

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis

Sample Identification Information

Date of Analysis 3/22/2024

Sample: S2084 A

Product Name KAVA EXTRACT 70%

Batch # CJ2402-KE70

Country of Origin VANUATU

Country of Processing CHINA

Manufacture Date 10/21/23

Best By Date 10/20/26

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

72.35%

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

423516

HPLC

K/DHM

3.5

Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			24530			
Methysticin	M	1	2.21	2210.596	7.14%	6.27%	6
Dihydromethysticin	DHM	2	3.38	1573.576	5.08%	6.82%	5
Kavain	K	3	1	18442.678	59.55%	23.65%	4
Dihydrokavain	DHK	4	3.48	4757.924	15.36%	21.24%	2
Desmethoxyyangonin	DMY	5	2.52	2058.381	6.65%	6.65%	1
Yangonin	Y	6	3.12	1928.456	6.23%	7.72%	3
Kavalactones			Total:	30971.611	100.00%	72.35%	423516

*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

3/25/24

SAMPLE S2084 A
Vial 25

0.31867g/50mL

wavelength 246 nm

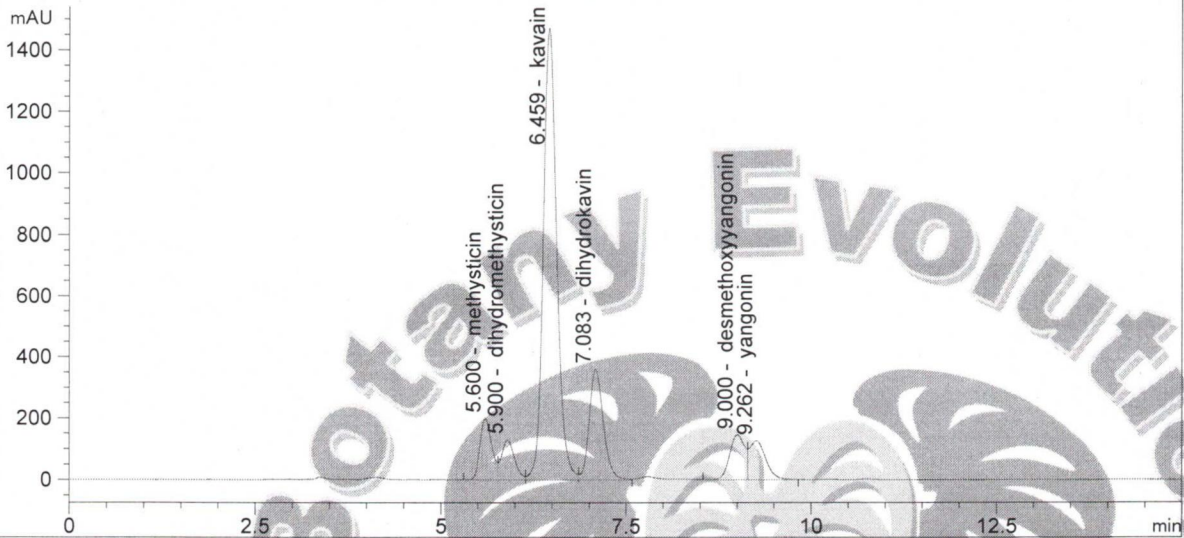
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SEQUENCE C:\CHEM32\1\DATA\KAVA_03_22_2024_ ->

Injection date 3/22/2024
Injection time 11:07:20 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA_03_22_202->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_03_22_2024_15MINSTDTESTMETHOD 2024-03-22 15-33-40\025-2501.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.600	2210.596	7.14	0.000
2	dihydromethysticin	5.900	1573.576	5.08	0.000
3	kavain	6.459	18442.678	59.55	0.002
4	dihydrokavin	7.083	4757.924	15.36	0.001
5	desmethoxyyangonin	9.000	2058.381	6.65	0.000
6	yangonin	9.262	1928.456	6.23	0.000

3/25/24
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CERTIFICATE OF ANALYSIS

GENERAL INFORMATION

Report Date	3/22/2024	Country of Origin	Vanuatu
Sample Number	S2084	Country of Processing	China
Product Name	70% Kavalactone Extract	Manufacture Date	10/21/2023
Lot Number	CJ2402KE70	Best By Date	10/20/2026

ITEM	SPECIFICATION	TEST RESULTS	METHOD
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PHYSICAL & CHEMICAL

Identification	Piper methysticum	Complies	HPLC
Appearance	Beige to Yellow Powder	Complies	Organoleptic
Kavalactone Standard	2-17 % Kavalactones	72.35%	HPLC
Kavalactone Profile	Noble	Pass	HPLC
Chemotype	If # 5 is in 1st or 2nd in Abundance	423516	HPLC
K/DHM	> 1.2 for Noble	3.5	Calculation

HEAVY METALS

		Results	
Arsenic (As)	NMT 1,000 (ppb)*	37.7	ppb
Cadmium (Cd)	NMT 1,000 (ppb)*	2.7	ppb
Lead (Pb)	NMT 1,000 (ppb)*	60	ppb
Mercury (Hg)	NMT 1,000 (ppb)*	43.1	ppb

*Heavy Metals Action Limits Based on Maximum PDE at 5% Kavalactones. Results May Exceed 1,000 ppb action limit with higher Kavalactone contents.

MICROBIOLOGICAL

		Results	
AEROBIC PLATE COUNT	NMT 10,000,000 cfu	10	cfu / 10 g
E. COLI	ABSENT (cfu/10g)	Absent	cfu / 10 g
PSEUDOMONAS AERUGINOSA	ABSENT (cfu/10g)	Absent	cfu / 10 g
SALMONELLA	ABSENT (cfu/10g)	Absent	cfu / 10 g
STAPHYLOCOCCUS AUREUS	ABSENT (cfu/10g)	Absent	cfu / 10 g
YEAST	NMT 100,000 cfu (Combined)	5	cfu / 10 g
MOLD	NMT 100,000 cfu (Combined)	5	cfu / 10 g
TOTAL YEAST & MOLD	NMT 100,000 cfu (Combined)	10	cfu / 10 g

cfu/g = Colony Forming Units Per Gram NMT = No More Than PDE = Permitted Daily Exposure PPB = Parts Per Billion

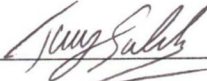
Analysis Performed by a Third-Party Laboratory

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Completed By: 

Title: Manager

Date: 3/26/2024