



# CERTIFICATE OF ANALYSIS

**PRODUCT NAME:** Joy Organics CBD Softgels with Curcumin  
**PRODUCT STRENGTH:** 25 mg CBD / 10 mg Curcumin  
**FILL LOT NUMBER:** 21026A  
**SOFTGEL BATCH:** TOSM-061-GK-1  
**BEST BY DATE:** 04/06/2022

*\*Click on the links to view third-party reports\**

### Physical Attributes

Test	Method	Specification	Results
Color	SOP-100	Golden to Amber	PASS
Odor	SOP-100	N/A	PASS
Appearance	SOP-100	100 Dry, ovoid softgel capsules in container with lid and shrinkband	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
<b>Potency - Total CBD</b>	SOP-111	25-31.25 mg CBD LOQ**: 10 PPM† (0.001%)	<b>27.6 mg</b>	PASS
<b>Potency - D9-THC</b>	SOP-111	None Detected LOQ: 10 PPM (0.001%)	<b>ND</b>	PASS
<b>Compliant Pesticide Panel</b>	SOP-111	WIP-100008 : Product specification for softgel Oregon Action limits apply	<b>ND</b>	PASS
<b>Microbial - Stec E.Coli</b>	SOP-111	Complies with USP 61/62	<b>Below LOQ</b>	PASS
<b>Microbial - Salmonella</b>	SOP-111	Complies with USP 61/62	<b>Below LOQ</b>	PASS
<b>Microbial - Yeast and Mold</b>	SOP-111	Complies with USP 61/62	<b>Below LOQ</b>	PASS
<b>CA Compliant Heavy Metal Panel</b>	SOP-111	Arsenic (As): ≤1.5 PPM Cadmium (Cd): ≤0.5 PPM Mercury (Hg): ≤1.0 PPM Lead (Pb): ≤0.5 PPM	<b>ND</b>	PASS

\* \*Level of Quantitation, † Parts Per Million

Quality Certified Kei Horikawa 02/01/2021  
 Kei Horikawa Date  
 Quality Control Manager

## TOSM-061-GK-1

Sample ID: 2012CSALA3899.9815

Matrix: Other

Type: Other

Sample Size: 1 units

Batch Size:

Batch#:

Produced: N/A

Collected: 12/03/2020

Received: 12/03/2020

Completed: 12/09/2020



### Summary

Pass

<b>28.2703 mg/package</b> Total Cannabinoids	<b>Not Tested</b> Pesticides	<b>Pass</b> Residual Solvents
<b>Not Tested</b> Microbials	<b>Not Tested</b> Mycotoxins	<b>Not Tested</b> Heavy Metals

### Cannabinoids

Pass

Testing method: HPLC-SOP 101

Analyte	LOD	LOQ	Results	Results
	mg/g	mg/g	mg/package	mg/g
CBD	0.0059	0.018	27.5701	64.5669
CBDV	0.0042	0.0126	0.7002	1.6399
CBC	0.0009	0.0027	ND	ND
CBDa	0.0012	0.0037	ND	ND
CBG	0.0047	0.0143	ND	ND
CBGa	0.0016	0.005	ND	ND
CBN	0.0014	0.0041	ND	ND
THCa	0.002	0.006	ND	ND
THCV	0.0036	0.0111	ND	ND
$\Delta$ 8-THC	0.0038	0.0115	ND	ND
$\Delta$ 9-THC	0.0038	0.0115	ND	ND
<b>Total</b>			<b>28.2703</b>	<b>66.2067</b>

ND

Total THC

27.5701 mg/package

Total CBD

Package = 1 Capsule, 0.427 grams; 0.0 mg/package Total THC; 27.5701 mg/package Total CBD;

Date Tested: 12/04/2020

Total THC = THCa \* 0.877 + d9-THC

Total CBD = CBDa \* 0.877 + CBD

LOQ = Limit of Quantitation; LOD = Limit of Detection; NT = Not Tested; ND = Not Detected.

