

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis

Sample Identification Information

Date of Analysis 3/21/2022
Sample: S1513
Product Name 70% KAVA EXTRACT
Batch # CJ220310KE70

Country of Origin VANUATU
Country of Processing CHINA
Manufacture Date 12/01/21
Best By Date 11/30/24

General Product Specifications

Product Species Piper Methysticum
Part Used Root

Common Names Kava kava, Awa, Yagona
Appearance brownish yellow liquid

Analyzed Characteristics

Specification

Result

Test Method

Standardization	20-90% Kavalactones	86.46%	HPLC
Identification	Complies by HPLC	Conform	HPLC
Kavalactone Profile	Noble	PASS	HPLC
Mesh Size	60-30	30	Sieve
Color	Beige to Yellow	Pass	Visual
Odor		Pass	Organoleptic
Taste		Pass	Organoleptic
Chemotype		245361	HPLC
K/DHM		2.0	Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			12278.901			
Methysticin	M	1	2.21	6428.805	10.24%	9.04%	6
Dihydromethysticin	DHM	2	3.38	4802.878	7.65%	9.97%	5
Kavain	K	3	1	31103.076	49.55%	19.98%	4
Dihydrokavain	DHK	4	3.08	10781.47	17.17%	29.16%	2
Desmethoxyyangonin	DMY	5	2.52	4820.928	7.68%	8.49%	1
Yangonin	Y	6	3.12	4839.684	7.71%	9.82%	3
Kavalactones			Total:	62776.841	100.00%	86.46%	245361

*See data in attachment HPLC1100 Agilent Certificate with Chromatogram graph.

This result are in house tested and the best of our knowledge and experience. Using calibrated equipment.

We are dedicated to offer the best Quality of Botanical products on the market. We test and stand behind our products.

Disclaimer* the test results are accurate to the best of our knowledge and are based upon reputable laboratory and industry standard testing methods.

These results should not be used as a final determination for use in a finished product. It is recommended that you verify these test results with an in house quality control department or obtain an additional independent third party lab to verify that this material meets specifications

Botany Evolution, its board of directors, contract laboratories, employees, and affiliates are held harmless from any loss or damages resulting from the use or misuse of this document. The appropriate use of this product is the sole responsibility of the user of the purchasing party.

Chemist

Hustle Youngs

Date

3/22/22

SAMPLE S1513
Vial 15

0.31776g/25mL

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA_3_21_2022_15MINSTDTESTMETHOD 2022-03-21 16-03-22\015->
SEQUENCE C:\CHEM32\1\DATA\KAVA_3_21_2022_ ->

Injection date 3/21/2022

Injection time 9:42:40 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA_3_21_202->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_3_21_2022_15MINSTDTESTMETHOD 2022-03-21 16-03-22\015-1801.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
	methysticin	5.693	6428.805	10.24	0.001
	dihydromethysticin	5.984	4802.878	7.65	0.001
	kavain	6.521	31103.076	49.55	0.003
	dihydrokavain	7.135	10781.476	17.17	0.003
	desmethoxyyangonin	9.319	4820.928	7.68	0.001
	yangonin	9.717	4839.684	7.71	0.001

3/22/22
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Microbiological and Heavy Metal Certificate Of Analysis

Sample Identification Information

<u>Date of Analysis</u>	12/8/2021	<u>Country of Origin</u>	VANUATU
<u>Sample:</u>	S1513	<u>Country of Processing</u>	CHINA
<u>Product Name</u>	70% LIQUID KAVA EXTRACT	<u>Manufacture Date</u>	12/01/21
<u>Lot#</u>	CJ220310KE70	<u>Expiration Date</u>	11/30/24

General Product Specifications

<u>Product Species</u>	Piper Methysticum	<u>Common Names</u>	Kava kava, Awa, Yagona
<u>Part Used</u>	Root	<u>Appearance</u>	BROWN LIQUID

Analyzed Characteristics

	<u>SPECIFICATION</u>	<u>RESULT</u>	<u>TEST METHOD</u>
<u>TOTAL AEROBIC PLATE COUNT</u>	NMT 10,000 (cfu/g)	310	USP <2021>
<u>TOTAL YEAST AND MOLD</u>	NMT 1,000 (cfu/g)	60	USP <2021>
<u>E. COLI</u>	ABSENT (cfu/10g)	COMPLIES	USP <2022>
<u>SALMONELLA SPECIES</u>	ABSENT (cfu/10g)	COMPLIES	USP <2022>
<u>STAPHYLOCOCCUS AUREUS</u>	ABSENT (cfu/10g)	COMPLIES	USP <2022>

Heavy Metals

	<u>SPECIFICATION (PPM)</u>	<u>RESULT PPM (ug/g)</u>	<u>TEST METHOD</u>
<u>LEAD</u>	NMT 2.0	0.0087	ICP-MS\\USP<730>
<u>ARSENIC</u>	NMT 2.0	0.0193	ICP-MS\\USP<730>
<u>CADMIUM</u>	NMT 1.0	0.0007	ICP-MS\\USP<730>
<u>MERCURY</u>	NMT 1.0	0.0007	ICP-MS\\USP<730>

NMT= NO MORE THAN

PPM= PARTS PER MILLION

cfu/g = colony forming units per gram

Analysis performed by a third party laboratory.

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CHEMIST/DATE

Hustle Young

3/22/22