

## CERTIFICATE OF ANALYSIS

**Order Type:** Medical Cannabis  
**Order ID:** OR2019-3335

**Customer ID:** 746  
**Customer Name:** Helix Extracts

**Harvest/Extract Lot:** None  
**Harvest/Extract Batch:** None

**Cultivar (Strain):** Girl Scout Cookie  
**Sample Date:** 08/28/2019

**Lab ID:** SA2019-10533  
**Date Received:** 08/28/2019

**Sample Matrix:** Concentrate  
**Date Completed:** 09/05/2019

**Remarks:**

### CANNABINOID (POTENCY) PROFILE

**Analysis Date/Time:** 09/02/2019 1704  
**Analyst:** OL

**Method:** HPLC/DAD (Internal Method-001)  
**Instrument:** Agilent 1100

**Moisture Content (%):** -  
**Water Activity (aw):** -

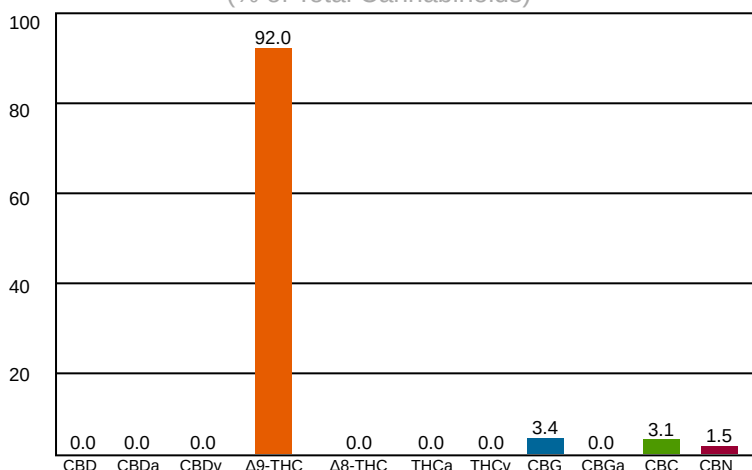
Cannabinoid	Result (%)	Result (mg/g)	Reporting Limit (mg/g)	Result (mg/mL)	Per Unit (mg)
CBD	-	-	0.491	-	-
CBDa	-	-	0.491	-	-
CBDv	-	-	0.491	-	-
Δ9-THC	75.3	753	0.491	-	753
Δ8-THC	-	-	0.491	-	-
THCa	-	-	0.491	-	-
THCv	-	-	0.491	-	-
CBC	2.51	25.1	0.491	-	25
CBG	2.77	27.7	0.491	-	28
CBGa	-	-	0.491	-	-
CBN	1.26	12.6	0.491	-	13
<b>TOTAL</b>	<b>81.8</b>	<b>818</b>			<b>818</b>
<b>TOTAL THC</b>	<b>75.3</b>	<b>753</b>			<b>753</b>
<b>TOTAL CBD</b>	<b>-</b>	<b>-</b>			<b>-</b>



**UNIT MASS (g):** 1

"-" Not detected above RL.

### Cannabinoid Distribution (% of Total Cannabinoids)



Deviations from standard operating procedure: None

Recoveries for all analyte standards: 90-110%  
Replicate Uncertainties: <5% RSD, <20% RPD  
Sample/Reagent Blanks: <RL for all analytes

Values for plant matter are adjusted for moisture content.

Total THC = (THCa x 0.877) + Δ9-THC  
Total CBD = (CBDa x 0.877) + CBD

Percentage results are reported by mass.  
mg/g results are reported as mass component per mass material.

