

CERTIFICATE OF ANALYSIS

PRODUCT NAME: CBD Tincture - Lemon
PRODUCT STRENGTH: 450 mg
LOT NUMBER: 20LL017A11
BEST BY DATE: 09/19/2021
HEMP EXTRACT LOT NUMBER: [112619](#)

Physical Attributes

Test	Method	Specification	Results
Color	SOP-100	Golden to Amber	PASS
Odor	SOP-100	Characteristic - coconut and hemp, lemon	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	427.5-562.2 mg CBD LOQ*: 10 PPM† (0.001%)	492.3 mg	PASS
Potency - D9-THC	SOP-111	None Detected LOQ: 10 PPM (0.001%)	ND	PASS
FL Compliant Pesticide Panel	SOP-111	Florida State Hemp Program Rule 5B-57.014: Action Limits for Pesticides	ND	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* 02/28/2020
 Darcie Moran Date
 Manager of Quality Assurance

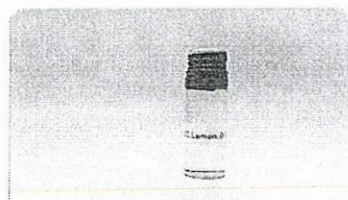
CERTIFICATE OF ANALYSIS

ISO/IEC 17025:2017 ACCREDITATION #103104



Order #: 49158
 Order Name: *all 2-19-20*
 JO.450.Lemon.017
 Batch#: ~~19LL047A44~~ *ZOLLO17A11*
 Received: 02/17/2020
 Completed: 02/19/2020

Sample



N/D D9-THC	1.746% Total CBD
500.3 mg Cannabinoids per bottle	492.3 mg CBD per bottle

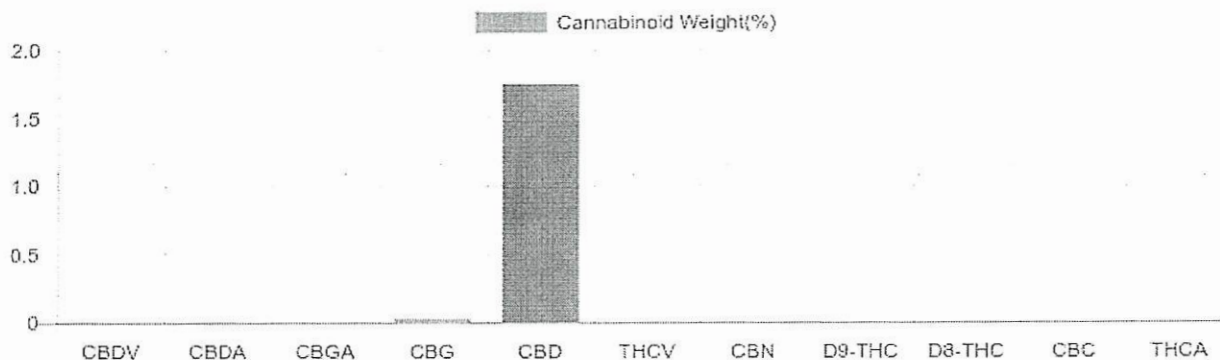
1 bottle = 30 ml per bottle x density (.94) x Cannabinoid concentration

Cannabinoids Test

SHIMADZU INTEGRATED UPLC-PDA
 GSL SOP 400

UPLOADED: 02/18/2020 10:35:01

Cannabinoids	LOQ	weight(%)	mg/g	mg/bottle
D9-THC	10 PPM	N/D	N/D	N/D
THCA	10 PPM	N/D	N/D	N/D
CBD	10 PPM	1.746%	17.459	492.3
CBDA	20 PPM	N/D	N/D	N/D
CBDV	20 PPM	N/D	N/D	N/D
CBC	10 PPM	N/D	N/D	N/D
CBN	10 PPM	N/D	N/D	N/D
CBG	10 PPM	0.028%	0.282	8.0
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*		1.746%	17.459	492.3
TOTAL CANNABINOIDS		1.774%	17.741	500.3



Reporting Limit 10 ppm
 *Total CBD = CBD + CBDA x 0.877
 N/D - Not Detected, B/LOQ - Below Limit of Quantification

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

Ben Witten
 Ben Witten, MS, MT., Lab Director

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



Green Scientific Labs uses its best efforts to deliver high quality results and to verify that the data contained therein are based on sound scientific judgment and levels listed are guidelines only and all data was reported based on standard laboratory procedures and deviations. However Green Scientific Labs makes no warranties or claims to that effect and further shall not be liable for any damage or misrepresentation that may result from the use or misuse of the data contained herein in any way. Further, Green Scientific Labs makes no claims regarding representations of the analyzed sample to the larger batch from which it was taken. Data and information in this report are intended solely for the individual(s) for whom samples were submitted and as part of our strict confidentiality policy, Green Scientific Labs can only discuss results with the original client of record.

