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/837e9d65-e9d9-4506-b530-dc8f1592cf4e

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 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. ISO/IEC 17025:2017 Accredited by A2LA.

Cert #4329.02

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CERTIFICATE OF ANALYSIS

900 Tropcial

Batch ID or Lot Number:	Test:	Reported:	USDA License:
220614B	**Microbial Contaminants**	**27Jun2022**	NA
Matrix:	Test ID:	Started:	Sampler ID:
Finished Product	T000211080	22Jun2022	NA
	Method(s): TM25 (PCR) TM24, TM26, TM27 (Culture Plating)	Received: 21Jun2022	Status: NA

Microbial Contaminants

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

PREPARED BY / DATE

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

APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/619efbc4-7eb3-47a2-908d-a3f89d961fe7

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: 10^2 = 100 CFU, 10^3 = 1,000 CFU, 10^4 = 10,000 CFU, 10^5 = 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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Official Compliance: Colorado
CERTIFICATE OF ANALYSIS

27460

Batch ID or Lot Number:
C0908-001

Test:
Potency

USDA License:
N/A

Matrix:
Concentrate

Test ID:
T000162435

Sampler ID:
N/A

Status:
N/A

Method:
TM14 (HPLC-DAD): Potency – Standard Cannabinoid Analysis (Colorado Panel)

CANNABINOID PROFILE

Compound	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.155	0.445	ND	ND
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.175	0.502	0.293	2.93
Cannabidiolic acid (CBDA)	0.182	0.583	ND	ND
Cannabidiol (CBD)	0.177	0.569	85.304	853.04
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.192	0.553	ND	ND
Cannabinolic Acid (CBNA)	0.110	0.317	ND	ND
Cannabinol (CBN)	0.050	0.145	0.051*	0.51*
Cannabigerolic acid (CBGA)	0.161	0.464	ND	ND
Cannabigerol (CBG)	0.039	0.111	6.575	65.75
Tetrahydrocannabivarinic Acid (THCVA)	0.136	0.393	ND	ND
Tetrahydrocannabivarin (THCV)	0.035	0.101	ND	ND
Cannabidivarinic Acid (CBDVA)	0.076	0.243	ND	ND
Cannabidivarin (CBDV)	0.042	0.135	0.348	3.48
Cannabichromenic Acid (CBCA)	0.062	0.179	ND	ND
Cannabichromene (CBC)	0.068	0.196	0.078*	0.78*
Total Cannabinoids			**92.649**	**926.49**
Total Potential THC**			0.293	2.93
Total Potential CBD**			85.304	853.04

Notes
N/A

Ryan Weems
PREPARED BY

Daniel Weidensaul
APPROVED BY

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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27460

Batch ID or Lot Number:	Test:	USDA License:
C0908-001	**Residual Solvents**	N/A

Matrix:	Test ID:	Sampler ID:
N/A	T000163124	N/A

Status:	Methods:
N/A	TM04 (GC-MS): Residual Solvents (Colorado Panel)

RESIDUAL SOLVENTS DETERMINATION

Solvent	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	52 - 1042	*ND	
Butanes (Isobutane, n-Butane)	103 - 2063	*ND	
Methanol	48 - 956	*ND	
Pentane	64 - 1277	*ND	
Ethanol	76 - 1524	*ND	
Acetone	75 - 1506	*ND	
Isopropyl Alcohol	85 - 1695	*ND	
Hexane	4 - 90	*ND	
Ethyl Acetate	78 - 1554	*ND	
Benzene	0 - 3	*ND	
Heptanes	72 - 1437	*ND	
Toluene	15 - 291	*ND	
Xylenes (m,p,o-Xylenes)	109 - 2172	*ND	

Hannah Wright
PREPARED BY

Ryan Weems
APPROVED BY

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

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27460

Batch ID or Lot Number:
C0908-001

Test:
Pesticides

USDA License:
N/A

Matrix:
Concentrate

Test ID:
T000163121

Sampler ID:
N/A

Status:
N/A

Method:
TM17(LC-QQQ LC MS/MS):

