

# CERTIFICATE OF ANALYSIS

**PRODUCT NAME:** Certified Organic Full Spectrum CBD Tincture - Tropical  
**PRODUCT STRENGTH:** 20 mg per bottle  
**TINCTURE BATCH:** 21306A  
**BEST BY DATE:** 05/02/2023  
**HEMP EXTRACT LOT:** CO729-001

*\*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	Characteristic - Coconut and Hemp, Tropical	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
<b>Potency - Total CBD</b>	HPLC-UV DAD	LOQ*: $\geq$ product strength mg / bottle	<b>20.1 mg</b>	PASS
<b>Potency - D9-THC</b>	HPLC-UV DAD	LOQ: $<0.3\%$ total THC (Full spectrum)	<b>0.1%</b>	PASS
<b>Expanded Pesticide Panel</b>	HPLC-QQQ	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	<b>Below LOQ</b>	PASS
<b>Microbial</b> Escherichia coli (STEC)	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram**	<b>Absent</b>	PASS
<b>Microbial</b> Salmonella	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram	<b>Absent</b>	PASS
<b>Microbial</b> Yeast and Mold	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ $10^2$ CFU/gram	<b>Below LOQ</b>	PASS
<b>Microbial</b> Total Coliforms	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ $10^2$ CFU/gram	<b>Below LOQ</b>	PASS
<b>Microbial</b> Total Aerobic Count	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ $10^3$ CFU/gram	<b>Below LOQ</b>	PASS
<b>Heavy Metals</b>	ICP-MS	Arsenic (As): $\leq 1.5$ ppm† Cadmium (Cd): $\leq 0.5$ ppm Lead (Pb): $\leq 0.5$ ppm Mercury (Hg): $\leq 1.5$ ppm	<b>Below LOQ</b>	PASS
<b>Mycotoxins</b>	ICP-MS	Total Aflatoxins $<20$ ppb†† Aflatoxin B1 $<5$ ppb Ochratoxin $<5$ ppb	<b>Below LOQ</b>	PASS
<b>Residual Solvents</b>	GC-HS-MSD	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	<b>Below LOQ</b>	PASS

\*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

  
 Kayla Kolber  
 Quality Assurance Technician

11/09/2021


Date


**27275**

Batch ID or Lot Number: <b>C0727-001</b>	Test: <b>Potency</b>	Reported: <b>8/17/21</b>	
Matrix: Solution	Test ID: T000155479	Started: 8/12/21	USDA License: N/A
Status: N/A	Method: TM14 (HPLC-DAD): Potency - Standard Cannabinoid Analysis (Colorado Panel)	Received: 08/05/2021 @ 12:37 PM	Sampler ID: N/A

## CANNABINOID PROFILE

Compound	LOD (mg/mL)	LOQ (mg/mL)	Result (mg/mL)	Result (mg/g)	Notes
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.132	0.438	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.149	0.494	0.970	1.03	Density = 0.945g/mL
Cannabidiolic acid (CBDA)	0.220	0.524	ND	ND	
Cannabidiol (CBD)	0.214	0.511	32.121	33.99	
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.164	0.544	ND	ND	
Cannabinolic Acid (CBNA)	0.094	0.312	ND	ND	
Cannabinol (CBN)	0.043	0.143	0.098*	0.1*	
Cannabigerolic acid (CBGA)	0.138	0.457	ND	ND	
Cannabigerol (CBG)	0.033	0.109	2.561	2.71	
Tetrahydrocannabivarinic Acid (THCVA)	0.116	0.386	ND	ND	
Tetrahydrocannabivarin (THCV)	0.030	0.099	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.092	0.218	ND	ND	
Cannabidivarin (CBDV)	0.051	0.121	0.183	0.19	
Cannabichromenic Acid (CBCA)	0.053	0.176	ND	ND	
Cannabichromene (CBC)	0.058	0.192	ND	ND	
<b>Total Cannabinoids</b>			<b>35.933</b>	<b>38.02</b>	
Total Potential THC**			0.970	1.03	
Total Potential CBD**			32.121	33.99	

 Daniel Weidensaul  
17-Aug-2021  
01:50 PM

 Taylor Brevik  
17-Aug-21  
1:56 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)

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.