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Order #: 49158
 Order Name:
 JO.450.Lemon.017
 Batch#: 19LL017A11
 Received: 02/17/2020
 Completed: 02/19/2020

RESIDUAL SOLVENTS:

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

GSL SOP 405
 Prepared: 02/17/2020 18:05:22
 Uploaded: 02/18/2020 16:18:20

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
ISOPROPYL ALCOHOL	5,000	B/L OQ	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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Order #: 49158
 Order Name:
 JO.450.Lemon.017
 Batch#: 19LL017A11
 Received: 02/17/2020
 Completed: 02/19/2020

Microbial Analysis:

Microbial Analysis GSL SOP 406

Uploaded: 02/18/2020 17:50:14

PCR - Agilent AriaMX

Test	Test Method Used	Device Used	LOD	Allowable Criteria	Actual Result	Pass/Fail
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/Colliform), 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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Order #: 49158
Order Name:
JO.450.Lemon.017
Batch#: 19LL017A11
Received: 02/17/2020
Completed: 02/19/2020

Mycotoxin Analysis:

LC-MS - Shimadzu LCMS-8060
GSL SOP 401

Uploaded: 02/18/2020 10:55:29

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

LOQ is 4ppb, LOD is 1ppb

Water Activity:

HD-3A Water Activity Meter - GSL SOP 407

Uploaded: 02/18/2020 11:10:04

Water

0.59

Filth and Foreign Materials Analysis:

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

Uploaded: 02/18/2020 11:05:25

Pass: No Foreign Materials Detected

Heavy Metals Analysis:

ICP-MS - Shimadzu ICPMS-2030
GSL SOP 403

Uploaded: 02/18/2020 17:56:58

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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total cannabinoids 84.7%
 CBD decarb total 80.7%
 Δ9-THC ND

This Product Has Been Tested and Complies with 7USC1639o(1) Definition of Hemp



Stillwater Laboratories

https://portal.a2la.org/scopepdf/4961-01.pdf

Sample Handling

test ID 6654 sample date 2/24/20 4:49 PM
 order 6654 labID OBR66 weight
 source

Methods	method	equipment
weights	MSP-7.3.1.3	AUX120.1
potency	MSP-7.5.1.5	LC-2030
terpenes	MSP-7.5.1.7	QP2020/HS20
pesticides	MSP-7.5.1.8	LC-8060
mycotoxins	MSP-7.5.1.8	LC-8060
microbial	MSP-7.5.1.9	Hardy Diag
solvents	MSP-7.5.1.6	QP2020/HS20
metals	MSP-7.5.1.10	ICPMS2030



concentrate



Potency

	%	estimated error
tetrahydrocannabinolic acid (THCa)	ND	± 0.02 %
Δ ⁹ -tetrahydrocannabinol (Δ ⁹ THC)	ND	± 0.02 %
Δ ⁸ -tetrahydrocannabinol (Δ ⁸ THC)	ND	± 0.02 %
tetrahydrocannabivarin (THCv)	ND	± 0.02 %
cannabidiolic acid (CBDa)	ND	± 0.02 %
cannabidiol (CBD)	80.7%	± 0.73 %
cannabidivarin (CBDv)	ND	± 0.02 %
cannabigerolic acid (CBGa)	ND	± 0.02 %
cannabigerol (CBG)	4.02%	± 0.16 %
cannabinol (CBN)	ND	± 0.02 %
cannabichromene (CBC)	ND	± 0.02 %

