# CERTIFICATE OF ANALYSIS

#### **PRODUCT NAME: PRODUCT STRENGTH:** LOT NUMBER: **BEST BY DATE: HEMP EXTRACT LOT NUMBER:**

CBD Tincture - Orange
900 mg
20LL005K11
07/15/2021
110419

#### Physical Atttributes

Test	Method	Specification	Results
Color	SOP-100	Golden to Amber	PASS
Odor	SOP-100	Characteristic - coconut and hemp, orange	PASS
Appearance	SOP-100	Golden to Amber oil in brown glass bottle with dropper	PASS
Primary Package Eval.	SOP-132	Container clean and free of filth. Container caps tight and shrink bands intact	PASS
Secondary Package Eval.	SOP-132	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	SOP-111	855-1125 mg CBD LOQ*: 10 PPM† (0.001%)	<u>998.3</u>	PASS
Potency - D9-THC	SOP-111	None Detected LOQ: 10 PPM (0.001%)	<u>ND</u>	PASS
FL Compliant Pesticide Panel	SOP-111	Florida State Hemp Program Rule 5B-57.014: Action Limits for Pesticides	<u>ND</u>	PASS
Microbial - Stec E.Coli	SOP-111	Complies with USP 61/62	Below LOD	PASS
Microbial - Salmonella	SOP-111	Complies with USP 61/62	Below LOD	PASS
Microbial - Aspergillus	SOP-111	Complies with USP 61/62	Below LOD	PASS
CA Compliant Heavy Metal Panel	SOP-111	Arsenic (As): ≤1.5 PPM Cadmium (Cd): ≤0.5 PPM Mercury (Hg): ≤1.0 PPM Lead (Pb): ≤0.5 PPM	Below LOQ	PASS

\* Level of Quantitation, † Parts Per Million

Quality Certified by:

Darcie Moran

02/12/2020

Darcie Moran Manager of Quality Assurance Date

Cannabinoids Test SHIMADZU INTEGRATED UPLC-PDA



Order #: 48114 Order Name: 900.Orange.005-rush Batch#: 20LL005K11 Received: 02/04/2020 Completed: 02/07/2020



#### Sample



1 bottle = 30 ml per bottle x density (0.945) x Cannabinoid concentration

#### GSL SOP 400 PREPARED: 02/04/2020 13:06:26 UPLOADED: 02/05/2020 10:31:51 weight(%) Cannabinoids LOQ mg/bottle mg/g D9-THC 10 PPM N/D N/D N/D THCA 10 PPM N/D N/D N/D CBD 10 PPM 998.3 3.521% 35.215 CBDA 20 PPM N/D N/D N/D CBDV 20 PPM N/D N/D N/D СВС 10 PPM N/D N/D N/D CBN 10 PPM N/D N/D N/D CBG 10 PPM 0.109% 1.087 30.8 CBGA 20 PPM N/D N/D N/D D8-THC 10 PPM N/D N/D N/D THCV 10 PPM N/D N/D N/D TOTAL D9-THC N/D N/D N/D TOTAL CBD\* 3.521% 35.215 998.3 TOTAL CANNABINOIDS 3.630% 36.302 1,029.1

Cannabinoid Weight(%) 4 3 2 1 0 CBDV CBDA CBGA CBG CBD THCV CBN D9-THC D8-THC CBC THCA

Reporting Limit 10 ppm \*Total CBD = CBD + CBDA x 0.877

N/D - Not Detected, B/LOQ - Below Limit of Quantification

Dr. Andrew Hall, Ph.D., Chief Scientific Officer

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Ben Witten, MS, MT., Lab Director

Green Scientific Labs info@greenscientificlabs.com 1-833 TEST CBD





Order #: 48114 Order Name: 900.Orange.005-rush Batch#: 20LL005K11 Received: 02/04/2020 Completed: 02/07/2020



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#### **PESTICIDE ANALYSIS:**

GSL SOP 401

PREPARED: 02/04/2020 16:53:59

UPLOADED: 02/05/2020 15:31:03

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GCMS-MS - Shimadzu GCMS-TQ8040

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
CAPTAN	0.700	N/D	0.003	0.001
CHLORDANE	0.100	N/D	0.003	0.001
CHLORFENAPYR	0.100	N/D	0.003	0.001
COUMAPHOS	0.100	N/D	0.003	0.001
CYFLUTHRIN	2.000	N/D	0.003	0.001

