

Botany Evolution LLC

510 Kirby Circle NE

Altamonte Beach, FL 32945

21-802-4583

Certificate Of Analysis

Sample Identification Information

Date of Analysis 12/10/2023

Sample: S2033 A

Product Name KAVA EXTRACT 70%

Batch # CJ2312KE70

Country of Origin VANUATU

Country of Processing CHINA

Manufacture Date 11/14/23

Best By Date 11/13/26

General Product Specifications

Product Species Piper Methysticum

Part Used Root

Common Names Kava kava, Awa, Yagona

Appearance YELLOW POWDER

Analyzed Characteristics

Specification

Result

Test Method

Standardization

20-90% Kavalactones

72.66%

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

245316

HPLC

K/DHM

1.6

Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			13617.069			
Methysticin	M	1	2.21	1634.851	7.48%	5.25%	6
Dihydromethysticin	DHM	2	3.38	1972.098	9.02%	9.34%	5
Kavain	K	3	1	10474.313	47.92%	15.35%	4
Dihydrokavain	DHK	4	3.08	4886.089	22.35%	30.15%	2
Desmethoxyyangonin	DMY	5	2.52	1332.375	6.10%	5.35%	1
Yangonin	Y	6	3.12	1558.364	7.13%	7.22%	3
Kavalactones			Total:	21858.090	100.00%	72.66%	245316

