

CERTIFICATE OF ANALYSIS

Order Type: Medical Cannabis
Order ID: OR2019-3879

Customer ID: 692
Customer Name: Canna Outlaw, LLC

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

Cultivar (Strain): Mango Kush
Sample Date: 09/19/2019

Lab ID: SA2019-12480
Date Received: 09/19/2019

Sample Matrix: Flower
Date Completed: 09/28/2019

Remarks:

CANNABINOID (POTENCY) PROFILE

Analysis Date/Time: 09/20/2019 2035
Analyst: OL

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

Moisture Content (%): 13.0
Water Activity (aw): -

Cannabinoid	Result (%)	Result (mg/g)	Reporting Limit (mg/g)	Result (mg/mL)	Per Unit (mg)
CBD	-	-	1.3	-	-
CBDa	0.252	2.52	1.3	-	3
CBDv	-	-	1.3	-	-
Δ9-THC	0.722	7.22	1.3	-	7
Δ8-THC	-	-	1.3	-	-
THCa	20.8	208	1.3	-	208
THCv	-	-	1.3	-	-
CBC	-	-	1.3	-	-
CBG	-	-	1.3	-	-
CBGa	-	-	1.3	-	-
CBN	-	-	1.3	-	-

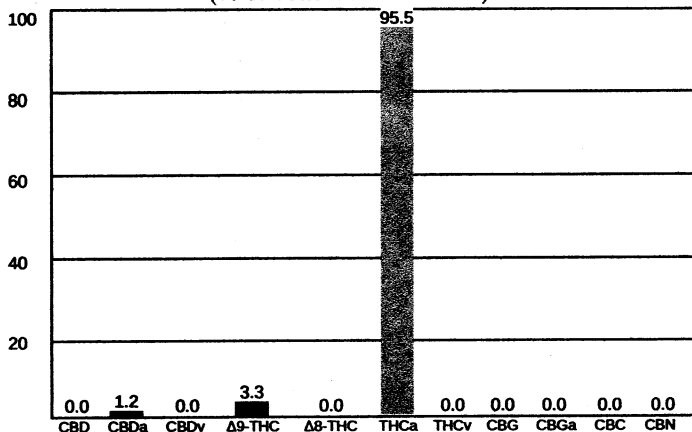


TOTAL	21.8	218	-	218
TOTAL THC	19	190	-	190
TOTAL CBD	0.221	2	-	2

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

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REPORT OF LABORATORY ANALYSIS

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

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TERPENOID PROFILE

Analysis Date/Time: 09/20/2019 2035
Analyst: OL

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

Deviations from SOP:
None

<u>Terpene</u>	<u>Result</u> (µg/g)	<u>Result</u> (%)	
α-Bisabolol	804	0.0804	
Camphene	-	-	
δ-3-Carene	-	-	
β-Caryophyllene	3296	0.33	■
Caryophyllene oxide	-	-	
p-Cymene	596	0.0596	
Eucalyptol	-	-	
Geraniol	-	-	
Guaiol	724	0.0724	
α-Humulene	948	0.0948	
Isopulegol	-	-	
d-Limonene	204	0.0204	
Linalool	-	-	
β-Myrcene	7182	0.718	■
cis-Nerolidol	162	0.0162	
trans-Nerolidol	-	-	
α-Ocimene	-	-	
β-Ocimene	-	-	
α-Pinene	7306	0.731	■
β-Pinene	1968	0.197	■
α-Terpinene	-	-	
γ-Terpinene	-	-	
Terpinolene	-	-	
TOTAL	23190	2.32	



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

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"-" Not detected above RL.

Reporting Limit (µg/g): 2

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PESTICIDES PROFILE

Analysis Date/Time: 09/20/2019 2035
Analyst: OL

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

Deviations from SOP:
None

<u>Pesticide</u>	<u>Result</u> ($\mu\text{g/g}$)	<u>Action Level</u> ($\mu\text{g/g}$)
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

1/2 AL < RESULT < AL

Reporting Limit ($\mu\text{g/g}$)
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	Sythane	Propiconazole	Tilt
DDVP	Dichlorvos	Naled	Dibrom	Propoxur	Baygon
Ethoprophos	Prophos	Phosmet	Imidan		

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MYCOTOXIN PROFILE

Analysis Date/Time: 09/20/2019 2035
Analyst: OL

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

Deviations from SOP:
None

<u>Mycotoxin</u>	<u>Result</u> ($\mu\text{g/kg}$)	<u>Action Level</u> ($\mu\text{g/kg}$)
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

1/2 AL < RESULT < AL

Reporting Limit (CFU/g)
1

"-" not detected above reporting limit

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Remarks:

HEAVY METAL PROFILE

Analysis Date/Time: 09/20/2019 2035
Analyst: OL

Method: ICP/MS
Instrument: PerkinElmer Elan 9000

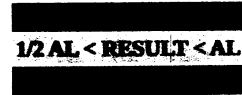
Deviations from SOP:
None

<u>Heavy Metal</u>	<u>Result</u> <u>(µg/kg)</u>	<u>Action Level</u> <u>(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



Reporting Limit (µg/kg)
50

"-" not detected above reporting limit

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Remarks:

MICROBIOLOGICAL PROFILE

Analysis Date/Time: 09/20/2019 2035
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)		1
Mold		10000
Yeast		10000
Salmonella spp.		1



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

Color Key

1/2 AL < RESULT < AL

Reporting Limit (CFU/g)

1

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