Pesticide	Action Leve	l Results	LOQ	LOD
resticide	(ppm)	(ppm)	(ppm)	(ppm)
CYPERMETHRIN	1.000	N/D	0.003	0.001
FIPRONIL	0.100	N/D	0.003	0.001
FLUDIOXONIL	0.100	N/D	0.003	0.001
PARATHION-METHYL	0.100	N/D	0.003	0.001
PENTACHLORONITROBENZENE	0.100	N/D	0.003	0.001

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LCMS-MS - Shimadzu LCMS-8060

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
ABAMECTIN B1A	0.100	N/D	0.005	0.001
ACEPHATE	0.100	N/D	0.001	0.001
ACEQUINOCYL	0.100	N/D	0.001	0.001
ACETAMIPRID	0.100	N/D	0.005	0.001
ALDICARB	0.100	N/D	0.005	0.001
AZOXYSTROBIN	0.100	N/D	0.001	0.001
BIFENAZATE	0.100	N/D	0.005	0.001
BIFENTHRIN	3.000	N/D	0.005	0.001
BOSCALID	0.100	N/D	0.005	0.001
CARBARYL	0.500	N/D	0.003	0.001
CARBOFURAN	0.100	N/D	0.001	0.001
CHLORANTRANILIPROLE	10.000	N/D	0.005	0.005
CHLORPYRIFOS	0.100	N/D	0.001	0.001
CLOFENTEZINE	0.100	N/D	0.001	0.001
DAMINOZIDE	0.100	N/D	0.005	0.001
DIAZANON	0.100	N/D	0.001	0.001
DICHLORVOS	0.100	N/D	0.005	0.001
DIMETHOATE	0.100	N/D	0.001	0.001
DIMETHOMORPH	2.000	N/D	0.005	0.001
ETHOPROPHOS	0.100	N/D	0.001	0.001
ETOFENPROX	0.100	N/D	0.001	0.001
ETOXAZOLE	0.100	N/D	0.010	0.005
FENHEXAMID	0.100	N/D	0.005	0.001
FENOXYCARB	0.100	N/D	0.005	0.001
FENPYROXIMATE	0.100	N/D	0.001	0.001
FLONICAMID	0.100	N/D	0.025	0.010
HEXYTHIAZOX	0.100	N/D	0.005	0.001
IMAZALIL	0.100	N/D	0.005	0.001

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
IMIDACLOPRID	5.000	N/D	0.005	0.001
KRESOXIM-METHYL	0.100	N/D	0.010	0.005
MALATHION	0.500	N/D	0.005	0.001
METALAXYL	2.000	N/D	0.001	0.001
METHIOCARB	0.100	N/D	0.005	0.001
METHOMYL	1.000	N/D	0.001	0.001
MEVINPHOS	0.100	N/D	0.001	0.001
MYCLOBUTANIL	0.100	N/D	0.005	0.001
NALED	0.100	N/D	0.005	0.001
OXAMYL	0.500	N/D	0.001	0.001
PACLOBUTRAZOL	0.100	N/D	0.005	0.001
PERMETHRINS	0.500	N/D	0.005	0.001
PHOSMET	0.100	N/D	0.005	0.001
PIPERONYL BUTOXIDE	3.000	N/D	0.001	0.001
PRALLETHRIN	0.100	N/D	0.005	0.005
PROPICONAZOLE	0.100	N/D	0.010	0.005
PROPOXUR	0.100	N/D	0.001	0.001
PYRETHRINS (PYRETHRIN I)	0.500	N/D	0.005	0.005
PYRIDABEN	0.100	N/D	0.005	0.001
SPINETORAM	0.100	N/D	0.001	0.001
SPINOSAD	0.100	N/D	0.001	0.001
SPIROMESIFEN	0.100	N/D	0.005	0.001
SPIROTETRAMAT	0.100	N/D	0.001	0.001
SPIROXAMINE	0.100	N/D	0.001	0.001
TEBUCONAZOLE	0.100	N/D	0.005	0.001
THIACLOPRID	0.100	N/D	0.001	0.001
THIAMETHOXAM	5.000	N/D	0.001	0.001
TRIFLOXYSTROBIN	0.100	N/D	0.001	0.001

N/D = Not Detected, A/LOQ = Above LOQ Level, B/LOQ = Below LOQ Level, B/LOD = Below LOD Level



Dr. Andrew Hall, Ph.D., Chief Scientific Officer Ben Witten, MS, MT., Lab Director

