



CERTIFICATE OF ANALYSIS

Sample Name: Ready Mix
 Steep Hill ID: HI73214
 Batch ID: 962019-01
 State ID:
 Sample Type: Concentrate
 Date Received: 9/12/2019
 Date Reported: 9/15/2019

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	Pass	NT

Cannabinoid Results – Standard Potency 9/15/2019

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

Analyte	%	mg/g	LOD mg/g	LOQ mg/g
CBD	0.37	3.7	0.168	0.176
CBDA	ND	ND	0.168	0.30
CBG	ND	ND	0.168	0.193
CBN	ND	ND	0.168	0.168
THC	ND	ND	0.168	0.168
THCA	ND	ND	0.168	0.39
Total	0.37	3.7		

Total THC	Total CBD
Not Detected	0.37 %
Not Detected	3.7 mg/g

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	LOD mg/g	LOQ mg/g
CBC	NT	NT	NT	NT
CBD	NT	NT	NT	NT
CBDA	NT	NT	NT	NT
CBDV	NT	NT	NT	NT
CBDVA	NT	NT	NT	NT
CBG	NT	NT	NT	NT
CBN	NT	NT	NT	NT
THC	NT	NT	NT	NT
Δ8-THC	NT	NT	NT	NT
THCA	NT	NT	NT	NT
THCV	NT	NT	NT	NT
THCVA	NT	NT	NT	NT
Total	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	0.21	0.65	Hexythiazox	Pass	ND	1	0.187	0.57
Acephate	Pass	ND	1	0.061	0.185	Imazalil	Pass	ND	1	0.042	0.126
Acequinocyl	Pass	ND	1	0.0031	0.84	Imidacloprid	Pass	ND	1	0.060	0.183
Acetamiprid	Pass	ND	1	0.101	0.31	Kresoxim-methyl	Pass	ND	1	0.057	0.173
Aldicarb	Pass	ND	1	0.034	0.102	Malathion	Pass	ND	1	0.052	0.158
Azoxystrobin	Pass	ND	1	0.078	0.24	Metalaxyl	Pass	ND	1	0.050	0.152
Bifenazate	Pass	ND	1	0.090	0.27	Methiocarb	Pass	ND	1	0.085	0.26
Bifenthrin	Pass	ND	1	0.176	0.53	Methomyl	Pass	ND	1	0.033	0.101
Boscalid	Pass	ND	1	0.183	0.56	Methyl Parathion	Pass	ND	1	0.127	0.38
Carbaryl	Pass	ND	1	0.035	0.107	MGK-264	Pass	ND	1	0.166	0.50
Carbofuran	Pass	ND	1	0.025	0.075	Myclobutanil	Pass	ND	1	0.051	0.156
Chlorantraniliprole	Pass	ND	1	0.076	0.23	Naled	Pass	ND	1	0.047	0.143
Chlorfenapyr	Pass	ND	1	0.033	0.099	Oxamyl	Pass	ND	1	0.033	0.100
Chlorpyrifos	Pass	ND	1	0.075	0.23	Paclobutrazol	Pass	ND	1	0.033	0.101
Clofentezine	Pass	ND	1	0.141	0.43	Permethrin	Pass	ND	1	0.23	0.69
Cyfluthrin	Pass	ND	1	0.35	0.84	Phosmet	Pass	ND	1	0.118	0.36
Cypermethrin	Pass	ND	1	0.22	0.68	Piperonyl Butoxide	Pass	ND	1	0.039	0.117
Diazinon	Pass	ND	1	0.030	0.090	Prallethrin	Pass	ND	1	0.070	0.21
Dichlorvos	Pass	ND	1	0.151	0.46	Propiconazole	Pass	ND	1	0.071	0.22
Dimethoate	Pass	ND	1	0.042	0.126	Propoxur	Pass	ND	1	0.026	0.079
Ethoprophos	Pass	ND	1	0.079	0.24	Pyrethrins	Pass	ND	1	0.033	0.101
Etofenprox	Pass	ND	1	0.20	0.62	Pyridaben	Pass	ND	1	0.178	0.54
Etoxazole	Pass	ND	1	0.042	0.128	Spinosad	Pass	ND	1	0.028	0.085
Fenpyroximate	Pass	ND	1	0.00124	0.0038	Spiromesifen	Pass	ND	1	0.053	0.160
Fipronil	Pass	ND	1	0.095	0.29	Spirotetramat	Pass	ND	1	0.045	0.136
Flonicamid	Pass	ND	1	0.081	0.25	Tebuconazole	Pass	ND	1	0.068	0.21
Fludioxonil	Pass	ND	1	0.052	0.159	Thiacloprid	Pass	ND	1	0.052	0.158

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		4.4	13.2
Aflatoxin B2		ND		4.0	12.1
Aflatoxin G1		ND		4.1	12.5
Aflatoxin G2		ND		6.0	18.1
Ochratoxin A	Pass	ND	<20	7.7	23
Total Aflatoxins	Pass	ND	<20	6.0	18.1

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	0.00135	1.40
Cadmium	Pass	< LOQ	4	0.0000112	1.40
Lead	Pass	ND	6	0.00163	1.40
Mercury	Pass	ND	2	0.00121	1.40

Residual Solvents Results
Pass
9/13/2019

 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		ND		3.6	5.4	Isobutane		ND		0.47	0.54
Acetonitrile		ND		0.26	0.54	Isopropanol		11.6		3.6	5.4
Benzene	Pass	ND	1	0.25	0.54	Methanol		ND		0.49	0.54
Butanes	Pass	ND	800	0.25	0.54	n-Pentane		ND		0.25	0.54
Chloroform		ND		0.26	0.54	Tetrahydrofuran		ND		0.49	0.54
Ethanol		ND		3.6	5.4	Toluene	Pass	ND	1	0.25	0.54
Heptanes	Pass	ND	500	6.5	10.8	Total Xylenes	Pass	ND	1	0.25	0.54
n-Hexane	Pass	ND	10	0.47	0.54						



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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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