JOY ORGANICS

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Organic CBD Tincture - Orange
PRODUCT STRENGTH: 900mg
TINCTURE BATCH: 220624
BEST BY DATE: 6/27/2024
HEMP EXTRACT LOT: BCA-00410-220624

Physical Atttributes

Test	Method	Specification	Results
Color	Joy Internal	Golden to Amber	PASS
Odor	Joy Internal	Characteristic - Coconut and Hemp, Orange	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	**991mg**	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
10^2=100 CFU
10^3=1,000 CFU

Quality Certified — Name — 11/1/2022 — Date

2519 S. Shields St. #1042, Fort Collins, CO 80526
Tel: (833) 569-7223 www.joyorganics.com

Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number:	22-007617/D002.R000
Report Date:	07/07/2022
ORELAP#:	OR100028
Purchase Order:	
Received:	06/29/22 11:00

Product identity: OTO900-220624
Client/Metrc ID: 900mg 5G Broad Spectrum Tincture Bulk lot #BCA-00410-220624 .
Laboratory ID: 22-007617-0002

Summary

Potency:

Analyte	Result	Limits	Units	Status
CBD	3.48		%	
CBDV†	0.0191		%	
CBG†	0.211		%	
CBT†	0.0399		%	
Analyte per 1g	**Result**	**Limits**	**Units**	**Status**
CBD per 1g	34.8		mg/1g	
CBDV per 1g†	0.191		mg/1g	
CBG per 1g†	2.11		mg/1g	
CBT per 1g†	0.399		mg/1g	

CBD-Total per 1g	34.8 mg/1g
THC-Total per 1g	<LOQ

(Reported in milligrams per serving)

Residual Solvents:

All analytes passing and less than LOQ.

Pesticides:

All analytes passing and less than LOQ.

Metals:

Less than LOQ for all analytes.

Microbiology:

Less than LOQ for all analytes.

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Received: 06/29/22 11:00

Product identity: 900mg 5G Broad Spectrum Tincture Bulk lot #BCA-00410-220624 .

Client/Metrc ID: OTO900-220624

Laboratory ID: 22-007617-0002
Evidence of Cooling: No
Temp: Relinquished 26.2 °C
by: Serving Size #1: UPS
1 g

Sample Results

Potency **Method:** J AOAC 2015 V98-6 (mod) **Units** % **Batch:** 2205650 **Analyze:** 7/2/22 3:52:00 AM

Analyte	Result	Limits	Units	LOQ	Notes
CBC	< LOQ		%	0.00325	
CBC-A†	< LOQ		%	0.00325	
CBC-Total†	< LOQ		%	0.00610	
CBD	3.48		%	0.0325	
CBD-A	< LOQ		%	0.00325	
CBD-Total	3.48		%	0.0353	
CBDV†	0.0191		%	0.00325	
CBDV-A†	< LOQ		%	0.00325	
CBDV-Total†	0.0191		%	0.00606	
CBE†	< LOQ		%	0.00325	
CBG†	0.211		%	0.00325	
CBG-A†	< LOQ		%	0.00325	
CBG-Total	0.211		%	0.00606	
CBL†	< LOQ		%	0.00325	
CBL-A†	< LOQ		%	0.00325	
CBL-Total†	< LOQ		%	0.00610	
CBN	< LOQ		%	0.00325	
CBT†	0.0399		%	0.00325	
Δ8-THCV	< LOQ		%	0.00325	
Δ8-THC	< LOQ		%	0.00325	
Δ9-THC	< LOQ		%	0.00325	
exo-THC	< LOQ		%	0.00325	
THC-A	< LOQ		%	0.00325	
THC-Total	< LOQ		%	0.00610	
THCV†	< LOQ		%	0.00325	
THCV-A†	< LOQ		%	0.00325	
THCV-Total†	< LOQ		%	0.00606	
Total Cannabinoids†	**3.75**		%		

Potency per 1g **Method:** J AOAC 2015 V98-6 (mod) **Units** mg/se **Batch:** 2205650 **Analyze:** 7/2/22 3:52:00 AM

Analyte	Result	Limits	Units	LOQ	Notes
CBC per 1g†	< LOQ		mg/1g	0.0325	

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Purchase Order:
Received: 06/29/22 11:00

Potency per 1g

Method: J AOAC 2015 V98-6 (mod) **Units** mg/se **Batch:** 2205650 **Analyze:** 7/2/22 3:52:00 AM