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Order #: 48114 Order Name: 900.Orange.005-rush Batch#: 20LL005K11 Received: 02/04/2020 Completed: 02/07/2020



#### **RESIDUAL SOLVENTS:**

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

GSL SOP 405 Prepared: 02/04/2020 16:58:20 Uploaded: 02/05/2020 07:41:22

Residual Solvent	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
ACETONE	5,000	N/D	140	20
ACETONITRILE	410	N/D	25	1
BENZENE	1	N/D	1	0.5
BUTANE	5,000	N/D	50	10
CHLOROFORM	1	N/D	1	0.5
DICHLOROETHANE	1	N/D	1	0.5
DICHLOROMETHANE	1	N/D	1	0.5
ETHANOL	5,000	N/D	140	20
ETHYL ACETATE	5,000	N/D	140	20
ETHYL ETHER	5,000	N/D	140	20
SOPROPYL ALCOHOL	5,000	N/D	140	20
METHANOL	3,000	N/D	100	20
N-HEPTANE	5,000	N/D	140	20
N-HEXANE	290	N/D	18	10
PENTANE	5,000	N/D	140	20
PROPANE	5,000	N/D	20	1
TOLUENE	890	N/D	53	1
TRICHLOROETHENE	1	N/D	0	0
XYLENES	2,170	N/D	130	20

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Ben Witten, MS, MT., Lab Director

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Order #: 48114 Order Name: 900.Orange.005-rush Batch#: 20LL005K11 Received: 02/04/2020 Completed: 02/07/2020



#### **Microbial Analysis:**

Microbial Analysis GSL SOP 406

Uploaded: 02/07/2020 09:37:04

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PCR - Agilent AriaMX Test	Test Method Used	Device Used	LOD	Allowable Criteria	Actual Result	Pass/Fai
STEC E.COLI*	USP 61/62†	ARIAMX PCR	2 COPIES OF DNA	PRESENCE / ABSENT	BELOW LOD	PASS
SALMONELLA*	USP 61/62†	ARIAMX PCR	5 COPIES OF DNA	PRESENCE / ABSENT	BELOW LOD	PASS
ASPERGILLUS	USP 61/62†	ARIAMX PCR	ASP_LOD***	PRESENCE / ABSENT	BELOW LOD	PASS
YEAST AND MOLD	USP 61/62†	ARIAMX PCR	363.05518 CFU/G**	1,000	BELOW THRESHOLD	PASS
TOTAL AEROBIC BACTERIA	USP 61/62†	ARIAMX PCR	0.25316 CFU/G**	10,000	BELOW THRESHOLD	PASS
COLIFORM	USP 61/62†	ARIAMX PCR	3.41539 CFU/G**	100	BELOW THRESHOLD	PASS
ENTEROBACTERIACEAE	USP 61/62†	ARIAMX PCR	0.32951 CFU/G**	100	BELOW THRESHOLD	PASS

† USP 61 (enumeration of bacteria TAC, TYM, and ENT/Coliform), USP 62 (identifying specific species E.coli Aspergillus etc) \* STEC and Salmonella run as Multiplex

\*\* CFU/g Calculation based on Select Category Type Gummy MIP/Extract Flower matrix

\*\*\*\* Flavus = 2 Copies of DNA / Fumigatis = 2 Copies of DNA Niger = 20 Copies of DNA / Terrus = 10 copies of DNA

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Ben Witten, MS, MT., Lab Director

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Order #: 48114 Order Name: 900.Orange.005-rush Batch#: 20LL005K11 Received: 02/04/2020 Completed: 02/07/2020



#### **Mycotoxin Analysis:**

LC-MS - Shimadzu LCMS-8060 GSL SOP 401

Uploaded: 02/05/2020 15:31:03

Analyte	Action Lvl (ppb)	Results (ppb)
AFLATOXIN B1	20	N/D
AFLATOXIN B2	20	N/D
AFLATOXIN G1	20	N/D
AFLATOXIN G2	20	N/D
OCHRATOXIN A	20	N/D

#### Heavy Metals Analysis:

ICP-MS - Shimadzu ICPMS-2030 GSL SOP 403

Uploaded: 02/05/2020 18:15:35

Metal	Action Level (ppb)	Result (ppb)
ARSENIC (AS)	200	B/LOQ
CADMIUM (CD)	200	B/LOQ
MERCURY (HG)	100	B/LOQ
LEAD (PB)	500	B/LOQ