Abbreviations: UV - Ultraviolet, HPLC - High Pressure Liquid Chromatography, RL - Reporting Limit, RPD - Relative Percent Difference, RSD - Relative Standard Deviation

This information is provided as a service and makes no claims of efficacy and/or safety of this product. Results are applicable only for the sample(s) analyzed and for the specific analysis conducted. This report is for informational purposes only and should not be used to diagnose, treat, or prevent any medical-related symptoms. The statements and results herein have not been approved and/or endorsed by the FDA.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Felling Analytical Services and Technology (F.A.S.T.), LLC

*John K. Irvin*  
John K. Irvin, M.S.  
Laboratory Director (Tulsa)

## CERTIFICATE OF ANALYSIS

**Order Type:** Medical Cannabis  
**Order ID:** OR2019-3335

**Customer ID:** 746  
**Customer Name:** Helix Extracts

**Harvest/Extract Lot:** None  
**Harvest/Extract Batch:** None

**Cultivar (Strain):** Girl Scout Cookie  
**Sample Date:** 08/28/2019

**Lab ID:** SA2019-10533  
**Date Received:** 08/28/2019

**Sample Matrix:** Concentrate  
**Date Completed:** 09/05/2019

**Remarks:**

### TERPENOID PROFILE

**Analysis Date/Time:** 09/02/2019 1704  
**Analyst:** OL

**Method:** HS/GC/FID (Internal Method-002)  
**Instrument:** Agilent 6890

**Deviations from SOP:**  
None

Terpene	Result (µg/g)	Result (%)	
α-Bisabolol	-	-	
Camphene	23	0.00227	
δ-3-Carene	109	0.0109	
β-Caryophyllene	1070	0.107	
Caryophyllene oxide	56	0.00562	
p-Cymene	-	-	
Eucalyptol	-	-	
Geraniol	-	-	
Guaiol	-	-	
α-Humulene	98	0.00983	
Isopulegol	-	-	
d-Limonene	1975	0.198	
Linalool	287	0.0287	
β-Myrcene	1672	0.167	
cis-Nerolidol	-	-	
trans-Nerolidol	-	-	
α-Ocimene	-	-	
β-Ocimene	-	-	
α-Pinene	427	0.0427	
β-Pinene	997	0.0997	
α-Terpinene	-	-	
γ-Terpinene	86	0.00861	
Terpinolene	-	-	
<b>TOTAL</b>	<b>6801</b>	<b>0.68</b>	



*Abbreviations:* HS - Headspace, GC - Gas Chromatography, MS - Mass Spectrometry, RL - Reporting Limit

This information is provided as a service and makes no claims of efficacy and/or safety of this product.

Results are applicable only for the sample(s) analyzed and for the specific analysis conducted.

This report is for informational purposes only and should not be used to diagnose, treat, or prevent any medical-related symptoms.

The statements and results herein have not been approved and/or endorsed by the FDA.

"-" Not detected above RL.

**Reporting Limit (µg/g): 12.5**

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Felling Analytical Services and Technology (F.A.S.T.), LLC

*John K. Irvin*  
John K. Irvin, M.S.  
Laboratory Director (Tulsa)