Terpenes

	%	estimated error		%	estimated error		%	estimated error
β-myrcene	0.001%	± 0.0017 %	camphene	0.002%	± 0.0017 %	guaiol	0.000%	± 0.0017 %
β-caryophyllene	0.001%	± 0.0017 %	Δ ³ -carene	0.003%	± 0.0018 %	β-bisabolol	0.002%	± 0.0017 %
alpha-pinene	0.005%	± 0.0018 %	a-terpinene	0.000%	± 0.0016 %	eucalyptol	0.005%	± 0.0018 %
β-pinene	0.008%	± 0.0019 %	para-cymene	0.009%	± 0.0019 %			
D-limonene	0.009%	± 0.0019 %	g-terpinene	0.010%	± 0.0019 %			
linalool	0.008%	± 0.0019 %	(-)-isopulegol	0.000%	± 0.0016 %			
ocimene	0.002%	± 0.0034 %	geraniol	0.002%	± 0.0017 %			
terpinolene	0.003%	± 0.0018 %	cis-nerolidol	0.000%	± 0.0016 %			
alpha-humulene	0.007%	± 0.0019 %	trans-nerolidol	0.004%	± 0.0018 %			
								total terpenes
								0.08%

Solvents

	MT limit	OBR66	LOQ
propane	5,000	0 ppm	<10ppm
butanes	5,000	0 ppm	<10ppm
pentanes	5,000	0 ppm	<10ppm
hexanes	290	0 ppm	<10ppm
cyclohexane	3,880	0 ppm	<10ppm
heptanes	5,000	0 ppm	<10ppm
methanol	3,000	0 ppm	<10ppm
isopropanol	5,000	0 ppm	<10ppm
acetone	5,000	0 ppm	<10ppm
ethyl acetate	5,000	0 ppm	<10ppm
benzene	2	0 ppm	<0.2ppm
toluene	890	0 ppm	<10ppm
xylenes	2,170	0 ppm	<10ppm
chloroform	2	0 ppm	<0.2ppm
dichloromethane	600	0 ppm	<10ppm

Pesticides (MT)

	MT limit	OBR66	LOQ
abamectin	2.50 ppm	0.00 ppm	<10ppb
acequinocyl	10.00 ppm	0.00 ppm	<10ppb
bifenazate	1.00 ppm	0.00 ppm	<10ppb
bifenthrin	1.00 ppm	0.00 ppm	<10ppb
chlormequat cl.	5.00 ppm	0.00 ppm	<10ppb
cyfluthrin	5.00 ppm	0.00 ppm	<80ppb
diaminozide	5.00 ppm	0.00 ppm	<10ppb
etoxazole	1.00 ppm	0.00 ppm	<10ppb
fenoxycarb	1.00 ppm	0.00 ppm	<10ppb
imazalil	1.00 ppm	0.00 ppm	<10ppb
imidacloprid	2.00 ppm	0.00 ppm	<10ppb
myclobutanil	0.60 ppm	0.00 ppm	<10ppb
paclobutrazol	2.00 ppm	0.00 ppm	<10ppb
pyrethrins	5.00 ppm	0.00 ppm	<10ppb
spinosad	1.00 ppm	0.00 ppm	<10ppb
spiromesifen	1.00 ppm	0.00 ppm	<10ppb
spirotetramat	1.00 ppm	0.00 ppm	<10ppb
trifloxystrobin	1.00 ppm	0.00 ppm	<10ppb

Pesticides (other)

	OBR66	LOQ
acephate	0.00 ppm	<10ppb
acetamidiprid	0.00 ppm	<10ppb
aldicarb	0.00 ppm	<10ppb
azoxystrobin	0.00 ppm	<10ppb
boscalid	0.00 ppm	<10ppb
carbaryl	0.00 ppm	<10ppb
carbofuran	0.00 ppm	<10ppb
chlorantraniliprole	0.00 ppm	<10ppb
chlorpyrifos	0.00 ppm	<10ppb
clofentazine	0.00 ppm	<10ppb
cypermethrin	0.00 ppm	<10ppb
diazinon	0.00 ppm	<10ppb
dichlorvos	0.00 ppm	<10ppb
dimethoate	0.00 ppm	<10ppb
etofenprox	0.00 ppm	<10ppb
fenpyroximate	0.00 ppm	<10ppb
fipronil	0.00 ppm	<10ppb
flonicamid	0.00 ppm	<10ppb
fludioxonil	0.00 ppm	<10ppb
hexythiazox	0.00 ppm	<10ppb
kresoxym-methyl	0.00 ppm	<10ppb
malathion	0.00 ppm	<10ppb
metalaxyl	0.00 ppm	<10ppb
methiocarb	0.00 ppm	<10ppb
methomyl	0.00 ppm	<10ppb
oxamyl	0.00 ppm	<10ppb
permethrin	0.00 ppm	<10ppb
phosmet	0.00 ppm	<10ppb
piperonyl butoxide	0.00 ppm	<10ppb
prallethrin	0.00 ppm	<10ppb
propiconazole	0.00 ppm	<10ppb
pyridaben	0.00 ppm	<10ppb
spiroxamine	0.00 ppm	<10ppb
tebuconazole	0.00 ppm	<10ppb
thiacloprid	0.00 ppm	<10ppb
thiamethoxam	0.00 ppm	<10ppb