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Certificate #4329.02

**27275**

Batch ID or Lot Number:	Test:	Reported:
<b>C0727-001</b>	<b>Pesticides</b>	<b>8/11/21</b>

Matrix:	Test ID:	Started:	USDA License:
Concentrate	T000155480	8/10/21	N/A

Status:	Method:	Received:	Sampler ID:
N/A	TM17(LC-QQQ LC MS/MS):	08/05/2021 @ 12:37 PM	N/A

## PESTICIDE DETERMINATION

Compound	LOQ (ppm)	Result (ppm)	Compound	LOQ (ppm)	Result (ppm)	Compound	LOQ (ppm)	Result (ppm)
Acephate	54	ND	Fenoxycarb	54	ND	Paclobutrazol	54	ND
Acetamiprid	54	ND	Fipronil	54	ND	Permethrin	324	ND
Avermectin	324	ND	Flonicamid	54	ND	Phosmet	54	ND
Azoxystrobin	54	ND	Fludioxonil	324	ND	Prophos	324	ND
Bifenazate	54	ND	Hexythiazox	54	ND	Propoxur	54	ND
Boscalid	54	ND	Imazalil	324	ND	Pyridaben	324	ND
Carbaryl	54	ND	Imidacloprid	54	ND	Spinosad A	54	ND
Carbofuran	54	ND	Kresoxim-methyl	150	ND	Spinosad D	324	ND
Chlorantraniliprole	54	ND	Malathion	324	ND	Spiromesifen	324	ND
Chlorpyrifos	500	ND	Metalaxyl	54	ND	Spirotetramat	324	ND
Clofentezine	324	ND	Methiocarb	54	ND	Spiroxamine 1	54	ND
Diazinon	324	ND	Methomyl	54	ND	Spiroxamine 2	54	ND
Dichlorvos	324	ND	MGK 264 1	324	ND	Tebuconazole	324	ND
Dimethoate	54	ND	MGK 264 2	324	ND	Thiacloprid	54	ND
E-Fenpyroximate	324	ND	Myclobutanil	54	ND	Thiamethoxam	54	ND
Etofenprox	54	ND	Naled	54	ND	Trifloxystrobin	54	ND
Etoxazole	324	ND	Oxamyl	1500	ND			

  
 Taylor Brevik  
 8/11/2021  
 4:08:00 PM

  
 Sam Smith  
 8/11/2021  
 4:11:00 PM

PREPARED BY / DATE

APPROVED BY / DATE

### Definitions

LOQ = Limit of Quantification  
 ppb = Parts per Billion

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**OFTT900**


Batch ID or Lot Number: <b>21306A</b>	Test: <b>Microbial Contaminants</b>	Reported: <b>11/8/21</b>	
Matrix: Finished Product	Test ID: T000174572	Started: 11/5/21	USDA License: N/A
Status: N/A	Methods: TM25 (qPCR) TM24, TM26, TM27(Culture Plating): Microbial (Colorado Panel)	Received: 11/05/2021 @ 10:59 AM	Sampler ID: N/A

**MICROBIAL CONTAMINANTS DETERMINATION**

Contaminant	Method	LOD	LLOQ	ULOQ	Result	Notes
<b>Total Aerobic Count*</b>	TM-26, Culture Plating	10 <sup>2</sup> CFU/g	10 <sup>3</sup> CFU/g	1.5x10 <sup>5</sup> CFU/g	None Detected	Free from visual mold, mildew, and foreign matter
<b>Total Coliforms*</b>	TM-27, Culture Plating	10 <sup>1</sup> CFU/g	10 <sup>2</sup> CFU/g	1.5x10 <sup>4</sup> CFU/g	None Detected	
<b>Total Yeast and Mold*</b>	TM-24, Culture Plating	10 <sup>1</sup> CFU/g	10 <sup>2</sup> CFU/g	1.5x10 <sup>4</sup> CFU/g	None Detected	
<b>E. coli (STEC)</b>	TM-25, PCR	1 CFU/25 g	NA	NA	Absent	
<b>Salmonella</b>	TM-25, PCR	1 CFU/25 g	NA	NA	Absent	