### Terpenes

Complete

Testing method: HS-GC-FID - SOP 201

Analyte	LOD	LOQ	Results	Results
	%	%	%	mg/g
$\beta$ -Caryophyllene	0.006	0.0173	1.69	16.86
$\alpha$ -Humulene	0.006	0.0173	0.09	0.93
Caryophyllene Oxide	0.029	0.0874	<LOQ	<LOQ
$\alpha$ -Bisabolol	0.01	0.0295	0.04	0.42
Guaiol	0.011	0.0334	<LOQ	<LOQ
Camphene	0.005	0.0163	ND	ND
Eucalyptol	0.006	0.0175	ND	ND
Geraniol	0.007	0.0205	ND	ND
Isopulegol	0.009	0.0282	ND	ND
Linalool	0.008	0.0228	ND	ND
Ocimene	0.004	0.0109	ND	ND
p-Cymene	0.005	0.0162	ND	ND
Terpinolene	0.006	0.0168	ND	ND
trans-Nerolidol	0.007	0.0219	ND	ND
$\alpha$ -Pinene	0.006	0.0175	ND	ND
$\alpha$ -Terpinene	0.005	0.0165	ND	ND
$\beta$ -Myrcene	0.008	0.024	ND	ND
$\beta$ -Pinene	0.005	0.0147	ND	ND
$\gamma$ -Terpinene	0.006	0.0168	ND	ND
$\delta$ -3-Carene	0.005	0.016	ND	ND
$\delta$ -Limonene	0.005	0.0159	ND	ND
<b>Total</b>			<b>1.82</b>	<b>18.21</b>

Date Tested: 12/04/2020

<b>NT</b> Moisture Moisture Analyzer SOP-103	<b>NT</b> Water Activity Water Activity Meter SOP-102	<b>NT</b> Foreign Matter Visual Inspection SOP-600
--	---	--


 ISO / IEC 17025:2017 ACCREDITED  
 LABORATORY  
 Accreditation No. 73653



 Douglas Duncan  
 Lab Director  
 12/09/2020



 Cecilia Melgar  
 COA Review  
 12/09/2020

## TOSM-061-GK-1

Sample ID: 2012CSALA3899.9815

Matrix: Other

Type: Other

Sample Size: 1 units

Batch Size:

Batch#:

Produced: N/A

Collected: 12/03/2020

Received: 12/03/2020

Completed: 12/09/2020

## Residual Solvents

Pass

Testing method: HSGCMS-SOP 202

Analyte	LOD	LOQ	Limit	Results	Status
	µg/g	µg/g	µg/g	µg/g	
1,2-Dichloroethane	0.1	0.4	1	ND	Pass
Acetone	64.0	214.0	5000	ND	Pass
Acetonitrile	36.0	119.0	410	ND	Pass
Benzene	0.1	0.2	1	ND	Pass
Butane	42.0	141.0	5000	ND	Pass
Chloroform	0.1	0.4	1	ND	Pass
Ethanol	59.0	197.0	5000	1064	Pass
Ethyl acetate	43.0	144.0	5000	<LOQ	Pass
Ethylene Oxide	0.2	0.6	1	ND	Pass
Ethyl ether	40.0	134.0	5000	ND	Pass
Heptane	46.0	154.0	5000	ND	Pass
Isopropyl alcohol	41.0	138.0	5000	ND	Pass
Methanol	160.0	534.0	3000	ND	Pass
Methylene chloride	0.1	0.4	1	ND	Pass
Hexane	42.0	139.0	290	ND	Pass
Pentane	69.0	229.0	5000	ND	Pass
Propane	21.0	70.0	5000	ND	Pass
Toluene	47.0	156.0	890	ND	Pass
Trichloroethylene	0.1	0.4	1	ND	Pass
Total xylenes	86.0	287.0	2170	ND	Pass

Date Tested: 12/08/2020

LOQ = Limit of Quantitation; LOD = Limit of Detection; NT = Not Tested; ND = Not Detected.


