

# Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

## Certificate Of Analysis

### Sample Identification Information

Date of Analysis 5/27/2024

Sample: S2116

Product Name GOLD LATERAL

Lot# SIK2404-GLR5

Country of Origin SOLOMON ISLANDS

Country of Processing USA

Manufacture Date Apr-24

Best By Date Apr-27

### General Product Specifications

Product Species Piper Methysticum

Part Used Root

Common Names Kava kava, Awa, Yagona

Appearance Yellow, Brown, beige powder

### Analyzed Characteristics

#### Specification

#### Result

#### Test Method

Standardization

2-17% Kavalactones

16.33%

HPLC

Identification

Complies by HPLC

Conform

HPLC

Kavalactone Profile

Noble

PASS

HPLC

Mesh Size

60-30

60

Sieve

Color

Beige to Yellow

Pass

Visual

Odor

Pass

Organoleptic

Taste

Pass

Organoleptic

Chemotype

423165

HPLC

K/DHM

4.8

Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2398			
Methysticin	M	1	2.21	935.64	5.89%	1.19%	6
Dihydromethysticin	DHM	2	3.38	604.906	3.81%	1.18%	5
Kavain	K	3	1	9822.619	61.88%	5.67%	4
Dihydrokavain	DHK	4	3.48	2183.206	13.75%	4.39%	2
Desmethoxyyangonin	DMY	5	2.52	858.994	5.41%	1.25%	1
Yangonin	Y	6	3.12	1468.929	9.25%	2.65%	3
Kavalactones			<b>Total:</b>	<b>15874.294</b>	<b>100.00%</b>	<b>16.33%</b>	<b>423165</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

*Mustel Youngs*

Date

5/28/24

SAMPLE S2116  
Vial 13

0.75681g/50mL

wavelength 246 nm

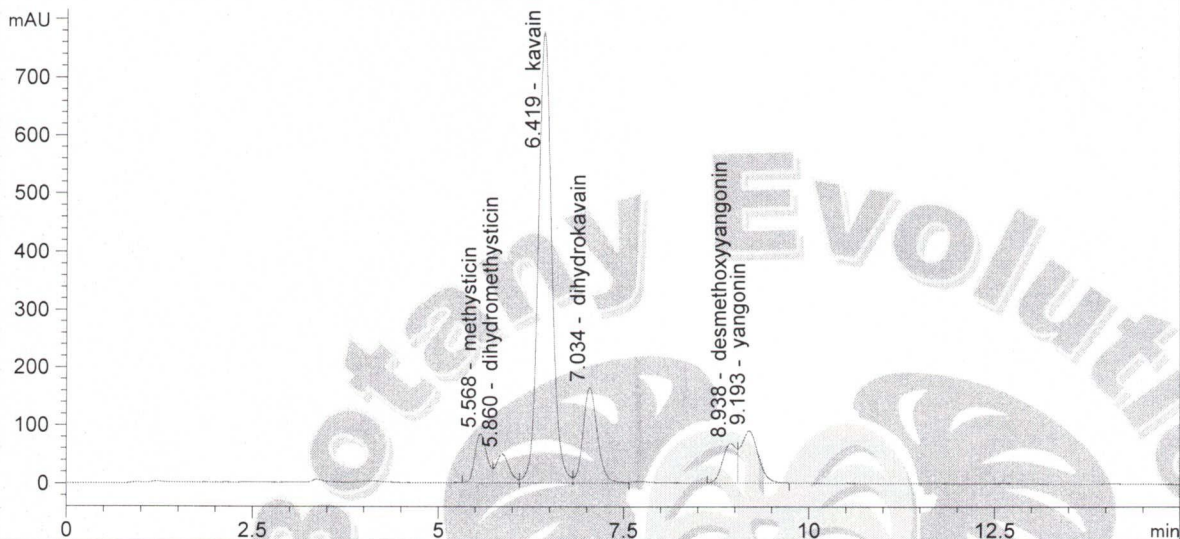
C:\CHEM32\1\DATA\KAVA\_05\_27\_2024\_15MINSTDTESTMETHOD 2024-05-27 19-15-27\01->  
SEQUENCE C:\CHEM32\1\DATA\KAVA\_05\_27\_2024\_ -->

Injection date 5/27/2024  
Injection time 11:34:54 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA\_05\_27\_202->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA\_05\_27\_2024\_15MINSTDTESTMETHOD 2024-05-27 19-15-27\013-1301.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.568	935.640	5.89	0.000
2	dihydromethysticin	5.860	604.906	3.81	0.000
3	kavain	6.419	9822.619	61.88	0.001
4	dihydrokavain	7.034	2183.206	13.75	0.000
5	desmethoxyyangonin	8.938	858.994	5.41	0.000
6	yangonin	9.193	1468.929	9.25	0.000

5/28/24  
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# CERTIFICATE OF ANALYSIS

**GENERAL INFORMATION**

Report Date	5/27/2024	Country of Origin	Solomon Islands
Sample Number	S2116	Country of Processing	United States
Product Name	Gold Lateral Roots	Manufacture Date	Apr-24
Lot Number	SIK2404-GLR5	Best By Date	Apr-27

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	16.33%	HPLC
Kavalactone Profile	Noble	Pass	HPLC
Chemotype	If # 5 is in 1st or 2nd in Abundance	423165	HPLC
K/DHM	> 1.2 for Noble	4.8	Calculation

**HEAVY METALS**

		Basal	Lateral		
Arsenic (As)	NMT 1,000 (ppb)*	17.4	86	ppb	FDA EAM 4.7
Cadmium (Cd)	NMT 1,000 (ppb)*	799	918	ppb	FDA EAM 4.7
Lead (Pb)	NMT 1,000 (ppb)*	120	194	ppb	FDA EAM 4.7
Mercury (Hg)	NMT 1,000 (ppb)*	< 10	< 10	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**

		Basal	Lateral		
AEROBIC PLATE COUNT	NMT 10,000,000 cfu	22,000	250,000	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)	13,000	11,000	cfu / 10 g	
MOLD		100	< 10	cfu / 10 g	USP 2021
TOTAL YEAST & MOLD	NMT 100,000 cfu (Combined)	13100	11000	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: *Amy Sahls* Title: Manager Date: 05/28/2024