*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

Mustie Youngs

Date

12/15/23

SAMPLE S2033 A
Vial 14

.25116g/50mL

wavelength 246 nm

:\CHEM32\1\DATA\KAVA_12_10_2023_15MINSTDTESTMETHOD 2023-12-10 14-54-58\01->

SEQUENCE C:\CHEM32\1\DATA\KAVA_12_10_2023_ ->

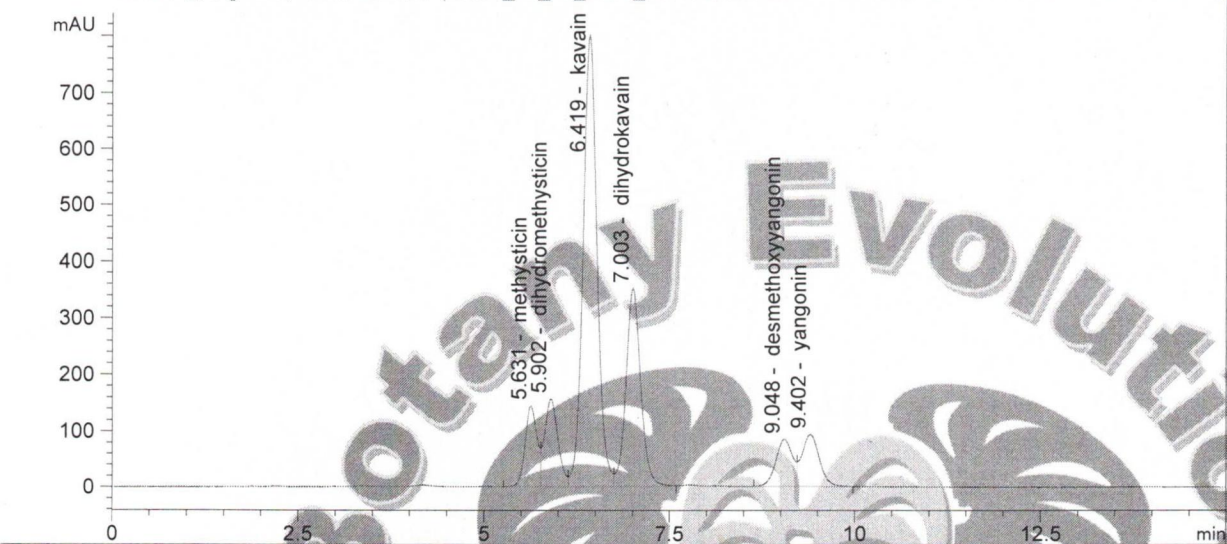
Injection date 12/10/2023

Injection time 7:30:32 PM

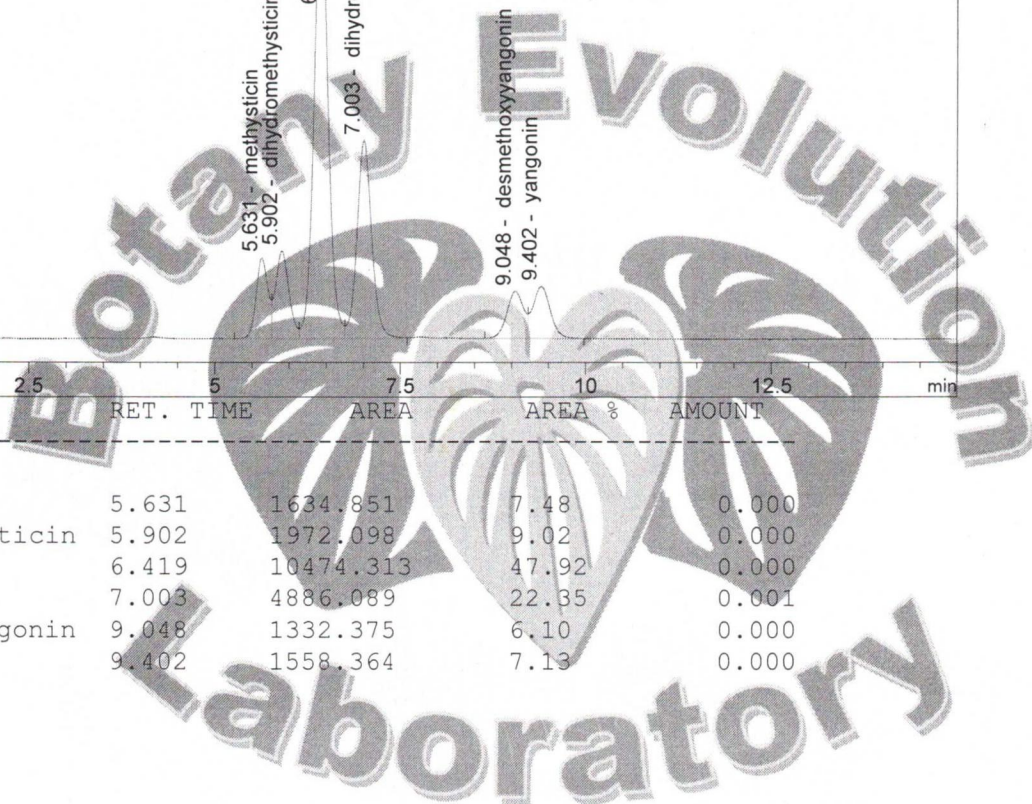
Operator KRISTL

Method C:\CHEM32\1\DATA\KAVA_12_10_202->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_12_10_2023_15MINSTDTESTMETHOD 2023-12-10 14-54-58\014-1401.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.631	1634.851	7.48	0.000
2	dihydromethysticin	5.902	1972.098	9.02	0.000
3	kavain	6.419	10474.313	47.92	0.000
4	dihydrokavain	7.003	4886.089	22.35	0.001
5	desmethoxyyangonin	9.048	1332.375	6.10	0.000
6	yangonin	9.402	1558.364	7.13	0.000



12/15/23
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Botany Evolution LLC

510 Kirby Circle NE
Palm Bay, FL 32945
21-802-4583

Microbiological and Heavy Metal Certificate Of Analysis

Sample Identification Information

<u>Date of Analysis</u> 11/21/2023	<u>Country of Origin</u> VANUATU
<u>Sample:</u> S2033	<u>Country of Processing</u> CHINA
<u>Product Name</u> 70% KAVA EXTRACT POWDER	<u>Manufacture Date</u> 11/14/23
<u>Lot#</u> CJ2312KE70	<u>Expiration Date</u> 11/13/26

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> yellow powder

Analyzed Characteristics

<u>TOTAL AEROBIC PLATE COUNT</u>	<u>USP SPECIFICATION</u>	<u>RESULT</u>	<u>TEST METHOD</u>
<u>TOTAL YEAST AND MOLD</u>	NMT 10,000 (cfu/g)	430	USP <2021>
<u>E. COLI</u>	NMT 1,000 (cfu/g)	10	USP <2021>
<u>SALMONELLA SPECIES</u>	ABSENT (cfu/10g)	COMPLIES	USP <2022>
<u>STAPHYLOCOCCUS AUREUS</u>	ABSENT (cfu/10g)	COMPLIES	USP <2022>
	ABSENT (cfu/10g)	COMPLIES	USP <2022>

Heavy Metals

<u>LEAD</u>	<u>USP SPECIFICATION (PPM)</u>	<u>RESULT PPM (ug/g)</u>	<u>TEST METHOD</u>
<u>ARSENIC</u>	NMT 5.0	0.0944	ICP-MS\\USP<730>
<u>CADMIUM</u>	NMT 2.0	0.0456	ICP-MS\\USP<730>
<u>MERCURY</u>	NMT 0.5	0.0012	ICP-MS\\USP<730>
	NMT 0.1	0.0285	ICP-MS\\USP<730>

NMT= NO MORE THAN PPM= PARTS PER MILLION cfu/g = colony forming units per gram USP = United States Pharmacopeia

Analysis performed by a third party laboratory.

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CHEMIST/DATE

Russell Youngs 12/29/23