 ISO / IEC 17025:2017 ACCREDITED  
 LABORATORY  
 Accreditation No. 73653



 Douglas Duncan  
 Lab Director  
 12/09/2020



 Cecilia Melgar  
 COA Review  
 12/09/2020

## TOSM-061-GK-1

Sample ID: 2012CSALA3899.9815

Matrix: Other

Type: Other

Sample Size: 1 units

Batch Size:

Batch#:

Produced: N/A

Collected: 12/03/2020

Received: 12/03/2020

Completed: 12/09/2020

### Traditional Microbials

Pass

Testing method: Petrifilm-SOP 402

Analyte	Limit	Results	Status
	cfu/g	cfu/g	
Enterobacter	ND	ND	Pass
Salmonella	ND	ND	Pass
E. Coli	ND	ND	Pass
Total aerobic plate count	< 1000	10	Pass
Total coliforms	ND	ND	Pass
Total Yeast & Mold	< 100	ND	Pass

Date Tested: 12/09/2020

LOQ = Limit of Quantitation; LOD = Limit of Detection; NT = Not Tested; ND = Not Detected.


 ISO / IEC 17025:2017 ACCREDITED  
 LABORATORY  
 Accreditation No. 73653



 Douglas Duncan  
 Lab Director  
 12/09/2020



 Cecilia Melgar  
 COA Review  
 12/09/2020

# CERTIFICATE OF ANALYSIS

## ISO/IEC 17025:2017 ACCREDITATION #103104



Order #: 45773  
 Order Name: 29NOV19NOC  
 Batch#: 29NOV19NOC  
 Received: 01/08/2020  
 Completed: 01/15/2020

### Sample



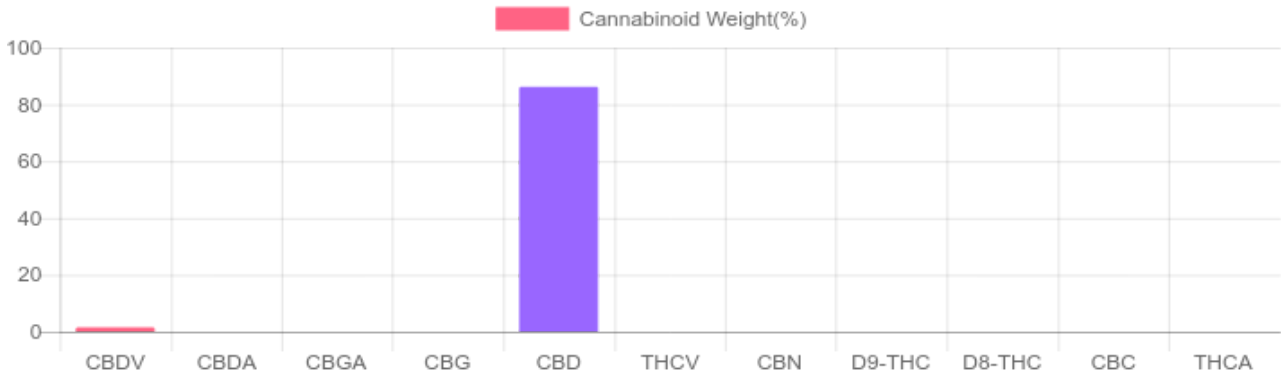
**N/D**  
D9-THC

**86.193%**  
Total CBD

### Cannabinoids Test

SHIMADZU INTEGRATED UPLC-PDA  
 GSL SOP 400      **PREPARED:** 01/15/2020 15:11:50      **UPLOADED:** 01/15/2020 16:49:52

Cannabinoids	LOQ	weight(%)	mg/g
D9-THC	10 PPM	N/D	N/D
THCA	10 PPM	N/D	N/D
CBD	10 PPM	<b>86.193%</b>	<b>861.925</b>
CBDA	20 PPM	N/D	N/D
CBDV	20 PPM	<b>1.531%</b>	<b>15.311</b>
CBC	10 PPM	N/D	N/D
CBN	10 PPM	N/D	N/D
CBG	10 PPM	N/D	N/D
CBGA	20 PPM	N/D	N/D
D8-THC	10 PPM	N/D	N/D
THCV	10 PPM	N/D	N/D
<b>TOTAL D9-THC</b>		<b>N/D</b>	<b>N/D</b>
<b>TOTAL CBD*</b>		<b>86.193%</b>	<b>861.925</b>
<b>TOTAL CANNABINOIDS</b>		<b>87.724%</b>	<b>877.236</b>



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

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.

