



CERTIFICATE OF ANALYSIS

Sample Name: 20 mg Gummies
 Steep Hill ID: HI73215
 Batch ID: 8222019-02B
 State ID:
 Sample Type: Edible
 Date Received: 9/12/2019
 Date Reported: 9/15/2019
 Pkg. Mass: 2.9722 g
 # of Servings: 1

Customer: Hawaii Cannabis Care

OVERALL BATCH SUMMARY: PASS

Residual Pesticides	Microbial Impurities	Mycotoxins	Heavy Metals	Moisture	Residual Solvents	Foreign Material
Pass	Pass	Pass	Pass	NT	NT	NT

Cannabinoid Results – Standard Potency 9/15/2019

Standard potency analysis utilizing Ultra High Performance Liquid Chromatography (UHPLC; HI-SOP-024)

Analyte	%	mg/g	mg/pkg	mg/serv	LOD mg/g	LOQ mg/g
CBD	0.67	6.7	19.9	19.9	0.0034	0.0036
CBDA	ND	ND	ND	ND	0.0034	0.0061
CBG	ND	ND	ND	ND	0.0034	0.0039
CBN	ND	ND	ND	ND	0.0034	0.0034
THC	ND	ND	ND	ND	0.0034	0.0034
THCA	ND	ND	ND	ND	0.0034	0.0078
Total	0.67	6.7	19.9	19.9		

Total THC	Total CBD
Not Detected	0.67 %
Not Detected	6.7 mg/g
Not Detected	19.9 mg/pkg
Not Detected	19.9 mg/serv

Total THC = [THCA x 0.877] + [THC]
 Total CBD = [CBDA x 0.877] + [CBD]

Cannabinoid Results – Extended Cannabinoids NT

Extended cannabinoid analysis utilizing Ultra High Performance Liquid Chromatography (UHPLC; HI-SOP-024)

Analyte	%	mg/g	mg/pkg	mg/serv	LOD mg/g	LOQ mg/g
CBC	NT	NT	NT	NT	NT	NT
CBD	NT	NT	NT	NT	NT	NT
CBDA	NT	NT	NT	NT	NT	NT
CBDV	NT	NT	NT	NT	NT	NT
CBDVA	NT	NT	NT	NT	NT	NT
CBG	NT	NT	NT	NT	NT	NT
CBN	NT	NT	NT	NT	NT	NT
THC	NT	NT	NT	NT	NT	NT
Δ8-THC	NT	NT	NT	NT	NT	NT
THCA	NT	NT	NT	NT	NT	NT
THCV	NT	NT	NT	NT	NT	NT
THCVA	NT	NT	NT	NT	NT	NT
Total	NT	NT	NT	NT	NT	NT



Nelson Lazaga, Ph.D
 Laboratory Director
 Date: 9/16/2019

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Residual Pesticides Results
Pass
9/15/2019

 Residual pesticide analysis utilizing Liquid Chromatography – Mass Spectrometry (LC-MSMS; HI-SOP-025) - **Limit units: ug/g = ppm**