Lower Limit of Quantitation (LOQ) is 75 ppb

LOQ is 4ppb, LOD is 1ppb

#### Water Activity:

HD-3A Water Activity Meter - GSL SOP 407

Uploaded: 02/04/2020 17:02:38

Water 0.49

#### Filth and Foreign Materials Analysis:

Microscope - Amscope Simul-Focal Trinocular Stereo Zoom Microscope - GSL SOP 409

Uploaded: 02/04/2020 17:08:36

Pass: No Foreign Materials Detected

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Ben Witten, MS, MT., Lab Director

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**Cannabinoids Test** 



Order #: 40909 Order Name: BSO2.110419 Batch#: BSO2.110419 Received: 11/06/2019 Completed: 11/08/2019

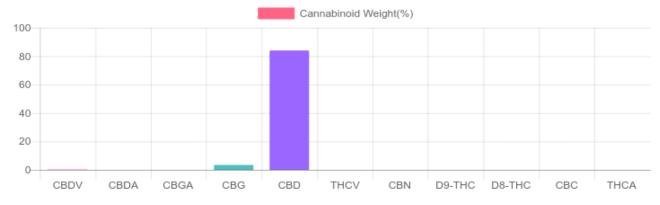


#### Sample





SHIMADZU INTEGRATED	UPLC-PDA		
GSL SOP 400	PREPARED: 11/06/2019 16:53:01	UPLOADED	<b>D:</b> 11/07/2019 07:53:11
Cannabinoids	LOQ	weight(%)	mg/g
D9-THC	10 PPM	N/D	N/D
THCA	10 PPM	N/D	N/D
CBD	10 PPM	83.965%	839.655
CBDA	20 PPM	N/D	N/D
CBDV	20 PPM	0.231%	2.305
CBC	10 PPM	N/D	N/D
CBN	10 PPM	N/D	N/D
CBG	10 PPM	3.410%	34.096
CBGA	20 PPM	N/D	N/D
D8-THC	10 PPM	N/D	N/D
THCV	10 PPM	N/D	N/D
TOTAL D9-THC		N/D	N/D
TOTAL CBD*		83.965%	839.655
TOTAL CANNABINOIDS		87.606%	876.056



Reporting Limit 10 ppm \*Total CBD = CBD + CBDA x 0.877

N/D - Not Detected, B/LOQ - Below Limit of Quantification



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Dr. Andrew Hall, Ph.D., CSO & Lab Director



Order #: 40909 Order Name: BSO2.110419 Batch#: BSO2.110419 Received: 11/06/2019 Completed: 11/08/2019



