

Certificate of Analysis

Order #: HEM191212-010027

Order Date: 2019-12-12

Collection Date: 2019-12-17

Report Date: 2019-12-24

Batch #: SM-12-2019

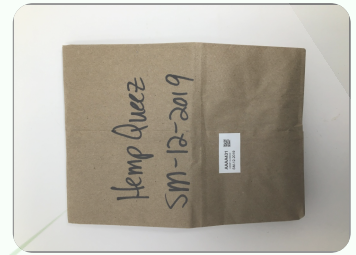
Method: SOP-3

Sample #: AAAA431

Specimen Type: CBD/HEMP Flower & Plants

Extracted From: hemp

Description: dried hemp flower

Potency
TestedHeavy Metals
PassedMycotoxins
PassedMoisture
TestedPathogenic
PassedTerpenes
TestedPesticides
Passed

The photos on this report are of a sample collected by the lab and may vary from the final packaging.

CBD Total
 14.454%

THC Total
 0.662%

CBG Total
 1.377%

CBN Total
 Not Detected

Other Cannabinoids Total
 Not Detected

Total Detected Cannabinoids
 16.493%

Potency - 16 (Tested)

(HPLC)

Analyte	Result (mg/g)	(%)	LOQ (%)	Analyte	Result (mg/g)	(%)	LOQ (%)	Analyte	Result (mg/g)	(%)	LOQ (%)
CBC		<LOQ	0.001	CBCA	7.544	0.754	0.001	CBD	3.607	0.361	0.001
CBDA	160.700	16.070	0.001	CBDV		<LOQ	0.001	CBDA	1.531	0.153	0.001
CBG	1.073	0.107	0.001	CBGA	14.480	1.448	0.001	CBL		<LOQ	0.001
CBN		<LOQ	0.001	CBNA		<LOQ	0.001	Delta-8-THC		<LOQ	0.001
Delta-9-THC	0.550	0.055	0.001	THCA-A	6.918	0.692	0.001	THCV		<LOQ	0.001
THCVA		<LOQ	0.001	Total CBD	144.541	14.454	0.001	Total THC	6.617	0.662	0.001

*Total CBD = CBD + (CBD-A * 0.877), *Total THC = THCA-A * 0.877 + Delta 9 THC, *CBG Total = (CBGA * 0.877) + CBG, *CBN Total = (CBNA * 0.877) + CBN, *Other Cannabinoids Total = CBC + CBDV + THCVA + THCV-A, *Total Detected Cannabinoids = CBD Total + CBG Total + CBN Total + THC Total + CBC + CBDV + THCV + THCV-A (mg/g) = Milligram per Gram, LOQ = Limit of Quantitation

 Xueli Gao
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Lab Toxicologist

 Aixia Sun
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Principal Scientist

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Specimen Type: CBD/HEMP Flower & Plants

Extracted From: hemp

Description: dried hemp flower

Heavy Metals (Passed)

(ICP-MS)

Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)
Arsenic (As)	200	<LOQ	100	Cadmium (Cd)	200	Passed	100	Lead (Pb)	500	Passed	100
Mercury (Hg)	100	<LOQ	100								

(ppb) = Parts per Billion, (ppb) = (µg/kg), LOQ = Limit of Quantitation

Mycotoxins (Passed)

(LCMS/MS)

Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)
Aflatoxin B1		<LOQ	6	Aflatoxin B2		<LOQ	6	Aflatoxin G1		<LOQ	6
Aflatoxin G2		<LOQ	6	Aflatoxin Total	20	<LOQ	6	Ochratoxin A	20	<LOQ	12

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Moisture (Tested)

(Moisture Meter)

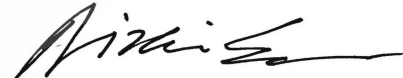
Analyte	Result (%)
Moisture	10.440

(% = Percent)



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Pathogenic Microbiology #3 (HEMP Compliance Panel) (Passed)

(qPCR)

Analyte	Result	Analyte	Result	Analyte	Result
<u>E.Coli</u>	Absence	<u>Listeria</u>	Absence	<u>Salmonella</u>	Absence

Terpenes - FL (Tested)

(GC/GCMS)