Analyte	Pass/Fail	µg/g	Limit	LOD µg/g	LOQ µg/g	Analyte	Pass/Fail	µg/g	Limit	LOD µg/g	LOQ µg/g
Abamectin B1a	Pass	ND	1	0.086	0.26	Hexythiazox	Pass	ND	1	0.075	0.23
Acephate	Pass	ND	1	0.025	0.075	Imazalil	Pass	ND	1	0.0168	0.051
Acequinocyl	Pass	ND	1	0.00125	0.34	Imidacloprid	Pass	ND	1	0.024	0.074
Acetamiprid	Pass	ND	1	0.041	0.124	Kresoxim-methyl	Pass	ND	1	0.023	0.070
Aldicarb	Pass	ND	1	0.0135	0.041	Malathion	Pass	ND	1	0.021	0.064
Azoxystrobin	Pass	ND	1	0.031	0.095	Metalaxyl	Pass	ND	1	0.020	0.061
Bifenazate	Pass	ND	1	0.036	0.110	Methiocarb	Pass	ND	1	0.034	0.104
Bifenthrin	Pass	ND	1	0.071	0.21	Methomyl	Pass	ND	1	0.0134	0.041
Boscalid	Pass	ND	1	0.074	0.22	Methyl Parathion	Pass	ND	1	0.051	0.155
Carbaryl	Pass	ND	1	0.0143	0.043	MGK-264	Pass	ND	1	0.067	0.20
Carbofuran	Pass	ND	1	0.0100	0.030	Myclobutanil	Pass	ND	1	0.021	0.063
Chlorantraniliprole	Pass	ND	1	0.031	0.093	Naled	Pass	ND	1	0.0191	0.058
Chlorfenapyr	Pass	ND	1	0.0132	0.040	Oxamyl	Pass	ND	1	0.0133	0.040
Chlorpyrifos	Pass	ND	1	0.030	0.092	Paclobutrazol	Pass	ND	1	0.0135	0.041
Clofentezine	Pass	ND	1	0.057	0.173	Permethrin	Pass	ND	1	0.092	0.28
Cyfluthrin	Pass	ND	1	0.142	0.34	Phosmet	Pass	ND	1	0.048	0.144
Cypermethrin	Pass	ND	1	0.091	0.27	Piperonyl Butoxide	Pass	ND	1	0.0156	0.047
Diazinon	Pass	ND	1	0.0120	0.036	Prallethrin	Pass	ND	1	0.028	0.086
Dichlorvos	Pass	ND	1	0.061	0.184	Propiconazole	Pass	ND	1	0.029	0.087
Dimethoate	Pass	ND	1	0.0168	0.051	Propoxur	Pass	ND	1	0.0106	0.032
Ethoprophos	Pass	ND	1	0.032	0.097	Pyrethrins	Pass	ND	1	0.0135	0.041
Etofenprox	Pass	ND	1	0.083	0.25	Pyridaben	Pass	ND	1	0.072	0.22
Etoxazole	Pass	ND	1	0.0170	0.052	Spinosad	Pass	ND	1	0.0113	0.034
Fenpyroximate	Pass	ND	1	0.00050	0.00153	Spiromesifen	Pass	ND	1	0.021	0.065
Fipronil	Pass	ND	1	0.038	0.117	Spirotetramat	Pass	ND	1	0.0181	0.055
Flonicamid	Pass	ND	1	0.033	0.099	Tebuconazole	Pass	ND	1	0.028	0.083
Fludioxonil	Pass	ND	1	0.021	0.064	Thiacloprid	Pass	ND	1	0.021	0.064

Mycotoxin Results
Pass
9/15/2019

 Mycotoxin analysis utilizing Liquid Chromatography – Mass Spectrometry (LC-MS; HI-SOP-025) - **Limit units: µg/kg = ppb**

Analyte	Pass/Fail	µg/kg	Limit	LOD µg/kg	LOQ µg/kg
Aflatoxin B1		ND		1.76	5.3
Aflatoxin B2		ND		1.61	4.9
Aflatoxin G1		ND		1.67	5.1
Aflatoxin G2		ND		2.4	7.3
Ochratoxin A	Pass	ND	<20	3.1	9.4
Total Aflatoxins	Pass	ND	<20	2.4	7.3

Heavy Metals Results
Pass
9/14/2019

 Heavy metals analysis utilizing Atomic Absorption Spectroscopy (AAS; HI-SOP-015) - **Limit units: µg/g = ppm**

Analyte	Pass/Fail	µg/g	Limit	LOD µg/g	LOQ µg/g
Arsenic	Pass	ND	10	0.00118	1.23
Cadmium	Pass	< LOQ	4	0.000098	1.23
Lead	Pass	< LOQ	6	0.00143	1.23
Mercury	Pass	ND	2	0.00106	1.23

Residual Solvents Results
NT

 Residual solvents and processing chemicals analysis utilizing Headspace Gas Chromatography – Mass Spectrometry (HS-GC-MS; HI-SOP-010) - **Limit units: ug/g = ppm**