Analyte	Result	Limits	Units	LOQ	Notes
CBC-A per 1g†	< LOQ		mg/1g	0.0325	
CBC-Total per 1g†	< LOQ		mg/1g	0.0610	
CBD per 1g	34.8		mg/1g	0.325	
CBD-A per 1g	< LOQ		mg/1g	0.0325	
CBD-Total per 1g	34.8		mg/1g	0.353	
CBDV per 1g†	0.191		mg/1g	0.0325	
CBDV-A per 1g†	< LOQ		mg/1g	0.0325	
CBDV-Total per 1g†	0.191		mg/1g	0.0606	
CBE per 1g†	< LOQ		mg/1g	0.0325	
CBG per 1g†	2.11		mg/1g	0.0325	
CBG-A per 1g†	< LOQ		mg/1g	0.0325	
CBG-Total per 1g†	2.11		mg/1g	0.0606	
CBL per 1g†	< LOQ		mg/1g	0.0325	
CBL-A per 1g†	< LOQ		mg/1g	0.0325	
CBL-Total per 1g†	< LOQ		mg/1g	0.0610	
CBN per 1g	< LOQ		mg/1g	0.0325	
CBT per 1g†	0.399		mg/1g	0.0325	
Δ8-THCV per 1g†	< LOQ		mg/1g	0.0325	
Δ8-THC per 1g†	< LOQ		mg/1g	0.0325	
Δ9-THC per 1g	< LOQ		mg/1g	0.0325	
exo-THC per 1g†	< LOQ		mg/1g	0.0325	
THC-A per 1g	< LOQ		mg/1g	0.0325	
THC-Total per 1g	< LOQ		mg/1g	0.0610	
THCV per 1g†	< LOQ		mg/1g	0.0325	
THCV-A per 1g†	< LOQ		mg/1g	0.0325	
THCV-Total per 1g†	< LOQ		mg/1g	0.0610	
Total Cannabinoids per 1g	37.5		mg/1g		

Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Status	Notes
Aerobic Plate Count	< LOQ	10,000.00	cfu/g	10	2205548	07/02/22	AOAC 990.12 (Petrifilm)	pass	X
E.coli	< LOQ	100.00	cfu/g	10	2205546	07/02/22	AOAC 991.14 (Petrifilm)	pass	X
Total Coliforms	< LOQ	100.00	cfu/g	10	2205546	07/02/22	AOAC 991.14 (Petrifilm)	pass	X
Mold (RAPID Petrifilm)	< LOQ	1,000.00	cfu/g	10	2205547	07/03/22	AOAC 2014.05 (RAPID)	pass	X
Yeast (RAPID Petrifilm)	< LOQ	1,000.00	cfu/g	10	2205547	07/03/22	AOAC 2014.05 (RAPID)	pass	X
Salmonella spp. by PCR	Negative		/25g		2205551	07/01/22	AOAC 2020.02		X
EHEC including STEC	Negative		/25g		2205553	07/01/22	AOAC RI 121806		X

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ORELAP#: OR100028
Purchase Order:
Received: 06/29/22 11:00

Solvents **Method:** Residual Solvents by GC/MS **Units** µg/g **Batch** 2205605 **Analyze** 07/01/22 12:42 PM

Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes
2-Methylbutane	< LOQ	1000	200	pass		2-Methylpentane	< LOQ	60.0	30.0	pass	
2-Propanol (IPA)	< LOQ	1000	200	pass		2,2-Dimethylbutane	< LOQ	60.0	30.0	pass	
2,2-Dimethylpropane	< LOQ	1000	200	pass		2,3-Dimethylbutane	< LOQ	60.0	30.0	pass	
3-Methylpentane	< LOQ	60.0	30.0	pass		Acetone	< LOQ	1000	200	pass	
Benzene	< LOQ	2.00	1.00	pass		Butanes (sum)	< LOQ	1000	400	pass	
Ethanol†	< LOQ	1000	200	pass		Ethyl acetate	< LOQ	1000	200	pass	
Hexanes (sum)	< LOQ	60.0	150	pass		m,p-Xylene	< LOQ	430	200	pass	
Methanol	< LOQ	600	200	pass		Methylpropane	< LOQ	1000	200	pass	
n-Butane	< LOQ	1000	200	pass		n-Heptane	< LOQ	1000	200	pass	
n-Hexane	< LOQ	60.0	30.0	pass		n-Pentane	< LOQ	1000	200	pass	
o-Xylene	< LOQ	430	200	pass		Pentanes (sum)	< LOQ	1000	600	pass	
Propane	< LOQ	1000	200	pass		Toluene	< LOQ	180	100	pass	
Total Xylenes	< LOQ	430	400	pass							

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ORELAP#: OR100028
Purchase Order:
Received: 06/29/22 11:00