## CERTIFICATE OF ANALYSIS

**Order Type:** Medical Cannabis  
**Order ID:** OR2019-3335

**Customer ID:** 746  
**Customer Name:** Helix Extracts

**Harvest/Extract Lot:** None  
**Harvest/Extract Batch:** None

**Cultivar (Strain):** Girl Scout Cookie  
**Sample Date:** 08/28/2019

**Lab ID:** SA2019-10533  
**Date Received:** 08/28/2019

**Sample Matrix:** Concentrate  
**Date Completed:** 09/05/2019

**Remarks:**

### RESIDUAL SOLVENT PROFILE

**Analysis Date/Time:** 09/02/2019 1704  
**Analyst:** OL

**Method:** USP <467>  
**Instrument:** Agilent 6890

**Deviations from SOP:**  
None

Solvent	Result (µg/g)	Action Level (µg/g)
Acetone (67-64-1)	-	1000
Benzene (71-43-2)	-	2
n-Butane (106-97-2)	-	1000
2,2-Dimethylbutane (75-83-2)	-	60
2,3-Dimethylbutane (79-29-8)	-	60
Ethyl benzene (100-41-4)	-	430
n-Heptane (142-82-5)	-	1000
n-Hexane (110-54-3)	-	60
Isobutane (75-28-5)	-	1000
Isopropanol (67-63-0)	-	1000
2-Methylbutane (78-78-4)	-	1000
2-Methylpentane (107-83-5)	-	60
3-Methylpentane (96-10-0)	-	60
n-Pentane (109-66-0)	-	1000
n-Propane (74-98-6)	-	1000
Toluene (108-88-3)	-	180
o-Xylene (95-47-6)	-	430
m,p-Xylene (108-38-3 or 106-42-3)	-	430
Xylenes* (1330-20-7)	-	430

**Color Key**

RESULT < 1/2 AL
1/2 AL < RESULT < AL
RESULT > AL

**Reporting Limit (µg/g)**  
1/2 of AL

"-" not detected above reporting limit

"\*" - o,m,p-Xylene and Ethylbenzene



Solvent	Synonym(s)	Solvent	Synonym(s)	Solvent	Synonym(s)
Acetonitrile	Methyl Cyanide, ACN	2-Ethoxyethanol	Cellosolve, Ethyl glycol	Methanol	Methyl alcohol
1-Butanol	n-Butanol, Butyl Alcohol	Ethyl ether	Diethyl ether, Ether	2-Methylbutane	Isopentane
2-Butanol	sec-Butyl alcohol	Ethyl acetate	EtOAc	Methylene chloride	Dichloromethane
2-Butanone	Methyl ethyl ketone, MEK	Ethyl benzene	Phenylethane	2-Methylpentane	Isohexane
1,2-Dimethoxyethane	Monoglyme	Ethylene glycol	1,2-Ethanediol	1-Pentanol	n-Amyl alcohol
2,3-Dimethylbutane	Neohexane	Ethylene oxide	Oxirane	1-Propanol	Propyl alcohol
2,3-Dimethylbutane	Diisopropyl	Isobutane	2-Methylpropane	Tetrahydrofuran	THF
N,N-Dimethylformamide	DMF	Isopropanol	2-Propanol, IPA	Tetramethylene sulfone	Sulfolane
Dimethylsulfoxide	DMSO	Isopropyl Acetate	Acetic acid isopropyl ester	Xylene	Dimethylbenzene

**Abbreviations:** HS-Headspace, GC-Gas Chromatography, MS-Mass Spectrometry, RL-Reporting Limit, AL-Action Level  
CAS-Chemical Abstract Services

**Disclaimer:** This information is provided as a service and makes no claims of efficacy and/or safety of this product. Results are applicable only for the sample(s) analyzed and for the specific analysis conducted. This report is for informational purposes only and should not be used to diagnose, treat, or prevent any medical-related symptoms. The statements and results herein have not been approved and/or endorsed by the FDA.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of  
Felling Analytical Services and Technology (F.A.S.T.), LLC

