Steep Hill Hawaii

CERTIFICATE OF ANALYSIS

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

ENV-DIST

SAMPLE TYPE
Concentrate

STEEP HILL ID
HI68229

RECEIVED **05/22/19**
REPORTED **05/25/19**

CUSTOMER
Jared Dalgamouni

TEST NAME
Standard Potency

METHOD NAME
HI-SOP-024

Total THC
Not Detected

Total CBD
92 % 920 mg/g

Cannabinoid	%	mg/g	LOD mg/g	LOQ mg/g
CBD	**92**	**920**	0.195	0.20
CBDA	ND	ND	0.195	0.35
CBG	**0.183**	**1.83**	0.195	0.22
CBN	**0.65**	**6.5**	0.195	0.195
THC	ND	ND	0.195	0.195
THCA	ND	ND	0.195	0.45
Total Measured	**93**	**928**		

ND - Not Detected

LOD - Limit of Detection
LOQ - Limit of Quantitation

CERTIFICATION

NELSON LAZAGA PH.D
LAB DIRECTOR

CERTIFICATE #: HI68229-4
REVISION: SRP-001 Rev. 4.

The above results relate only to the samples tested and for the specific tests conducted. Steep Hill grants permission to reproduce this document in full only.

THIS IS THE COMPLETE STANDARD POTENCY REPORT

© 2019 STEEP HILL, INC. ALL RIGHTS RESERVED.

CERTIFICATE OF ANALYSIS

Certificate ID: T20190522-02-1

Batch No.: 6589
QA Lot ID: 6589
Sample Name: Tincture 6589
Product Type: Tincture

Sample Submission: 05/22/2019
Sampling Method: Client Sampled
Certificate Issued: 06/07/2019
Client: Hawaiian Choice CBD

Summary of Test Results	
Test	**Status**
Foreign Material	PASS
Moisture Content	NA
Microbiological Impurities	PASS
Heavy Metals	PASS
Residual Solvents	PASS
Pesticide Residues	PASS

Heavy Metals			
Analyte	**Units**	**Result**	**State Limit**
Arsenic	ppm	< LOQ	10.0
Cadmium	ppm	< LOQ	4.0
Lead	ppm	< LOQ	6.0
Mercury	ppm	< LOQ	2.0

Residual Solvents			
Analyte	**Units**	**Result**	**State Limit**
Benzene	ppm	< LOQ	1
Butanes	ppm	< LOQ	800
Heptanes	ppm	< LOQ	500
Hexane	ppm	< LOQ	10
Toluene	ppm	< LOQ	1
Xylenes	ppm	< LOQ	1

Cannabinoid Profile		
Analyte	**Weight %**	**mg/g**
Δ9-THC	< LOQ	< LOQ
THCA	< LOQ	< LOQ
CBD	2.5	25.3
CBDA	< LOQ	< LOQ
CBG	< LOQ	< LOQ
CBN	< LOQ	< LOQ
THCV	< LOQ	< LOQ
CBDV	< LOQ	< LOQ
CBDVA	< LOQ	< LOQ
CBGA	< LOQ	< LOQ
CBC	< LOQ	< LOQ
CBL	< LOQ	< LOQ
Theoretical Δ9-THC*	< LOQ	< LOQ
Theoretical CBD*	2.5	25.3

* Theoretical Δ9-THC and CBD calculations account for decarboxylation of THCA to THC and CBDA to CBD, respectively.

Theoretical Δ9-THC = (0.877 x THCA) + THC
Theoretical CBD = (0.877 x CBDA) + CBD

Foreign Material and Moisture Content			
Test	**Units**	**Result**	**State Limit**
Foreign Material	%	Unremarkable	NA
Moisture Content	%		15

Microbiological Contaminants							
Analyte	**Units**	**Result**	**State Limit**	**Analyte**	**Units**	**Result**	**State Limit**
Total viable aer. bac.	Cfu/g	ND	10,000	Aspergillus fumigatus	Cfu/g	ND	≤ 1
Total yeast and mold	Cfu/g	ND	1,000	Aspergillus niger	Cfu/g	ND	≤ 1
Total coliforms	Cfu/g	ND	100	Aflatoxin B1	µg/kg	< LOQ	≤ 20
Bile-tolerant GN bac.	Cfu/g	ND	100	Aflatoxin B2	µg/kg	< LOQ	≤ 20
E. coli (pathogenic)	Cfu/g	ND	0	Aflatoxin G1	µg/kg	< LOQ	≤ 20
Salmonella spp.	Cfu/g	ND	0	Aflatoxin G2	µg/kg	< LOQ	≤ 20
Aspergillus flavus	Cfu/g	ND	≤ 1	Ochratoxin A	µg/kg	< LOQ	≤ 20