Pesticides **Method:** AOAC 2007.01 & EN 15662 (mod) **Units** mg/kg **Batch** 2205582 **Analyze** 06/30/22 04:15 PM

Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes
Abamectin	< LOQ	0.25	0.070	pass		Acephate	< LOQ	0.050	0.020	pass	
Acequinocyl	< LOQ	0.030	0.025	pass		Acetamiprid	< LOQ	0.050	0.050	pass	
Aldicarb	< LOQ	0.50	0.100	pass		Allethrin	< LOQ	0.10	0.100	pass	
Atrazine	< LOQ	0.0250	0.025	pass		Azadirachtin	< LOQ	1.0	0.500	pass	
Azoxystrobin	< LOQ	0.010	0.010	pass		Benzovindiflupyr	< LOQ	0.010	0.010	pass	
Bifenazate	< LOQ	0.010	0.010	pass		Bifenthrin	< LOQ	1.0	0.100	pass	
Boscalid	< LOQ	0.010	0.010	pass		Buprofezin	< LOQ	0.020	0.010	pass	
Carbaryl	< LOQ	0.025	0.025	pass		Carbofuran	< LOQ	0.010	0.010	pass	
Chlorantraniliprole	< LOQ	0.020	0.010	pass		Chlorfenapyr	< LOQ	1.5	0.100	pass	
Chlorpyrifos	< LOQ	0.50	0.010	pass		Clofentezine	< LOQ	0.010	0.010	pass	
Clothianidin	< LOQ	0.025	0.025	pass		Coumaphos	< LOQ	0.010	0.010	pass	
Cyantraniliprole	< LOQ	0.010	0.010	pass		Cyfluthrin	< LOQ	0.20	0.200	pass	
Cyhalothrin,lambda	< LOQ	0.0200	0.250	pass		Cypermethrin	< LOQ	0.30	0.300	pass	
Cyprodinil	< LOQ	0.010	0.010	pass		Daminozide	< LOQ	0.10	0.050	pass	
Deltamethrin	< LOQ	0.50	0.500	pass		Diazinon	< LOQ	0.020	0.010	pass	
Dichlorvos	< LOQ	0.050	0.050	pass		Dimethoate	< LOQ	0.010	0.010	pass	
Dimethomorph	< LOQ	0.050	0.050	pass		Dinotefuran	< LOQ	0.050	0.050	pass	
Diuron	< LOQ	0.125	0.125	pass		Dodemorph	< LOQ	0.050	0.050	pass	
Endosulfan I (alpha)	< LOQ	2.5	0.050	pass		Endosulfan II (beta)	< LOQ	2.5	0.050	pass	
Endosulfan sulfate	< LOQ	2.5	0.050	pass		Ethoprophos	< LOQ	0.010	0.010	pass	
Etofenprox	< LOQ	0.050	0.010	pass		Etoxazole	< LOQ	0.020	0.010	pass	
Etridiazole	< LOQ	0.15	0.050	pass		Fenhexamid	< LOQ	0.13	0.100	pass	
Fenoxycarb	< LOQ	0.010	0.010	pass		Fenpyroximate	< LOQ	0.020	0.020	pass	
Fensulfothion	< LOQ	0.010	0.010	pass		Fenthion	< LOQ	0.010	0.010	pass	
Fenvalerate	< LOQ		0.200			Fipronil	< LOQ	0.010	0.010	pass	
Flonicamid	< LOQ	0.025	0.025	pass		Fludioxonil	< LOQ	0.010	0.010	pass	
Fluopyram	< LOQ	0.010	0.010	pass		Hexythiazox	< LOQ	0.010	0.010	pass	
Imazalil	< LOQ	0.010	0.010	pass		Imidacloprid	< LOQ	0.010	0.010	pass	
Iprodione	< LOQ	0.50	0.500	pass		Kinoprene	< LOQ	1.3	0.200	pass	
Kresoxim-methyl	< LOQ	0.15	0.010	pass		Malathion	< LOQ	0.010	0.010	pass	
Metalaxyl	< LOQ	0.010	0.010	pass		Methiocarb	< LOQ	0.010	0.010	pass	
Methomyl	< LOQ	0.025	0.025	pass		Methoprene	< LOQ	2.0	1.00	pass	
Mevinphos	< LOQ	0.025	0.025	pass		MGK-264	< LOQ	0.050	0.050	pass	
Myclobutanil	< LOQ	0.010	0.010	pass		Naled	< LOQ	0.10	0.100	pass	
Novaluron	< LOQ	0.025	0.025	pass		Oxamyl	< LOQ	1.5	0.500	pass	
Paclobutrazole	< LOQ	0.010	0.010	pass		Parathion-Methyl	< LOQ	0.050	0.030	pass	
Permethrin	< LOQ	0.50	0.040	pass		Phenothrin	< LOQ	0.050	0.025	pass	
Phosmet	< LOQ	0.020	0.010	pass		Piperonyl butoxide	< LOQ	1.3	0.200	pass	
Pirimicarb	< LOQ	0.010	0.010	pass		Prallethrin	< LOQ	0.050	0.050	pass	
Propiconazole	< LOQ	0.10	0.010	pass		Propoxur	< LOQ	0.010	0.010	pass	
Pyraclostrobin	< LOQ	0.010	0.010	pass		Pyrethrins (total)	< LOQ	0.050	0.025	pass	
Pyridaben	< LOQ	0.020	0.020	pass		Pyriproxyfen	< LOQ	0.0100	0.010	pass	
Quintozene	< LOQ	0.020	0.020	pass		Resmethrin	< LOQ	0.050	0.020	pass	
Spinetoram	< LOQ	0.010	0.010	pass		Spinosad	< LOQ	0.010	0.010	pass	
Spirodiclofen	< LOQ	0.25	0.250	pass		Spiromesifen	< LOQ	3.0	0.030	pass	
Spirotetramat	< LOQ	0.010	0.010	pass		Spiroxamine	< LOQ	0.10	0.010	pass	