# CERTIFICATE OF ANALYSIS

## ISO/IEC 17025:2017 ACCREDITATION #103104



Order #: 45773  
 Order Name: 29NOV19NOC  
 Batch#: 29NOV19NOC  
 Received: 01/08/2020  
 Completed: 01/15/2020

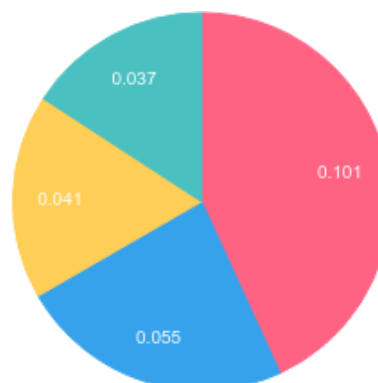
### TERPENES: TOTAL (0.234%)

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

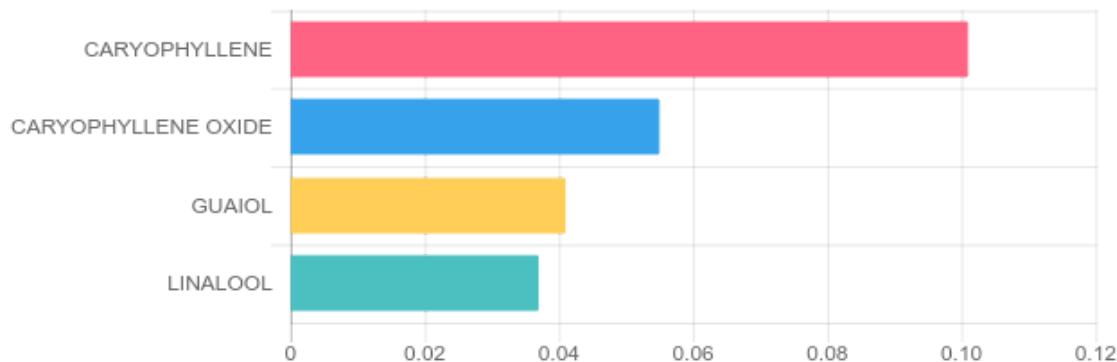
GSL SOP 404  
 Prepared: 01/08/2020 17:02:10  
 Uploaded: 01/09/2020 08:48:11

Terpene	Results (%)	LOQ (%)	LOD (%)
CARYOPHYLLENE	0.101%	0.0067%	0.0063%
CARYOPHYLLENE OXIDE	0.055%	0.0067%	0.0063%
GUAIOL	0.041%	0.0067%	0.0063%
LINALOOL	0.037%	0.0067%	0.0063%

### Terpenes Breakdown



### Top Terpenes Results:



### Tested for but not present:

ALPHA-PINENE, CAMPHENE, BETA-MYRCENE, BETA-PINENE, 3-CARENE, ALPHA-TERPINENE, TRANS-BETA-OCIMENE, LIMONENE, P-CYMENE, CIS-BETA-OCIMENE, EUCALYPTOL, GAMMA-TERPINENE, TERPINOLENE, ISOPULEGOL, GERANIOL, HUMULENE, CIS-NEROLIDOL, TRANS-NEROLIDOL, ALPHA-BISABOLOL

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

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.

# CERTIFICATE OF ANALYSIS

## ISO/IEC 17025:2017 ACCREDITATION #103104



Order #: 45773  
 Order Name: 29NOV19NOC  
 Batch#: 29NOV19NOC  
 Received: 01/08/2020  
 Completed: 01/15/2020

### PESTICIDE ANALYSIS:

GSL SOP 401

PREPARED: 01/09/2020 16:55:33

UPLOADED: 01/10/2020 14:36:11

GCMS-MS - Shimadzu GCMS-TQ8040

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
FIPRONIL	0.100	N/D	0.003	0.001


Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
FLUDIOXONIL	0.100	N/D	0.003	0.001


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

**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.

# CERTIFICATE OF ANALYSIS

## ISO/IEC 17025:2017 ACCREDITATION #103104



Order #: 45773  
 Order Name: 29NOV19NOC  
 Batch#: 29NOV19NOC  
 Received: 01/08/2020  
 Completed: 01/15/2020

### RESIDUAL SOLVENTS:

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

GSL SOP 405

Prepared: 01/08/2020 17:21:18

Uploaded: 01/09/2020 12:39:52

Residual Solvent	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
ACETONE	5,000	B/LOQ	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	B/LOQ	140	20
ETHYL ACETATE	5,000	N/D	140	20
ETHYL ETHER	5,000	N/D	140	20
ISOPROPYL 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	B/LOQ	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

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

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.



