Hawaiian Choice CBD — Independant Lab Report

Markings in RED are by Hawaiian Choice to highlight key findings

Tincture

Test Summary

Batch **6605**
View any other batch by scanning QR code on the box or visit our website
Manufacturing Date

Broad Spectrum
CBG & CBN also detected (beneficial non-psychoactive cannabinoids)

THC **None Detected**

CBD **26mg per ml**
- Bottle 30ml = 780mg
- Spray 0.4ml = 10.4mg

Pesticides **None Detected**

Mycotoxins **None Detected**

Heavy Metals **None Detected**

Steep Hill Hawaii
1150 S. KING STREET, HONOLULU, HI 96814
LICENSE #: 92630
PJLA Testing Accreditation # 92630

CERTIFICATE OF ANALYSIS

Sample Name: 6605
Steep Hill ID: HI73815
Batch ID:
State ID:
Sample Type: Tincture
Date Received: 9/24/2019
Date Reported: 9/27/2019
Density: 0.9563 g/mL

Customer: Hawaiian Choice

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 9/27/2019
Standard potency analysis utilizing Ultra High Performance Liquid Chromatography (UHPLC; HI-SOP-024)

Analyte	%	mg/g	mg/mL	LOD mg/g	LOQ mg/g
CBD	2.7	27	26	0.0089	0.0094
CBDA	ND	ND	ND	0.0089	0.0161
CBG	0.060	0.60	0.57	0.0089	0.0103
CBN	0.131	1.31	1.25	0.0089	0.0089
THC	ND	ND	ND	0.0089	0.0089
THCA	ND	ND	ND	0.0089	0.021
Total	2.9	29	28		

Total THC	Total CBD
Not Detected	2.7 %
Not Detected	27 mg/g
Not Detected	26 mg/mL

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

Nelson Lazaga, Ph.D
Laboratory Director
Date: 9/28/2019

CERTIFICATE #: HI73815
REVISION #: HI73815.1

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Residual Pesticides Results Pass 9/26/2019
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	0.22	0.67	Hexythiazox	Pass	ND	1	0.192	0.58
Acephate	Pass	ND	1	0.063	0.190	Imazalil	Pass	ND	1	0.043	0.130
Acequinocyl	Pass	ND	1	0.0032	0.87	Imidacloprid	Pass	ND	1	0.062	0.189
Acetamiprid	Pass	ND	1	0.104	0.32	Kresoxim-methyl	Pass	ND	1	0.059	0.179
Aldicarb	Pass	ND	1	0.035	0.105	Malathion	Pass	ND	1	0.054	0.163
Azoxystrobin	Pass	ND	1	0.080	0.24	Metalaxyl	Pass	ND	1	0.052	0.156
Bifenazate	Pass	ND	1	0.092	0.28	Methiocarb	Pass	ND	1	0.088	0.27
Bifenthrin	Pass	ND	1	0.181	0.55	Methomyl	Pass	ND	1	0.034	0.104
Boscalid	Pass	ND	1	0.189	0.57	Methyl Parathion	Pass	ND	1	0.131	0.40
Carbaryl	Pass	ND	1	0.037	0.111	MGK-264	Pass	ND	1	0.171	0.52
Carbofuran	Pass	ND	1	0.026	0.078	Myclobutanil	Pass	ND	1	0.053	0.161
Chlorantraniliprole	Pass	ND	1	0.079	0.24	Naled	Pass	ND	1	0.049	0.148
Chlorfenapyr	Pass	ND	1	0.034	0.102	Oxamyl	Pass	ND	1	0.034	0.103
Chlorpyrifos	Pass	ND	1	0.077	0.23	Paclobutrazol	Pass	ND	1	0.034	0.104
Clofentezine	Pass	ND	1	0.146	0.44	Permethrin	Pass	ND	1	0.23	0.71
Cyfluthrin	Pass	ND	1	0.36	0.87	Phosmet	Pass	ND	1	0.122	0.37
Cypermethrin	Pass	ND	1	0.23	0.70	Piperonyl Butoxide	Pass	ND	1	0.040	0.121
Diazinon	Pass	ND	1	0.031	0.093	Prallethrin	Pass	ND	1	0.072	0.22
Dichlorvos	Pass	ND	1	0.155	0.47	Propiconazole	Pass	ND	1	0.074	0.22
Dimethoate	Pass	ND	1	0.043	0.130	Propoxur	Pass	ND	1	0.027	0.082
Ethoprophos	Pass	ND	1	0.082	0.25	Pyrethrins	Pass	ND	1	0.035	0.105
Etofenprox	Pass	ND	1	0.21	0.64	Pyridaben	Pass	ND	1	0.183	0.56
Etoxazole	Pass	ND	1	0.043	0.132	Spinosad	Pass	ND	1	0.029	0.087
Fenpyroximate	Pass	ND	1	0.00128	0.0039	Spiromesifen	Pass	ND	1	0.055	0.165
Fipronil	Pass	ND	1	0.098	0.30	Spirotetramat	Pass	ND	1	0.046	0.140
Flonicamid	Pass	ND	1	0.084	0.25	Tebuconazole	Pass	ND	1	0.070	0.21
Fludioxonil	Pass	ND	1	0.054	0.164	Thiacloprid	Pass	ND	1	0.054	0.163

