



Steep Hill Hawaii™

1150 S. KING STREET, HONOLULU, HI 96814 LICENSE #: 92630

CERTIFICATE OF ANALYSIS

Sample Name: CBD Tincture
Steep Hill ID: HI89580
Batch ID:
State ID:
Sample Type: Tincture
Date Received: 8/14/2020
Date Reported: 8/17/2020
Density: 0.930 g/mL

Customer:

OVERALL BATCH SUMMARY: **PASS**

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



Total THC
Not Detected
Not Detected
Not Detected

Total CBD
3.35 %
33.5 mg/g
31.1 mg/mL

Total Cannabinoids
3.35 %
33.5 mg/g
31.1 mg/mL

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

Nelson Lazaga, Ph.D
Laboratory Director
Date: 8/17/2020

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CERTIFICATE OF ANALYSIS

Terpenoid Results

NT

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

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

Microbial Impurities Results

Pass

8/17/2020

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

Cannabinoid Results

8/17/2020

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

Analyte	%	mg/g	mg/mL	LOD mg/g	LOQ mg/g
CBC	NT	NT	NT	NT	NT
CBD	3.35	33.5	31.1	0.00940	0.00987
CBDA	ND	ND	ND	0.00940	0.0169
CBDV	NT	NT	NT	NT	NT
CBDVA	NT	NT	NT	NT	NT
CBG	ND	ND	ND	0.00940	0.0108
CBGA	NT	NT	NT	NT	NT
CBN	ND	ND	ND	0.00940	0.00940
THC	ND	ND	ND	0.00940	0.00940
delta-8-THC	NT	NT	NT	NT	NT
THCA	ND	ND	ND	0.00940	0.0216
THCV	NT	NT	NT	NT	NT
THCVA	NT	NT	NT	NT	NT
Total	3.35	33.5	31.1		

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

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CERTIFICATE OF ANALYSIS

Residual Pesticides Results

Pass

8/16/2020

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

Analyte	Pass/Fail	ug/g	Limit	LOD ug/g	LOQ ug/g	Analyte	Pass/Fail	ug/g	Limit	LOD ug/g	LOQ ug/g
Abamectin B1a	Pass	ND	1	0.239	0.723	Imazalil	Pass	ND	1	0.0467	0.141
Acephate	Pass	ND	1	0.0682	0.207	Imidacloprid	Pass	ND	1	0.0676	0.205
Acequinocyl	Pass	ND	1	0.00348	0.940	Kresoxim-methyl	Pass	ND	1	0.0639	0.194
Acetamiprid	Pass	ND	1	0.113	0.343	Malathion	Pass	ND	1	0.0584	0.177
Aldicarb	Pass	ND	1	0.0375	0.114	Metalaxyl	Pass	ND	1	0.0560	0.170
Azoxystrobin	Pass	ND	1	0.0869	0.263	Methiocarb	Pass	ND	1	0.0954	0.289
Bifenazate	Pass	ND	1	0.100	0.304	Methomyl	Pass	ND	1	0.0371	0.113
Bifenthrin	Pass	ND	1	0.197	0.596	Methyl Parathion	Pass	ND	1	0.142	0.429
Boscalid	Pass	ND	1	0.205	0.621	MGK-264	Pass	ND	1	0.186	0.562
Carbaryl	Pass	ND	1	0.0397	0.120	Myclobutanil	Pass	ND	1	0.0575	0.174
Carbofuran	Pass	ND	1	0.0278	0.0843	Naled	Pass	ND	1	0.0530	0.160
Chlorantraniliprole	Pass	ND	1	0.0853	0.258	Oxamyl	Pass	ND	1	0.0369	0.112
Chlorfenapyr	Pass	ND	1	0.0367	0.111	Paclobutrazol	Pass	ND	1	0.0374	0.113
Chlorpyrifos	Pass	ND	1	0.0838	0.254	Permethrin	Pass	ND	1	0.255	0.771
Clofentezine	Pass	ND	1	0.158	0.480	Phosmet	Pass	ND	1	0.132	0.400
Cyfluthrin	Pass	ND	1	0.394	0.940	Piperonyl Butoxide	Pass	ND	1	0.0432	0.131
Cypermethrin	Pass	ND	1	0.251	0.761	Prallethrin	Pass	ND	1	0.0784	0.238
Diazinon	Pass	ND	1	0.0332	0.101	Propiconazole	Pass	ND	1	0.0799	0.242
Dichlorvos	Pass	ND	1	0.168	0.511	Propoxur	Pass	ND	1	0.0292	0.0886
Dimethoate	Pass	ND	1	0.0466	0.141	Pyrethrins	Pass	ND	1	0.0374	0.113
Ethoprophos	Pass	ND	1	0.0885	0.268	Pyridaben	Pass	ND	1	0.199	0.603
Etofenprox	Pass	ND	1	0.229	0.695	Spinosad	Pass	ND	1	0.0313	0.0948
Etoxazole	Pass	ND	1	0.0472	0.143	Spiromesifen	Pass	ND	1	0.0592	0.179
Fenpyroximate	Pass	ND	1	0.00139	0.00423	Spirotetramat	Pass	ND	1	0.0502	0.152
Fipronil	Pass	ND	1	0.107	0.323	Tebuconazole	Pass	ND	1	0.0763	0.231
Flonicamid	Pass	ND	1	0.0910	0.276	Thiacloprid	Pass	ND	1	0.0584	0.177
Fludioxonil	Pass	ND	1	0.0587	0.178	Thiamethoxam	Pass	ND	1	0.0391	0.119
Hexythiazox	Pass	ND	1	0.209	0.632	Trifloxystrobin	Pass	ND	1	0.0380	0.115

Mycotoxin Results

Pass

8/16/2020

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

Analyte	Pass/Fail	ug/kg	Limit	LOD ug/kg	LOQ ug/kg
Aflatoxin B1		ND		2.82	3.76
Aflatoxin B2		ND		2.82	3.76
Aflatoxin G1		ND		2.82	3.76
Aflatoxin G2		ND		2.82	3.76
Ochratoxin A	Pass	ND	<20	2.82	3.76
Total Aflatoxins	Pass	ND	<20	2.82	3.76

Heavy Metals Results

Pass

8/15/2020

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

Analyte	Pass/Fail	ug/g	Limit	LOD ug/g	LOQ ug/g
Arsenic	Pass	ND	10	0.00123	1.28
Cadmium	Pass	ND	4	0.0000103	1.28
Lead	Pass	ND	6	0.00149	1.28
Mercury	Pass	< LOQ	2	0.00110	1.28

Residual Solvents Results

Pass

8/17/2020

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	ug/g	Limit	LOD ug/g	LOQ ug/g	Analyte	Pass/Fail	ug/g	Limit	LOD ug/g	LOQ ug/g
Acetone		ND		3.88	5.79	Isobutane		ND		0.507	0.579
Acetonitrile		ND		0.275	0.579	Isopropanol		6.45		3.89	5.79
Benzene	Pass	ND	1	0.271	0.579	Methanol		ND		0.532	0.579
Butanes	Pass	ND	800	0.268	0.579	n-Pentane		2.48		0.273	0.579
Chloroform		ND		0.275	0.579	Tetrahydrofuran		ND		0.526	0.579
Ethanol		ND		3.88	5.79	Toluene	Pass	ND	1	0.271	0.579
Heptanes	Pass	ND	500	6.99	11.6	Total Xylenes	Pass	ND	1	0.269	0.579
n-Hexane	Pass	ND	10	0.503	0.579						

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Certificate of Analysis
HI89580



Accreditation # 92630