

CERTIFICATE OF ANALYSIS

Order Type: Cannabis
Order ID: OR2019-5378

Customer ID: 932
Customer Name: Bud Wise Brands

Harvest/Extract Lot: 1
Harvest/Extract Batch: 4

Cultivar (Strain): Samoa Kush
Sample Date: 11/14/2019

Lab ID: SA2019-17157
Date Received: 11/14/2019

Sample Matrix: Flower
Date Completed: 11/22/2019

Remarks:

CANNABINOID (POTENCY) PROFILE

Analysis Date/Time: 11/18/2019 1515
Analyst: OL

Method: 2019-10-18T20:36:50Z
Instrument: Agilent 1100

Moisture Content (%): 13.9
Water Activity (aw): -

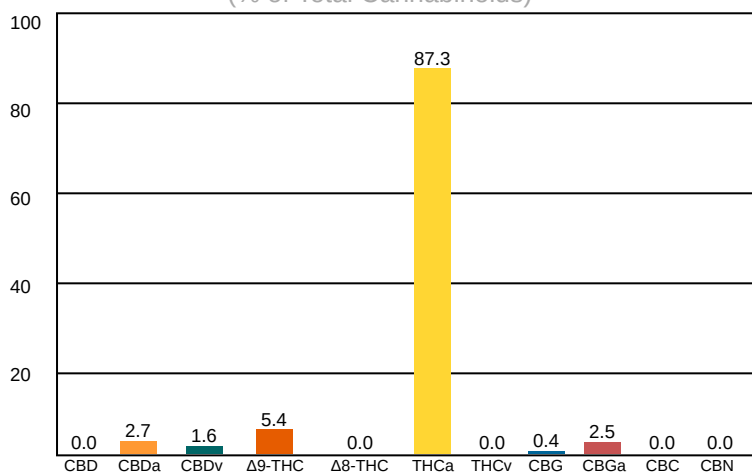
Cannabinoid	Result (%)	Result (mg/g)	Reporting Limit (mg/g)	Result (mg/mL)	Per Unit (mg)
CBD	-	-	0.0493	-	-
CBDa	0.577	5.77	0.0493	-	6
CBDv	0.347	3.47	0.0493	-	3
Δ9-THC	1.15	11.5	0.0493	-	11
Δ8-THC	-	-	0.0493	-	-
THCa	18.6	186	0.0493	-	186
THCv	-	-	0.0493	-	-
CBC	-	-	0.0493	-	-
CBG	0.0906	0.906	0.0493	-	0.906
CBGa	0.543	5.43	0.0493	-	5
CBN	-	-	0.0493	-	-
TOTAL	21.3	213		-	213
TOTAL THC	17.5	175		-	175
TOTAL CBD	0.506	5		-	5



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

www.FASTLaboratories.com

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TERPENOID PROFILE

Analysis Date/Time: 11/18/2019 1515
Analyst: OL

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

Deviations from SOP:
None

Terpene	Result (µg/g)	Result (%)	
α-Bisabolol	1728	0.173	■
Camphene	32	0.0032	■
δ-3-Carene	-	-	
β-Caryophyllene	4372	0.437	■
Caryophyllene oxide	448	0.0448	■
p-Cymene	-	-	
Eucalyptol	-	-	
Geraniol	-	-	
Guaiol	-	-	
α-Humulene	2041	0.204	■
Isopulegol	-	-	
d-Limonene	4229	0.423	■
Linalool	942	0.0942	■
β-Myrcene	7100	0.71	■
cis-Nerolidol	-	-	
trans-Nerolidol	763	0.0763	■
α-Ocimene	-	-	
β-Ocimene	4336	0.434	■
α-Pinene	1536	0.154	■
β-Pinene	967	0.0967	■
α-Terpinene	-	-	
γ-Terpinene	-	-	
Terpinolene	-	-	
TOTAL	28494	2.85	



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

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Remarks:

PESTICIDES PROFILE

Analysis Date/Time: 11/18/2019 1515
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
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

<u>Color Key</u>
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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Date Received: 11/14/2019**Sample Matrix:** Flower
Date Completed: 11/22/2019**Remarks:****MYCOTOXIN PROFILE****Analysis Date/Time:** 11/18/2019 1515
Analyst: OL**Method:** LC/MS/MS
Instrument: Waters Acquity/TQD**Deviations from SOP:**
None

<u>Mycotoxin</u>	<u>Result</u> <u>(µg/kg)</u>	<u>Action Level</u> <u>(µg/kg)</u>
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

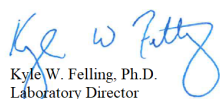
RESULT < 1/2 AL
1/2 AL < RESULT < AL
RESULT > AL

Reporting Limit (CFU/g)
1"- " not detected above
reporting limit

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Date Received: 11/14/2019**Sample Matrix:** Flower
Date Completed: 11/22/2019**Remarks:****HEAVY METAL PROFILE****Analysis Date/Time:** 11/18/2019 1515
Analyst: OL**Method:** ICP/MS
Instrument: PerkinElmer Elan 9000**Deviations from SOP:**
None

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

MICROBIOLOGICAL PROFILE

Analysis Date/Time: 11/18/2019 1515
Analyst: OL

Method: Hardy Diagnostics CompactDry
Instrument: Thermo Incubator

Deviations from SOP:
None

<u>Bacteria/Microbe</u>	<u>Result</u> (CFU/g)	<u>Action Level</u> (CFU/g)
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

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