## CERTIFICATE OF ANALYSIS

**Order Type:** Medical Cannabis  
**Order ID:** OR2019-3335

**Customer ID:** 746  
**Customer Name:** Helix Extracts

**Harvest/Extract Lot:** None  
**Harvest/Extract Batch:** None

**Cultivar (Strain):** Girl Scout Cookie  
**Sample Date:** 08/28/2019

**Lab ID:** SA2019-10533  
**Date Received:** 08/28/2019

**Sample Matrix:** Concentrate  
**Date Completed:** 09/05/2019

**Remarks:**

### PESTICIDES PROFILE

**Analysis Date/Time:** 09/02/2019 1704  
**Analyst:** OL

**Method:** LC/MS/MS and GC/MS  
**Instrument:** Waters Acquity/TQD

**Deviations from SOP:**  
None

<u>Pesticide</u>	<u>Result</u> (µg/g)	<u>Action Level</u> (µg/g)
Abamectin (71751-41-2)	-	0.5
Azoxystrobin (131860-33-8)	-	0.5
Bifenazate* (149877-41-8)	-	0.5
Etoxazole (153233-91-1)	-	0.5
Imazalil (35554-44-0)	-	0.5
Imidacloprid (138261-41-3)	-	0.5
Malathion (121-75-5)	-	0.5
Myclobutanil (88671-89-0)	-	0.5
Permethrins* (52645-53-1)	-	0.5
Spinosad A (168316-95-8)	-	0.5
Spinosad D (168316-95-8)	-	0.5
Spiromesifen (283594-90-1)	-	0.5
Spirotetramat (203313-25-1)	-	0.5
Tebuconazole (80443-41-0)	-	0.5

Color Key

RESULT < 1/2 AL
1/2 AL < RESULT < AL
RESULT > AL

**Reporting Limit (µg/g)**  
1/2 of AL

"-" not detected above reporting limit

"\*" analyzed by GC/MS (all others analyzed by LC/MS/MS)

Permethrins measured as the cumulative residue of the *cis*- and *trans*-permethrin isomers.



**Abbreviations:** LC - Liquid Chromatography, GC - Gas Chromatography, MS - Mass Spectrometry, RL - Reporting Limit, AL - Action Level, CAS - Chemical Abstract Services

<u>Pesticide</u>	<u>Synonym(s)</u>	<u>Pesticide</u>	<u>Synonym(s)</u>	<u>Pesticide</u>	<u>Synonym(s)</u>
Cyfluthrin	Baythroid	Myclobutanil	Systhane	Propiconazole	Tilt
DDVP	Dichlorvos	Naled	Dibrom	Propoxur	Baygon
Ethoprophos	Prophos	Phosmet	Imidan		

**Disclaimer:** This information is provided as a service and makes no claims of efficacy and/or safety of this product. Results are applicable only for the sample(s) analyzed and for the specific analysis conducted. This report is for informational purposes only and should not be used to diagnose, treat, or prevent any medical-related symptoms. The statements and results herein have not been approved and/or endorsed by the FDA.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Felling Analytical Services and Technology (F.A.S.T.), LLC

**CERTIFICATE OF ANALYSIS**

**Order Type:** Medical Cannabis  
**Order ID:** OR2019-3335

**Customer ID:** 746  
**Customer Name:** Helix Extracts

**Harvest/Extract Lot:** None  
**Harvest/Extract Batch:** None

**Cultivar (Strain):** Girl Scout Cookie  
**Sample Date:** 08/28/2019

**Lab ID:** SA2019-10533  
**Date Received:** 08/28/2019

**Sample Matrix:** Concentrate  
**Date Completed:** 09/05/2019

**Remarks:**

**MYCOTOXIN PROFILE**

**Analysis Date/Time:** 09/02/2019 1704  
**Analyst:** OL

**Method:** LC/MS/MS  
**Instrument:** Waters Acquity/TQD

**Deviations from SOP:**  
None

<u>Mycotoxin</u>	<u>Result</u> (µg/kg)	<u>Action Level</u> (µg/kg)
Aflatoxin B1	-	20
Aflatoxin B2	-	20
Aflatoxin G1	-	20
Aflatoxin G2	-	20
Ochratoxin A	-	20



*Abbreviations:* EC - Escherichia Coli, CFU - Colony-Forming Unit, RL - Reporting Limit, AL - Action Level

**Color Key**

RESULT < 1/2 AL
1/2 AL < RESULT < AL
RESULT > AL

**Reporting Limit (CFU/g)**  
1

"-" not detected above reporting limit

*Disclaimer:* This information is provided as a service and makes no claims of efficacy and/or safety of this product. Results are applicable only for the sample(s) analyzed and for the specific analysis conducted. This report is for informational purposes only and should not be used to diagnose, treat, or prevent any medical-related symptoms. The statements and results herein have not been approved and/or endorsed by the FDA.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Felling Analytical Services and Technology (F.A.S.T.), LLC

