

SUMMARY OF ANALYSIS (SAMPLE ID: SA25999)

Testing Location:	Customer ID: 1648	Order ID: OR8100	Sample Type: Primary
OKC	Red Dirt Sungrown	Lot Number:	Matrix: Flower
3680 E. I-240 Service Rd.	P.O. Box 1399	GL042006	Mass: 5g
Oklahoma City, OK 73135	Guthrie, OK 73044	Batch Number:	Date Collected: 04/21/2020
License: LAAA-4Y4X-Z72Z	License: GAAA-41RN-M7KD	Not Entered	Date Received: 04/21/2020
Cultivar (Strain) or Sample Description: Gold Leaf			Date Completed: 04/27/2020

*This page is simply a summary of the analysis performed. For analytical details, please consult the individual Certificate(s) of Analysis for each of the specific test(s) performed.

*For Oklahoma, with the new OMMA rules to be effective April 1, 2020, limits on moisture are proposed at 15% and water activity at 0.65aw.

Moisture Content (%)	PASS/FAIL	Water Activity (aw)	PASS/FAIL
16.1	PASS	0.44 @ 21.1°C	PASS

<u>Cannabinoids (Top 3)</u>	<u>(%)</u>	<u>mg/g</u>
THCa	28.5	285
CBGa	3.48	35
Δ9-THC	0.664	7
TOTAL CBD	0.0885	0.885
TOTAL THC	25.7	257
TOTAL CANNABINOIDS	33	330

<u>Terpenes (Top 5)</u>	<u>(%)</u>	<u>µg/g</u>
d-Limonene	0.481	4807
β-Myrcene	0.255	2554
β-Caryophyllene	0.100	997
β-Pinene	0.064	643
α-Pinene	0.049	495
TOTAL TERPENES	1.13	11342

<u>Contaminants</u>	<u>PASS/FAIL</u>
Heavy Metals:	PASS
Microbiology:	PASS
Mycotoxins:	PASS
Pesticides:	PASS
Visual Inspection:	PASS

Sample Picture Upon Receipt



Scan the QR code to verify results.

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Kyle W. Felling
Kyle W. Felling, Ph.D.
Laboratory Director

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CERTIFICATE OF ANALYSIS (SAMPLE ID: SA25999)

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CANNABINOID (POTENCY) PROFILE

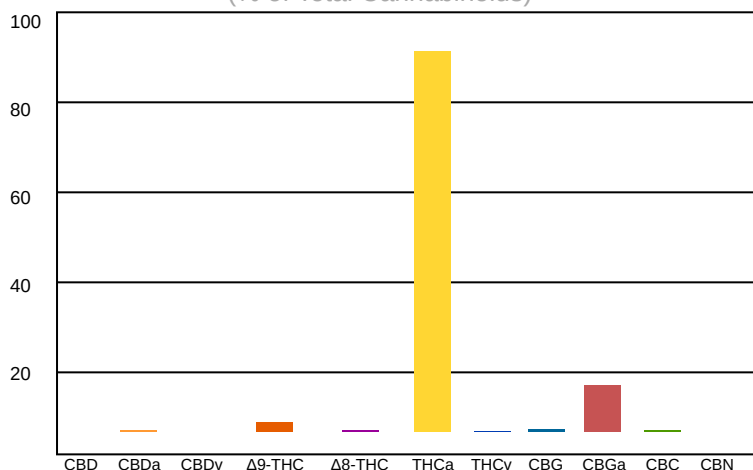
Analysis Date/Time: 04/21/2020 1716 **Method:** HPLC/DAD **Moisture Content (%):** 16.1
Analyst: WW **Instrument:** Agilent 1100 **Water Activity (aw):** 0.4409 @ 21.06Å°C

Cannabinoid	Result (%)	Result (mg/g)	Reporting Limit (mg/g)	Result (mg/mL)	Per Unit (mg)
CBD	-	-	0.0495	-	-
CBDa	0.101	1.01	0.0495	-	1.01
CBDv	-	-	0.0495	-	-
Δ9-THC	0.664	6.64	0.0495	-	7
Δ8-THC	0.037	0.37	0.0495	-	0.37
THCa	28.5	285	0.0495	-	285
THCv	0.0187	0.187	0.0495	-	0.187
CBC	0.0452	0.452	0.0495	-	0.452
CBG	0.145	1.45	0.0495	-	1.45
CBGa	3.48	34.8	0.0495	-	35
CBN	0.00695	0.0695	0.0495	-	0.0695
TOTAL	33	330	-	-	330
TOTAL THC	25.7	257	-	-	257
TOTAL CBD	0.0885	0.885	-	-	0.885



Cannabinoid Distribution

(% of Total Cannabinoids)



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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

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TERPENOID PROFILE

Analysis Date/Time: 04/21/2020 1716

Method: HS/GC/FID (Internal Method-002)

Deviations from SOP:

Analyst: DJ

Instrument: Agilent 6890

None

<u>Terpene</u>	<u>Result</u> (µg/g)	<u>Result</u> (%)	
α-Bisabolol	153	0.0153	
Camphene	171	0.0171	
δ-3-Carene	-	-	
β-Caryophyllene	997	0.0997	
Caryophyllene oxide	-	-	
p-Cymene	-	-	
Eucalyptol	-	-	
Geraniol	103	0.0103	
Guaiol	343	0.0343	
α-Humulene	350	0.035	
Isopulegol	-	-	
d-Limonene	4807	0.481	
Linalool	336	0.0336	
β-Myrcene	2554	0.255	
cis-Nerolidol	-	-	
trans-Nerolidol	-	-	
α-Ocimene	103	0.0103	
β-Ocimene	101	0.0101	
α-Pinene	495	0.0495	
β-Pinene	643	0.0643	
α-Terpinene	56	0.00561	
γ-Terpinene	-	-	
Terpinolene	130	0.013	
TOTAL	11342	1.13	



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

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"-" Not detected above RL.

Reporting Limit (µg/g): 1.98

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PESTICIDES PROFILE

Analysis Date/Time: 04/21/2020 1716

Method: LC/MS/MS

Deviations from SOP:

Analyst: DJ

Instrument: Waters Acquity/TQD

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
Etoazazole (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		

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MYCOTOXIN PROFILE

Analysis Date/Time: 04/21/2020 1716

Method: LC/MS/MS

Deviations from SOP:

Analyst: DJ

Instrument: Waters Acquity/TQD

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

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HEAVY METAL PROFILE**Analysis Date/Time:** 04/21/2020 1716**Method:** ICP/MS**Deviations from SOP:****Analyst:** CC**Instrument:** PerkinElmer Elan 9000

None

Heavy Metal	Result (µg/kg)	Action Level (µg/kg)
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

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MICROBIOLOGICAL PROFILE

Analysis Date/Time: 04/21/2020 1716	Method: Hardy Diagnostics CompactDry	Deviations from SOP:
Analyst: DJ	Instrument: Thermo Incubator	None

Bacteria/Microbe	Result (CFU/g)	Action Level (CFU/g)
Aerobic Plate Count, Total	Absent	-
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
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