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Pesticides

Method: AOAC 2007.01 & EN 15662 (mod) **Units** mg/kg **Batch** 2205582 **Analyze** 06/30/22 04:15 PM

Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes
Tebuconazole	< LOQ	0.010	0.010	pass		Tebufenozide	< LOQ	0.010	0.010	pass	
Teflubenzuron	< LOQ	0.025	0.025	pass		Tetrachlorvinphos	< LOQ	0.010	0.010	pass	
Tetramethrin	< LOQ	0.10	0.050	pass		Thiacloprid	< LOQ	0.010	0.010	pass	
Thiamethoxam	< LOQ	0.010	0.010	pass		Thiophanate-Methyl	< LOQ	0.050	0.030	pass	
Trifloxystrobin	< LOQ	0.010	0.010	pass							

Metals

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Status	Notes
Arsenic	< LOQ	1.50	mg/kg	0.0874	2205591	06/30/22	AOAC 2013.06 (mod.)	pass	X
Cadmium	< LOQ	0.50	mg/kg	0.0874	2205591	06/30/22	AOAC 2013.06 (mod.)	pass	X
Lead	< LOQ	0.50	mg/kg	0.0874	2205591	06/30/22	AOAC 2013.06 (mod.)	pass	X
Mercury	< LOQ	1.50	mg/kg	0.0437	2205591	06/30/22	AOAC 2013.06 (mod.)	pass	X

Mycotoxins

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Status	Notes
Aflatoxin B2†	< LOQ	5.00	µg/kg	5.00	2205724	07/07/22	AOAC 2007.01 & EN	pass	
Aflatoxin B1†	< LOQ	5.00	µg/kg	5.00	2205724	07/07/22	AOAC 2007.01 & EN	pass	
Aflatoxin G1†	< LOQ	5.00	µg/kg	5.00	2205724	07/07/22	AOAC 2007.01 & EN	pass	
Aflatoxin G2†	< LOQ	5.00	µg/kg	5.00	2205724	07/07/22	AOAC 2007.01 & EN	pass	
Ochratoxin A†	< LOQ	5.00	µg/kg	5.00	2205724	07/07/22	AOAC 2007.01 & EN	pass	
Ochratoxin B†	< LOQ		µg/kg	2.00	2205724	07/07/22	AOAC 2007.01 & EN		

SC Labs®
Formerly Botanacor Labs

Official Compliance: Colorado

CERTIFICATE OF ANALYSIS

OTO900-220624

Batch ID or Lot Number:	Test:	Reported:	USDA License:
221007A	**Microbial Contaminants**	**14Oct2022**	N/A
Matrix:	Test ID:	Started:	Sampler ID:
Finished Product	T000224183	11Oct2022	N/A
	Method(s): TM25 (qPCR) TM24, TM26, TM27 (Culture Plating): Microbial (Colorado Panel)	Received: 10Oct2022	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
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

Jacob Folkerts
14Oct2022
12:13:00 PM MDT
PREPARED BY / DATE

Eden Thompson-Wright
14Oct2022
05:56:00 PM MDT
APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/6cc3f394-8aa1-495a-a567-e75617602c0a

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

6cc3f3948aa1495aa567e75617602c0a.2