**CERTIFICATE OF ANALYSIS**

**Order Type:** Medical Cannabis  
**Order ID:** OR2019-3335

**Customer ID:** 746  
**Customer Name:** Helix Extracts

**Harvest/Extract Lot:** None  
**Harvest/Extract Batch:** None

**Cultivar (Strain):** Girl Scout Cookie  
**Sample Date:** 08/28/2019

**Lab ID:** SA2019-10533  
**Date Received:** 08/28/2019

**Sample Matrix:** Concentrate  
**Date Completed:** 09/05/2019

**Remarks:**

**HEAVY METAL PROFILE**

**Analysis Date/Time:** 09/02/2019 1704  
**Analyst:** OL

**Method:** ICP/MS  
**Instrument:** PerkinElmer Elan 9000

**Deviations from SOP:**  
None

<u>Heavy Metal</u>	<u>Result (µg/kg)</u>	<u>Action Level (µg/kg)</u>
Arsenic (As)	-	400
Cadmium (Cd)	-	440
Lead (Pb)	-	1000
Mercury (Hg)	-	200



*Abbreviations:* ICP - Inductively-Coupled Plasma, OES - Optical Emission Spectroscopy, MS - Mass Spectroscopy, RL - Reporting Limit, AL - Action Level

**Color Key**

RESULT < 1/2 AL
1/2 AL < RESULT < AL
RESULT > AL

**Reporting Limit (µg/kg)**  
50

"-" not detected above reporting limit

*Disclaimer:* This information is provided as a service and makes no claims of efficacy and/or safety of this product. Results are applicable only for the sample(s) analyzed and for the specific analysis conducted. This report is for informational purposes only and should not be used to diagnose, treat, or prevent any medical-related symptoms. The statements and results herein have not been approved and/or endorsed by the FDA.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Felling Analytical Services and Technology (F.A.S.T.), LLC

*John K. Irvin, M.S.*  
Laboratory Director (Tulsa)



**CERTIFICATE OF ANALYSIS**

**Order Type:** Medical Cannabis  
**Order ID:** OR2019-3335

**Customer ID:** 746  
**Customer Name:** Helix Extracts

**Harvest/Extract Lot:** None  
**Harvest/Extract Batch:** None

**Cultivar (Strain):** Girl Scout Cookie  
**Sample Date:** 08/28/2019

**Lab ID:** SA2019-10533  
**Date Received:** 08/28/2019

**Sample Matrix:** Concentrate  
**Date Completed:** 09/05/2019

**Remarks:**

**MICROBIOLOGICAL PROFILE**

**Analysis Date/Time:** 09/02/2019 1704  
**Analyst:** OL

**Method:** Hardy Diagnostics CompactDry  
**Instrument:** Thermo Incubator

**Deviations from SOP:**  
None

<u>Bacteria/Microbe</u>	<u>Result (CFU/g)</u>	<u>Action Level (CFU/g)</u>
Aerobic Plate Count, Total	NT	-
Escherichia Coli (E. Coli)	Absent	1
Mold	Absent	10000
Yeast	Absent	10000
Salmonella spp.	Absent	1



Abbreviations: EC - Escherichia Coli, CFU - Colony-Forming Unit, RL - Reporting Limit, AL - Action Level, NT - Not Tested

**Color Key**

RESULT < 1/2 AL
1/2 AL < RESULT < AL
RESULT > AL

**Reporting Limit (CFU/g)**  
1

"-" not detected above reporting limit

*Disclaimer:* This information is provided as a service and makes no claims of efficacy and/or safety of this product. Results are applicable only for the sample(s) analyzed and for the specific analysis conducted. This report is for informational purposes only and should not be used to diagnose, treat, or prevent any medical-related symptoms. The statements and results herein have not been approved and/or endorsed by the FDA.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Felling Analytical Services and Technology (F.A.S.T.), LLC