 Brianne Maillot  
 11/8/2021  
 3:59:00 PM

PREPARED BY / DATE


 Brett Hudson  
 11/8/2021  
 4:49:00 PM

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: 10<sup>2</sup> = 100 CFU  
 10<sup>3</sup> = 1,000 CFU  
 10<sup>4</sup> = 10,000 CFU  
 10<sup>5</sup> = 100,000 CFU

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**27275**

Batch ID or Lot Number: <b>C0727-001</b>	Test: <b>Residual Solvents</b>	Reported: <b>8/12/21</b>	
Matrix: N/A	Test ID: T000155483	Started: 8/11/21	USDA License: N/A
Status: N/A	Methods: TM04 (GC-MS): Residual Solvents (Colorado Panel)	Received: 08/05/2021 @ 12:37 PM	Sampler ID: N/A

## RESIDUAL SOLVENTS DETERMINATION

Solvent	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	79 - 1585	*ND	
Butanes	149 - 2976	*ND	
(Isobutane, n-Butane)			
Methanol	55 - 1102	*ND	
Pentane	81 - 1628	*ND	
Ethanol	87 - 1740	*ND	
Acetone	90 - 1792	*ND	
Isopropyl Alcohol	99 - 1978	*ND	
Hexane	6 - 110	*ND	
Ethyl Acetate	91 - 1819	*ND	
Benzene	0 - 4	*ND	
Heptanes	86 - 1728	*ND	
Toluene	16 - 329	*ND	
Xylenes	121 - 2429	*ND	
(m,p,o-Xylenes)			

 Karen Winternheimer  
12-Aug-21  
3:07 PM

PREPARED BY / DATE

 Ryan Weems  
12-Aug-21  
3:09 PM

APPROVED BY / DATE

### Definitions

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

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**27275**

Batch ID or Lot Number: <b>C0727-001</b>	Test: <b>Mycotoxins</b>	Reported: <b>8/12/21</b>	Location: 1250 S Capital of Texas Highway, B West Lake Hills, TX 78746-6446
Matrix: Concentrate	Test ID: T000155484	Started: 8/11/21	USDA License: N/A
Status: N/A	Method: TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins (Colorado Panel)	Received: 08/05/2021 @ 12:37 PM	Sampler ID: N/A


## MYCOTOXIN DETERMINATION

Compound	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	5.2 - 139.9	ND	N/A
Aflatoxin B1	1 - 36.2	ND	
Aflatoxin B2	1.1 - 35.4	ND	
Aflatoxin G1	1 - 35.6	ND	
Aflatoxin G2	1.2 - 34.3	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	



Taylor Brevik  
12-Aug-21  
2:47 PM

PREPARED BY / DATE



Sam Smith  
12-Aug-21  
2:50 PM

APPROVED BY / DATE

### Definitions

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

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**27275**Batch ID or Lot Number:  
**C0727-001**Test:  
**Metals**Reported:  
**8/13/21**Matrix:  
Unit CoTest ID:  
T000155482Started:  
8/12/21USDA License:  
N/AStatus:  
N/AMethod:  
TM19 (ICP-MS): Heavy Metals  
(Colorado Panel)Received:  
08/05/2021 @ 12:37 PMSampler ID:  
N/A**HEAVY METALS DETERMINATION**

Compound	Dynamic Range (ppb)	Result (ppb)	Notes
Arsenic	0.044 - 4.39	ND	
Cadmium	0.048 - 4.78	ND	
Mercury	0.044 - 4.38	ND	
Lead	0.044 - 4.38	ND	

 Sam Smith  
13-Aug-21  
1:11 PM

PREPARED BY / DATE

 Daniel Weidensaul  
13-Aug-21  
1:14 PM

APPROVED BY / DATE

**Definitions**

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

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