Analyte	Result (mg/g)	(%)	LOQ (%)	Analyte	Result (mg/g)	(%)	LOQ (%)	Analyte	Result (mg/g)	(%)	LOQ (%)
(+)-Cedrol	<LOQ	0.001	0.001	(R)-(+)-Limonene	0.520	0.052	0.001	3-Carene	<LOQ	0.001	0.001
Alpha-Bisabolol	0.050	0.005	0.001	alpha-Cedrene	0.220	0.022	0.001	alpha-Humulene	0.230	0.023	0.001
alpha-Phellandren-e	<LOQ	0.001	0.001	alpha-Pinene	0.100	0.010	0.001	alpha-Terpinene	<LOQ	0.001	0.001
Borneol	<LOQ	0.001	0.001	beta-Myrcene	10.300	1.030	0.001	beta-Pinene	<LOQ	0.001	0.001
Caryophyllene oxide	<LOQ	0.001	0.001	Camphene	<LOQ	0.001	0.001	Camphors	<LOQ	0.001	0.001
Fenchyl Alcohol	0.090	0.009	0.001	cis-Nerolidol	<LOQ	0.001	0.001	Eucalyptol	<LOQ	0.001	0.001
Guaiol	0.050	0.005	0.001	Farnesene	<LOQ	0.001	0.001	Fenchone	<LOQ	0.001	0.001
Isopulegol	<LOQ	0.001	0.001	gamma-Terpinene	<LOQ	0.001	0.001	Geraniol	<LOQ	0.001	0.001
Ocimene	0.920	0.092	0.001	Hexahydrothymol	<LOQ	0.001	0.001	Geranyl acetate	<LOQ	0.001	0.001
Sabinene Hydrate	<LOQ	0.001	0.001	Linalool	0.060	0.006	0.001	Isoborneol	<LOQ	0.001	0.001
trans-Caryophylle-ne	1.120	0.112	0.001	Pulegone	<LOQ	0.001	0.001	Nerol	<LOQ	0.001	0.001
				Terpineol	0.050	0.005	0.001	Sabinene	<LOQ	0.001	0.001
				trans-Nerolidol	0.060	0.006	0.001	Terpinolene	<LOQ	0.001	0.001
								Valencene	<LOQ	0.001	0.001

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Pesticides (Passed)

(LCMS/MS)

Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)	Analyte	Action Level (ppb)	Result (ppb)	LOQ (ppb)
Abamectin	100	<LOQ	28.23	Acephate	100	<LOQ	30	Acequinocyl	100	<LOQ	48
Acetamiprid	100	<LOQ	30	Aldicarb	100	<LOQ	30	Azoxystrobin	10	<LOQ	10
Bifenazate	100	<LOQ	30	Bifenthrin	100	<LOQ	30	Chlorfenapyr	100	<LOQ	48
Chlorpyrifos	100	<LOQ	30	Clofentezine	200	<LOQ	30	Coumaphos	100	<LOQ	30
Cyfluthrin	100	<LOQ	30	Cypermethrin	500	<LOQ	30	Daminozide	100	<LOQ	30
DDVP(Dichlorvos)	100	<LOQ	30	Diazinon	100	<LOQ	30	Dimethoate	100	<LOQ	30
Dimethomorph	200	<LOQ	30	Ethoprop(hos)	100	<LOQ	30	Etofenprox	100	<LOQ	30
Etoxazole	100	<LOQ	30	Fenhexamid	100	<LOQ	30	Fenoxycarb	100	<LOQ	30
Fipronil	100	<LOQ	30	Flonicamid	100	<LOQ	30	Fludioxonil	100	<LOQ	30
Hexythiazox	100	<LOQ	30	Imazalil	100	<LOQ	30	Imidacloprid	400	<LOQ	30
Kresoxim Methyl	100	<LOQ	30	Malathion A	200	<LOQ	30	Metalaxyl	20	<LOQ	10
Methiocarb	50	<LOQ	30	Methomyl	100	<LOQ	30	Mevinphos	100	<LOQ	30
Myclobutanil	100	<LOQ	30	Naled	250	<LOQ	30	Oxamyl	500	<LOQ	30
Paclobutrazol	100	<LOQ	30	Parathion-methyl	100	<LOQ	48	Pentachloronitrobenzene	150	<LOQ	30
Permethrin	100	<LOQ	30	Phosmet	100	<LOQ	30	Piperonylbutoxide	3000	<LOQ	30
Prallethrin	100	<LOQ	30	Propiconazole	100	<LOQ	30	Propoxur	100	<LOQ	30
Pyrethrins	500	<LOQ	30	Pyridaben	200	<LOQ	30	Spinetoram	200	<LOQ	30
Spinosyn A	100	<LOQ	30	Spinosyn D	100	<LOQ	30	Spiromesifen	100	<LOQ	30
Spirotetramat	100	<LOQ	30	Spiroxamine	100	<LOQ	30	Tebuconazole	100	<LOQ	30
Thiacloprid	100	<LOQ	30	Thiamethoxam	500	<LOQ	30	Trifloxystrobin	100	<LOQ	30

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