### **PESTICIDE ANALYSIS:**

GSL SOP 401

PREPARED: 11/06/2019 11:40:45

UPLOADED: 11/07/2019 08:58:24

LCMS-MS - Shimadzu LCMS-8060

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)	Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
ABAMECTIN B1A	0.100	N/D	0.005	0.001	IMAZALIL	0.100	N/D	0.005	0.001
ACEPHATE	0.100	N/D	0.001	0.001	IMIDACLOPRID	5.000	N/D	0.005	0.001
ACEQUINOCYL	0.100	N/D	0.001	0.001	KRESOXIM-METHYL	0.100	N/D	0.010	0.005
ACETAMIPRID	0.100	N/D	0.005	0.001	MALATHION	0.500	N/D	0.005	0.001
ALDICARB	0.100	N/D	0.005	0.001	METALAXYL	2.000	N/D	0.001	0.001
AZOXYSTROBIN	0.100	N/D	0.001	0.001	METHIOCARB	0.100	N/D	0.005	0.001
BIFENAZATE	0.100	N/D	0.005	0.001	METHOMYL	1.000	N/D	0.001	0.001
BIFENTHRIN	3.000	N/D	0.005	0.001	MEVINPHOS	0.100	N/D	0.001	0.001
BOSCALID	0.100	N/D	0.005	0.001	MYCLOBUTANIL	0.100	N/D	0.005	0.001
CARBARYL	0.500	N/D	0.003	0.001	NALED	0.100	N/D	0.005	0.001
CARBOFURAN	0.100	N/D	0.001	0.001	OXAMYL	0.500	N/D	0.001	0.001
CHLORANTRANILIPROLE	10.000	N/D	0.005	0.005	PACLOBUTRAZOL	0.100	N/D	0.005	0.001
CHLORPYRIFOS	0.100	N/D	0.001	0.001	PERMETHRINS	0.500	N/D	0.005	0.001
CLOFENTEZINE	0.100	N/D	0.001	0.001	PHOSMET	0.100	N/D	0.005	0.001
DAMINOZIDE	0.100	N/D	0.005	0.001	PIPERONYL	3.000	N/D	0.001	0.001
DIAZANON	0.100	N/D	0.001	0.001	BUTOXIDE				
DICHLORVOS	0.100	N/D	0.005	0.001	PRALLETHRIN	0.100	N/D	0.005	0.005
DIMETHOATE	0.100	N/D	0.001	0.001	PROPICONAZOLE	0.100	N/D	0.010	0.005
DIMETHOMORPH	2.000	N/D	0.005	0.001	PROPOXUR	0.100	N/D	0.001	0.001
ETHOPROPHOS	0.100	N/D	0.001	0.001	PYRETHRINS	0.500	N/D	0.005	0.005
ETOFENPROX	0.100	N/D	0.001	0.001	(PYRETHRIN I)				
ETOXAZOLE	0.100	N/D	0.010	0.005	PYRIDABEN	0.100	N/D	0.005	0.001
FENHEXAMID	0.100	N/D	0.005	0.001	SPINETORAM	0.100	N/D	0.001	0.001
FENOXYCARB	0.100	N/D	0.005	0.001	SPINOSAD	0.100	N/D	0.001	0.001
FENPYROXIMATE	0.100	N/D	0.001	0.001	SPIROMESIFEN	0.100	N/D	0.005	0.001
FIPRONIL	0.100	N/D	0.003	0.001	SPIROTETRAMAT	0.100	N/D	0.001	0.001
FLONICAMID	0.100	N/D	0.025	0.010	SPIROXAMINE	0.100	N/D	0.001	0.001
FLUDIOXONIL	0.100	N/D	0.003	0.001	TEBUCONAZOLE	0.100	0.010	0.005	0.001
HEXYTHIAZOX	0.100	N/D	0.005	0.001	THIACLOPRID	0.100	N/D	0.001	0.001
					THIAMETHOXAM	5.000	N/D	0.001	0.001
					TRIFLOXYSTROBIN	0.100	N/D	0.001	0.001

N/D = Not Detected, A/LOQ = Above LOQ Level, B/LOQ = Below LOQ Level, B/LOD = Below LOD Level



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Order #: 40909 Order Name: BSO2.110419 Batch#: BSO2.110419 Received: 11/06/2019 Completed: 11/08/2019



#### **RESIDUAL SOLVENTS:**

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

GSL SOP 405 Prepared: 11/06/2019 15:09:21 Uploaded: 11/08/2019 07:09:26

Residual Solvent	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
ACETONE	5,000	N/D	140	20
ACETONITRILE	410	N/D	25	1
BENZENE	1	N/D	1	0.5
UTANE	5,000	N/D	50	10
HLOROFORM	1	N/D	1	0.5
ICHLOROETHANE	1	N/D	1	0.5
DICHLOROMETHANE	1	N/D	1	0.5
THANOL	5,000	N/D	140	20
THYL ACETATE	5,000	N/D	140	20
THYL ETHER	5,000	N/D	140	20
SOPROPYL ALCOHOL	5,000	N/D	140	20
IETHANOL	3,000	N/D	100	20
-HEPTANE	5,000	N/D	140	20
I-HEXANE	290	N/D	18	10
ENTANE	5,000	N/D	140	20
ROPANE	5,000	N/D	20	1
OLUENE	890	N/D	53	1
RICHLOROETHENE	1	N/D	0	0
YLENES	2,170	N/D	130	20



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Dr. Andrew Hall, Ph.D., CSO & Lab Director



Order #: 40909 Order Name: BSO2.110419 Batch#: BSO2.110419 Received: 11/06/2019 Completed: 11/08/2019



#### Heavy Metals Analysis:

ICP-MS - Shimadzu ICPMS-2030 GSL SOP 403

Uploaded: 11/07/2019 08:25:31

Metal	Action Level (ppb)	Result (ppb)
ARSENIC (AS)	200	B/LOQ
CADMIUM (CD)	200	B/LOQ
MERCURY (HG)	100	B/LOQ
LEAD (PB)	500	B/LOQ

Lower Limit of Quantitation (LOQ) is 75 ppb



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