Toxic Metals

	MT limit	OBR66	LOQ
arsenic	2 ppm	0.0 ppm	<10ppb
cadmium	0.8 ppm	0.0 ppm	<10ppb
lead	1.2 ppm	0.0 ppm	<10ppb
mercury	0.4 ppm	0.0 ppm	<10ppb

Comments

• All testing was completed onsite at 6073 US93N, Olney MT • Potency (cannabinoid concentration) is calculated from the equation: [cannabinoid] = [cannabinoid]_{HPLC} x volume_{dilution}/m_{dry}. Terpene concentration is calculated from the equation: [terpene] = (terpene mass)_{GCMS} / m_{dry}. • Decarboxyted cannabinoid concentration is calculated from the equation XXX_{total} = 0.877 x XXX_a + XXX • Standards are used to calibrate the resulting data and estimate error using a standard estimate of error method; this is combined with error from weighing and dilution using the propagation of error formula s_g² = Σ (df/di)²s_i² where i is the contributor to error. The 95% confidence range is calculated from the equation: (concentration) ± t_{CL90} x s_g. Sampling error is not

Certified by:

Kyle Larson, MSc (Biology)
 Deputy Director
 6073 US93N, Olney MT 59927
 406-881-2019 rdb@stwlabs.com

Printed 3/4/2020 1:42 PM



Analytical Report

1309 Record Crossing Rd
Dallas, TX 75235

Report Date: 01/27/2020

Work Order: MISG200124-017
Received Date: 01/24/2020
P.O. #:

Client:

Client Contact:

Comments:

Sample Num: 20MI02612

Lot Number: 20LL017

Client Sample Num: Summary Lemon

Comments:

<u>Analysis</u>	<u>Method Reference</u>	<u>Result</u>	<u>Unit</u>	<u>Analysis Date/Approval Date</u>	
Aerobic Plate Count	USP <2021>	< 10	cfu/g	01/24/2020	01/27/2020
Escherichia coli	USP <2022>	Absent	cfu/g	01/24/2020	01/27/2020
Salmonella sp.	USP <2022>	Absent	cfu/g	01/24/2020	01/27/2020
Staphylococcus aureus	USP <2022>	Absent	cfu/g	01/24/2020	01/27/2020
Yeast & Mold	AOAC 2014.05	< 10	cfu/g	01/24/2020	01/27/2020

Reviewed by:

Benny McKee, President



Analytical Report

1309 Record Crossing Rd
Dallas, TX 75235

Report Date: 02/03/2020

Work Order: MISG200130-019
Received Date: 01/30/2020
P.O. #:

Client:

Client Contact:

Comments:

Sample Num: 20MI03276

Lot Number: 20LL017A11

Client Sample Num: Lemon 450mg

Comments:

<u>Analysis</u>	<u>Method Reference</u>	<u>Result</u>	<u>Unit</u>	<u>Analysis Date/Approval Date</u>	
Aerobic Plate Count	USP <2021>	< 10	cfu/g	01/30/2020	02/03/2020
Escherichia coli	USP <2022>	Absent	cfu/g	01/30/2020	02/03/2020
Salmonella sp.	USP <2022>	Absent	cfu/g	01/30/2020	02/03/2020
Staphylococcus aureus	USP <2022>	Absent	cfu/g	01/30/2020	02/03/2020
Yeast & Mold	AOAC 2014.05	< 10	cfu/g	01/30/2020	02/03/2020

Reviewed by:

Benny McKee, President