# CERTIFICATE OF ANALYSIS

## ISO/IEC 17025:2017 ACCREDITATION #103104



Order #: 45773  
 Order Name: 29NOV19NOC  
 Batch#: 29NOV19NOC  
 Received: 01/08/2020  
 Completed: 01/15/2020

### Microbial Analysis:

Microbial Analysis GSL SOP 406

Uploaded: 01/13/2020 18:26:27

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/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

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

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.

# CERTIFICATE OF ANALYSIS

## ISO/IEC 17025:2017 ACCREDITATION #103104



Order #: 45773  
Order Name: 29NOV19NOC  
Batch#: 29NOV19NOC  
Received: 01/08/2020  
Completed: 01/15/2020

### Mycotoxin Analysis:

LC-MS - Shimadzu LCMS-8060  
GSL SOP 401

Uploaded: 01/10/2020 14:36:11

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

### Heavy Metals Analysis:

ICP-MS - Shimadzu ICPMS-2030  
GSL SOP 403

Uploaded: 01/09/2020 18:21:19

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

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

Ben Witten, MS, MT., Lab Director

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



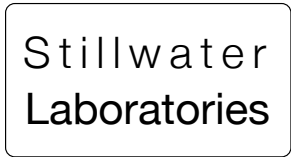
Green Scientific Labs uses its best efforts to deliver high quality results and to verify that the data contained therein are based on sound scientific judgment and levels listed are guidelines only and all data was reported based on standard laboratory procedures and deviations. However Green Scientific 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.



ISO/IEC 17025:2017



Certificate #4961.01



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

21026A

Sample Handling

test ID            sample date 1/28/21 12:35 PM  
 order 9661    labID 1AY05    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-7.5.1.1	AriaMx/Hardy
solvents MSP-7.5.1.6	QP2020/HS20
metals MSP-7.5.1.11	ICPMS2030

capsule



Potency	%	estimated error	Terpenes	%	estimated error	%	estimated error	%	estimated error
---------	---	-----------------	----------	---	-----------------	---	-----------------	---	-----------------

potency  
not tested

terpenes  
not tested / not required

Solvents	MT limit	1AY05	LOQ	Pesticides (MT)	MT limit	1AY05	LOQ	Pesticides (other)	1AY05	LOQ
----------	----------	-------	-----	-----------------	----------	-------	-----	--------------------	-------	-----

pesticides  
not tested / not required

not tested /  
not required

Toxic Metals	MT limit	1AY05	LOQ
--------------	----------	-------	-----

metals  
not tested / not required

Microbial	MT limit	1AY05	LOQ
<i>E. coli</i>	10 CFU	0 CFU	<10 CFU/g
Salmonella sp.	10 CFU	0 CFU	<10 CFU/g
molds	10000 CFU	0 CFU	<10k CFU/g

Comments

• All testing was completed onsite at 6073 US93N, Olney MT •• Potency (cannabinoid concentration) is calculated from the equation: [cannabinoid] = [cannabinoid]<sub>HPLC</sub> x volume<sub>dilution</sub> / m<sub>dry</sub>. Terpene concentration is calculated from the equation: [terpene] = (terpene mass)<sub>GCMS</sub> / m<sub>dry</sub>. ••• Decarboxyted cannabinoid concentration is calculated from the equation XXX<sub>total</sub> = 0.877 x XXX<sub>a</sub> + 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<sub>g</sub><sup>2</sup> = Σ(∂f/∂i)<sup>2</sup>s<sub>i</sub><sup>2</sup> where i is the contributor to error. The 95% confidence range is calculated from the equation: (concentration) ± t<sub>CL90</sub> x s<sub>g</sub>. Sampling error is not

Certified by:

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

Printed 1/30/2021 11:12 AM