Mycotoxin Results Pass 9/26/2019
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		4.5	13.6
Aflatoxin B2		ND		4.1	12.5
Aflatoxin G1		ND		4.3	12.9
Aflatoxin G2		ND		6.2	18.7
Ochratoxin A	Pass	ND	<20	8.0	24
Total Aflatoxins	Pass	ND	<20	6.2	18.7

Heavy Metals Results Pass 9/27/2019
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	0.00139	1.45
Cadmium	Pass	ND	4	0.0000116	1.45
Lead	Pass	ND	6	0.00168	1.45
Mercury	Pass	ND	2	0.00125	1.45

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	Isobutane		NT	NT	NT	NT
Acetonitrile		NT	NT	NT	NT	Isopropanol		NT	NT	NT	NT
Benzene		NT	NT	NT	NT	Methanol		NT	NT	NT	NT
Butanes		NT	NT	NT	NT	n-Pentane		NT	NT	NT	NT
Chloroform		NT	NT	NT	NT	Tetrahydrofuran		NT	NT	NT	NT
Ethanol		NT	NT	NT	NT	Toluene		NT	NT	NT	NT
Heptanes		NT	NT	NT	NT	Total Xylenes		NT	NT	NT	NT
n-Hexane		NT	NT	NT	NT						

Nelson Lazaga, Ph.D
Laboratory Director
Date: 9/28/2019

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Hawaiian Choice CBD **Independant Lab Report**

Markings in RED are by Hawaiian Choice to highlight key findings

Tincture

Microbial **None Detected**

Bacteria, spores, molds, fungus

Shelf Life Stability **Pass**

Low water activity (aW <0.86) and high acidity (pH <4.5) for improved anti-microbial shelf life and stability.

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

Terpenoid Results - Extended Terpenes NT
Extended terpene analysis utilizing Gas Chromatography – Mass Spectrometry (GC-MS)

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
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** **9/27/2019**
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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Laboratory Director
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3170 Ualena Street, Unit A
Honolulu, HI 96819
Phone: 808-839-9444. Fax: 808-839-9744

Hawaiian Choice
P.O. Box 61242
Honolulu, HI, 96839
Attn:
Project Name: 6605

CERTIFICATE OF ANALYSIS

Received: 09/24/2019 @ 12:18 PM
Completed: 09/24/2019 @ 1:54 PM
Project Number: 190924-3472-010
Temperature: 27.0 °C
Client Project No: 6605

Sample ID: 190924-3472-010-01 Food Sample - 12
Honey & Fruit Extract Mix
Sampled: 9/23/2019 @ 12:23 PM Sampler: Hawaiian Choice

Analysis	Results	Units	MDL	Test Method	Analyzed	By
Water Activity	0.80	aW	-	AOAC 978.18	09/24/2019 12:58 PM	JA
pH	3.37	pH unit	0.10	AOAC 981.12	09/24/2019 1:51 PM	JL

Approved By: Imelda D. Guarte
Wednesday, September 25, 2019