PESTICIDE DETERMINATION

Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)
Acephate	38	ND	Fenoxycarb	43	ND	Paclobutrazol	41	ND
Acetamiprid	38	ND	Fipronil	55	ND	Permethrin	305	ND
Avermectin	312	ND	Flonicamid	40	ND	Phosmet	39	ND
Azoxystrobin	42	ND	Fludioxonil	286	ND	Prophos	291	ND
Bifenazate	39	ND	Hexythiazox	35	ND	Propoxur	41	ND
Boscalid	41	ND	Imazalil	278	ND	Pyridaben	303	ND
Carbaryl	35	ND	Imidacloprid	37	ND	Spinosad A	34	ND
Carbofuran	40	ND	Kresoxim-methyl	150	ND	Spinosad D	52	ND
Chlorantraniliprole	34	ND	Malathion	286	ND	Spiromesifen	274	ND
Chlorpyrifos	500	ND	Metalaxyl	42	ND	Spirotetramat	303	ND
Clofentezine	287	ND	Methiocarb	38	ND	Spiroxamine 1	18	ND
Diazinon	290	ND	Methomyl	38	ND	Spiroxamine 2	24	ND
Dichlorvos	286	ND	MGK 264 1	160	ND	Tebuconazole	283	ND
Dimethoate	40	ND	MGK 264 2	117	ND	Thiacloprid	38	ND
E-Fenpyroximate	277	ND	Myclobutanil	39	ND	Thiamethoxam	38	ND
Etofenprox	41	ND	Naled	44	ND	Trifloxystrobin	44	ND
Etoxazole	304	ND	Oxamyl	1500	ND			

Samantha Smith

PREPARED BY

Sam Smith

Courtney Richards

APPROVED BY

Courtney Richards

Definitions

LOQ = Limit of Quantification

ppb = Parts per Billion

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27460

Batch ID or Lot Number:	Test:	USDA License:
C0908-001	**Metals**	N/A
Matrix:	Test ID:	Sampler ID:
Unit Co	T000163123	N/A
Status:	Method:	
N/A	TM19 (ICP-MS): Heavy Metals (Colorado Panel)	

HEAVY METALS DETERMINATION

Compound	Dynamic Range (ppm)	Result (ppm)
Arsenic	0.047 - 4.70	ND
Cadmium	0.046 - 4.56	ND
Mercury	0.044 - 4.43	ND
Lead	0.046 - 4.59	ND

Notes

Daniel Weidensaul

PREPARED BY

APPROVED BY

Definitions

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

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Batch ID or Lot Number:	Test:	USDA License:
C0908-001	**Microbial Contaminants**	N/A
Matrix:	**Test ID:**	**Sampler ID:**
Finished Product	T000163122	N/A
Status:	**Methods:**	
N/A	TM25 (qPCR) TM24, TM26, TM27(Culture Plating): Microbial (Colorado Panel)	

MICROBIAL CONTAMINANTS DETERMINATION

Contaminant	Method	LOD	LLOQ	ULOQ	Result
Total Aerobic Count*	TM-26, Culture Plating	10^2 CFU/g	10^3 CFU/g	1.5x10^5 CFU/g	None Detected
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

Notes

Free from visual mold, mildew, and foreign matter

PREPARED B

APPROVED BY Tori King

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:
10^2 = 100 CFU
10^3 = 1,000 CFU
10^4 = 10,000 CFU
10^5 = 100,000 CFU

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Batch ID or Lot Number:	Test:	USDA License:
C0908-001	**Mycotoxins**	N/A

Matrix:	Test ID:	Sampler ID:
Concentrate	T000163125	N/A

Status:	Method:
N/A	TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins (Colorado Panel)

MYCOTOXIN DETERMINATION

Compound	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	3.9 - 127	ND	N/A
Aflatoxin B1	1.2 - 32.5	ND	
Aflatoxin B2	1.2 - 32.3	ND	
Aflatoxin G1	0.9 - 31.2	ND	
Aflatoxin G2	1.2 - 31.5	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Samantha Smith
PREPARED BY

Alex Smith
APPROVED BY

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

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