Pesticide Residues							
Analyte	**Units**	**Result**	**State Limit**	**Analyte**	**Units**	**Result**	**State Limit**
Abamectin B1a	ppm	< LOQ	1.0	Imazalil	ppm	< LOQ	1.0
Acephate	ppm	< LOQ	1.0	Imidacloprid	ppm	< LOQ	1.0
Acequinocyl	ppm	< LOQ	1.0	Kresoxim-Methyl	ppm	< LOQ	1.0
Acetamiprid	ppm	< LOQ	1.0	Malathion	ppm	< LOQ	1.0
Aldicarb	ppm	< LOQ	1.0	Metalaxyl	ppm	< LOQ	1.0
Azoxystrobin	ppm	< LOQ	1.0	Methiocarb	ppm	< LOQ	1.0
Bifenazate	ppm	< LOQ	1.0	Methomyl	ppm	< LOQ	1.0
Bifenthrin	ppm	< LOQ	1.0	Methyl Parathion	ppm	< LOQ	1.0
Boscalid	ppm	< LOQ	1.0	MGK-264*	ppm	< LOQ	1.0
Carbaryl	ppm	< LOQ	1.0	Myclobutanil	ppm	< LOQ	1.0
Carbofuran	ppm	< LOQ	1.0	Naled	ppm	< LOQ	1.0
Chlorantraniliprole	ppm	< LOQ	1.0	Oxamyl	ppm	< LOQ	1.0
Chlorfenapyr	ppm	< LOQ	1.0	Paclobutrazol	ppm	< LOQ	1.0
Chlorpyrifos	ppm	< LOQ	1.0	Permethrins*	ppm	< LOQ	1.0
Clofentezine	ppm	< LOQ	1.0	Phosmet	ppm	< LOQ	1.0
Cyfluthrin*	ppm	< LOQ	1.0	Piperonyl Butoxide	ppm	< LOQ	1.0
Cypermethrin*	ppm	< LOQ	1.0	Prallethrin*	ppm	< LOQ	1.0
DDVP (Dichlorvos)	ppm	< LOQ	1.0	Propiconazole*	ppm	< LOQ	1.0
Diazinon	ppm	< LOQ	1.0	Propoxur	ppm	< LOQ	1.0
Dimethoate	ppm	< LOQ	1.0	Pyrethrins*	ppm	< LOQ	1.0
Ethoprophos	ppm	< LOQ	1.0	Pyridaben	ppm	< LOQ	1.0
Etofenprox	ppm	< LOQ	1.0	Spinosad*	ppm	< LOQ	1.0
Etoxazole	ppm	< LOQ	1.0	Spiromesifen	ppm	< LOQ	1.0
Fenpyroximate	ppm	< LOQ	1.0	Spirotetramat	ppm	< LOQ	1.0
Fipronil	ppm	< LOQ	1.0	Tebuconazole	ppm	< LOQ	1.0
Flonicamid	ppm	< LOQ	1.0	Thiacloprid	ppm	< LOQ	1.0
Fludioxonil	ppm	< LOQ	1.0	Thiamethoxam	ppm	< LOQ	1.0
Hexythiazox	ppm	< LOQ	1.0	Trifloxystrobin	ppm	< LOQ	1.0

* For cyfluthrin, cypermethrin, MGK-264, permethrins, prallethrin, propiconazole, spinosad, and pyrethrins (pyrethrin I and II), the reported results are the sum of isomers.

The sample identified herein was tested by Aeos Labs, Inc. All results are reported on an as-received basis with the exception of hemp, which is reported on a dry weight basis. Reported results relate only to the product identified on this certificate. No part of this certificate of analysis shall be reproduced without written consent of Aeos Labs, Inc. The measurement uncertainty, decision rule, quality control, and detection limit data are available on request. Aeos Labs makes no efficacy warranties or claims, nor shall it be liable for any misrepresentation that may result from the use or misuse of these data in any way. Our confidentiality policy dictates that we only discuss reported data with the original client of record and the State of Hawaii Department of Health.

*****Electronically Signed Out By Tai-Yuan David Lin, MD, PhD*****
Aeos Labs, Inc., Aiea, HI

Definitions:

aer. bac.	Aerobic bacteria
Cfu/g	Colony-forming unit per gram
GN bac.	Gram-negative bacteria
LOD	Limit of detection
LOQ	Limit of quantitation
µg/kg	Microgram per kilogram
mg/g	Milligram per gram
NA	Not applicable
ND	Not detected
ppm	Parts per million

Methodology:

Cannabinoid Profiles	Ultra high performance liquid chromatography coupled with UV detection
Foreign Material	Microscopy
Moisture Content	Thermogravimetric
Heavy Metals	Inductively-coupled plasma with mass spectrometry
Microbiological Impurities	Aerobic plate count and matrix assisted laser desorption/ionization-time of flight
Mycotoxins	Ultra high performance liquid chromatography with triple quadrupole mass spectrometry
Residual Solvents	Gas chromatography with mass spectrometry
Pesticide Residue	Ultra high performance liquid chromatography with triple quadrupole mass spectrometry and gas chromatography with mass spectrometry

©2019 Aeos Labs, Inc.