Analyte	Pass/Fail	µg/g	Limit	LOD µg/g	LOQ µg/g	Analyte	Pass/Fail	µg/g	Limit	LOD µg/g	LOQ µg/g
Acetone	NT	NT	NT	NT	NT	Isobutane	NT	NT	NT	NT	NT
Acetonitrile	NT	NT	NT	NT	NT	Isopropanol	NT	NT	NT	NT	NT
Benzene	NT	NT	NT	NT	NT	Methanol	NT	NT	NT	NT	NT
Butanes	NT	NT	NT	NT	NT	n-Pentane	NT	NT	NT	NT	NT
Chloroform	NT	NT	NT	NT	NT	Tetrahydrofuran	NT	NT	NT	NT	NT
Ethanol	NT	NT	NT	NT	NT	Toluene	NT	NT	NT	NT	NT
Heptanes	NT	NT	NT	NT	NT	Total Xylenes	NT	NT	NT	NT	NT
n-Hexane	NT	NT	NT	NT	NT						



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Terpenoid Results - Standard Terpenes NT

Standard terpene analysis utilizing Liquid Chromatography – Mass Spectrometry (LC-MS; HI-SOP-024)

Analyte	%	mg/g	LOD mg/g	LOQ mg/g
Caryophyllene Oxide	NT	NT	NT	NT
β-Caryophyllene	NT	NT	NT	NT
Citronellol	NT	NT	NT	NT
α-Humulene	NT	NT	NT	NT
Linalool	NT	NT	NT	NT
β-Myrcene	NT	NT	NT	NT
Total	NT	NT	NT	NT

Terpenoid Results - Extended Terpenes NT

Extended terpene analysis utilizing Gas Chromatography – Mass Spectrometry (GC-MS)

Analyte	%	mg/g	LOD mg/g	LOQ mg/g
α-Bisabolol	NT	NT	NT	NT
Camphene	NT	NT	NT	NT
3-Carene	NT	NT	NT	NT
Caryophyllene Oxide	NT	NT	NT	NT
β-Caryophyllene	NT	NT	NT	NT
Eucalyptol	NT	NT	NT	NT
Geraniol	NT	NT	NT	NT
Guaiol	NT	NT	NT	NT
Humulene	NT	NT	NT	NT
p-Isopropyltoluene	NT	NT	NT	NT
Isopulegol	NT	NT	NT	NT
Limonene	NT	NT	NT	NT
Linalool	NT	NT	NT	NT
β-Myrcene	NT	NT	NT	NT
Nerolidol	NT	NT	NT	NT
Ocimene	NT	NT	NT	NT
α-Pinene	NT	NT	NT	NT
β-Pinene	NT	NT	NT	NT
α-Terpinene	NT	NT	NT	NT
γ-Terpinene	NT	NT	NT	NT
Terpinolene	NT	NT	NT	NT
Total	NT	NT	NT	NT

Microbial Impurities Results
Pass

9/15/2019

 Microbiological screening utilizing PathogenDx and TEMPO (HI-SOP-008 + HI-SOP-007) - **Limit units: CFU/g**

Analyte	Pass/Fail	Result	Limit	LOQ
Aspergillus flavus	Pass	ND	ND	Not Detected in 1 gram
Aspergillus fumigatus	Pass	ND	ND	Not Detected in 1 gram
Aspergillus niger	Pass	ND	ND	Not Detected in 1 gram
Salmonella	Pass	ND	ND	Not Detected in 1 gram
Aerobic	Pass	<100	10000	1 CFU/g
Coliform	Pass	<100	100	1 CFU/g
Enterobacteria	Pass	<100	100	1 CFU/g
General E. coli	Pass	<1	ND	1 CFU/g
Yeast & Mold	Pass	<100	1000	1 CFU/g

Moisture Results
NT

 Moisture content analysis utilizing Moisture Balance (MB; HI-SOP-033) - **Limit units: %**

Analyte	Pass/Fail	%	Limit
Moisture	NT	NT	

Foreign Material Results
NT

Foreign material analysis utilizing visual inspection with 10x magnification (HI-SOP-016)

Analyte	Pass/Fail
Visual Inspection	NT

 LOD: Limit of Detection
 LOQ: Limit of Quantitation
 NT: Not Tested
 ND: Not Detected



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Page 3 of 3