

# Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

## Certificate Of Analysis

### Sample Identification Information

Date of Analysis 5/1/2024

Sample: S2104 B

Product Name KAVA EXTRACT 30%

Batch # CJ2405KE30

Country of Origin VANUATU

Country of Processing CHINA

Manufacture Date 09/10/23

Best By Date 09/09/26

### 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

31.14%

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

241356

HPLC

K/DHM

2.5

Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			13271			
Methysticin	M	1	2.21	1411.682	6.69%	2.13%	<b>6</b>
Dihydromethysticin	DHM	2	3.38	1148.299	5.44%	2.65%	<b>5</b>
Kavain	K	3	1	9546.808	45.23%	6.52%	<b>4</b>
Dihydrokavain	DHK	4	3.48	5830.488	27.62%	13.86%	<b>2</b>
Desmethoxyyangonin	DMY	5	2.52	1895.782	8.98%	3.26%	<b>1</b>
Yangonin	Y	6	3.12	1273.233	6.03%	2.71%	<b>3</b>
<b>Kavalactones</b>			<b>Total:</b>	<b>21106.292</b>	<b>100.00%</b>	<b>31.14%</b>	<b>241356</b>

\*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

*Mistl Younger*

Date

*5/2/24*

SAMPLE S2104 B  
Vial 17

0.55306g/50mL

wavelength 246 nm

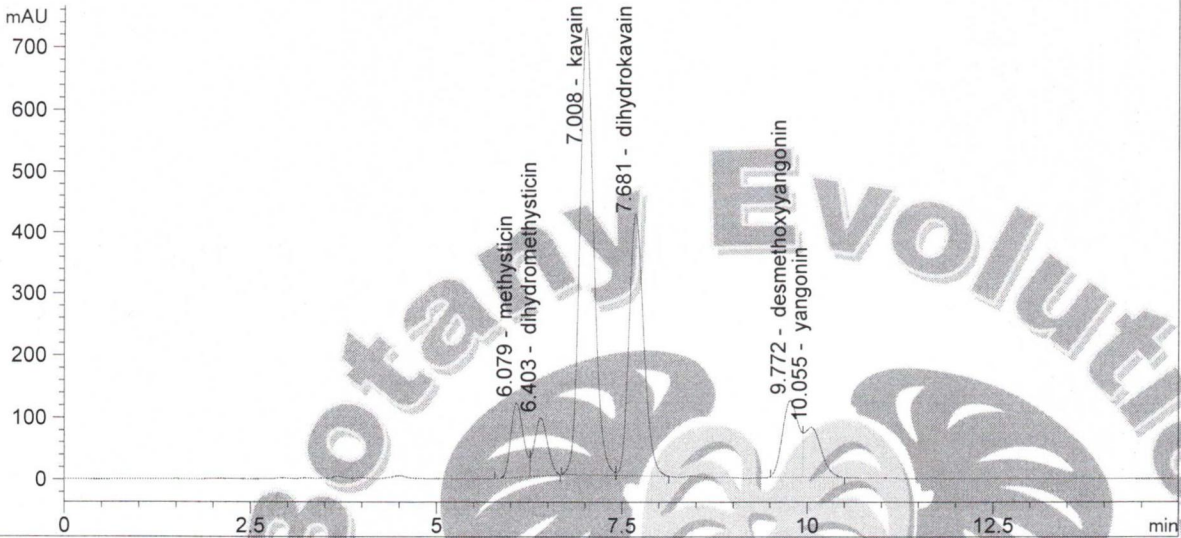
C:\CHEM32\1\DATA\KAVA\_05\_01\_2024\_15MINSTDTESTMETHOD 2024-05-01 14-33-50\01->  
SEQUENCE C:\CHEM32\1\DATA\KAVA\_05\_01\_2024\_ ->

Injection date 5/1/2024  
Injection time 9:34:29 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA\_05\_01\_202->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA\_05\_01\_2024\_15MINSTDTESTMETHOD 2024-05-01 14-33-50\017-2001.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	6.079	1411.682	6.69	0.000
2	dihydromethysticin	6.403	1148.299	5.44	0.000
3	kavain	7.008	9546.808	45.23	0.001
4	dihydrokavain	7.681	5830.488	27.62	0.001
5	desmethoxyyangonin	9.772	1895.782	8.98	0.000
6	yangonin	10.055	1273.233	6.03	0.000

# CERTIFICATE OF ANALYSIS

**GENERAL INFORMATION**

Report Date	5/1/2024	Country of Origin	Vanuatu
Sample Number	S2104	Country of Processing	China
Product Name	30% Kavalactone Extract	Manufacture Date	9/10/2023
Lot Number	CJ2405KE30	Best By Date	9/9/2026

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	31.14%	HPLC
Kavalactone Profile	Noble	Pass	HPLC
Chemotype	If # 5 is in 1st or 2nd in Abundance	241356	HPLC
K/DHM	> 1.2 for Noble	2.5	Calculation

**HEAVY METALS**

		Results	
Arsenic (As)	NMT 1,000 (ppb)*	37.7 ppb	FDA EAM 4.7
Cadmium (Cd)	NMT 1,000 (ppb)*	2.7 ppb	FDA EAM 4.7
Lead (Pb)	NMT 1,000 (ppb)*	60 ppb	FDA EAM 4.7
Mercury (Hg)	NMT 1,000 (ppb)*	43.1 ppb	FDA EAM 4.7

\*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	USP 2021
E. COLI	ABSENT (cfu/10g)	Absent cfu / 10 g	USP 2022
PSEUDOMONAS AERUGINOSA	ABSENT (cfu/10g)	Absent cfu / 10 g	USP 2022
SALMONELLA	ABSENT (cfu/10g)	Absent cfu / 10 g	USP 2022
STAPHYLOCOCCUS AUREUS	ABSENT (cfu/10g)	Absent cfu / 10 g	USP 2022
YEAST	NMT 100,000 cfu (Combined)	5 cfu / 10 g	
MOLD		5 cfu / 10 g	
TOTAL YEAST & MOLD	NMT 100,000 cfu (Combined)	10 cfu / 10 g	USP 2021

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: Tony Sabeh

Title: Manager

Date: 5/3/2024