

**Botany Evolution LLC**

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

**Certificate Of Analysis****Sample Identification Information**Date of Analysis 6/28/2024Sample: S2144Product Name GOLDLot# SIK2406-G6Country of Origin SOLOMON ISLANDSCountry of Processing USAManufacture Date Jun-24Best By Date Jun-27**General Product Specifications**Product Species Piper MethysticumPart Used RootCommon Names Kava kava, Awa, YagonaAppearance Yellow, Brown, beige powder**Analyzed Characteristics****Specification****Result****Test Method**Standardization

2-17% Kavalactones

11.93%

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

423516

HPLC

K/DHM

3.8

Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2374.334			
Methysticin	M	1	2.21	609.924	5.57%	0.79%	<b>6</b>
Dihydromethysticin	DHM	2	3.38	497.019	4.54%	0.98%	<b>5</b>
Kavain	K	3	1	6452.58	58.97%	3.78%	<b>4</b>
Dihydrokavain	DHK	4	3.48	1821.943	16.65%	3.72%	<b>2</b>
Desmethoxyyangonin	DMY	5	2.52	568.44	5.20%	0.84%	<b>1</b>
Yangonin	Y	6	3.12	991.904	9.07%	1.81%	<b>3</b>
<b>Kavalactones</b>			<b>Total:</b>	<b>10941.810</b>	<b>100.00%</b>	<b>11.93%</b>	<b>423516</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

*Austel Youngs*

Date

*7/1/24*

SAMPLE S2144  
Vial 11

0.75298g/50mL

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA\_06\_28\_2024\_15MINSTDTESTMETHOD 2024-06-28 17-21-00\01->  
SEQUENCE C:\CHEM32\1\DATA\KAVA\_06\_28\_2024\_ ->

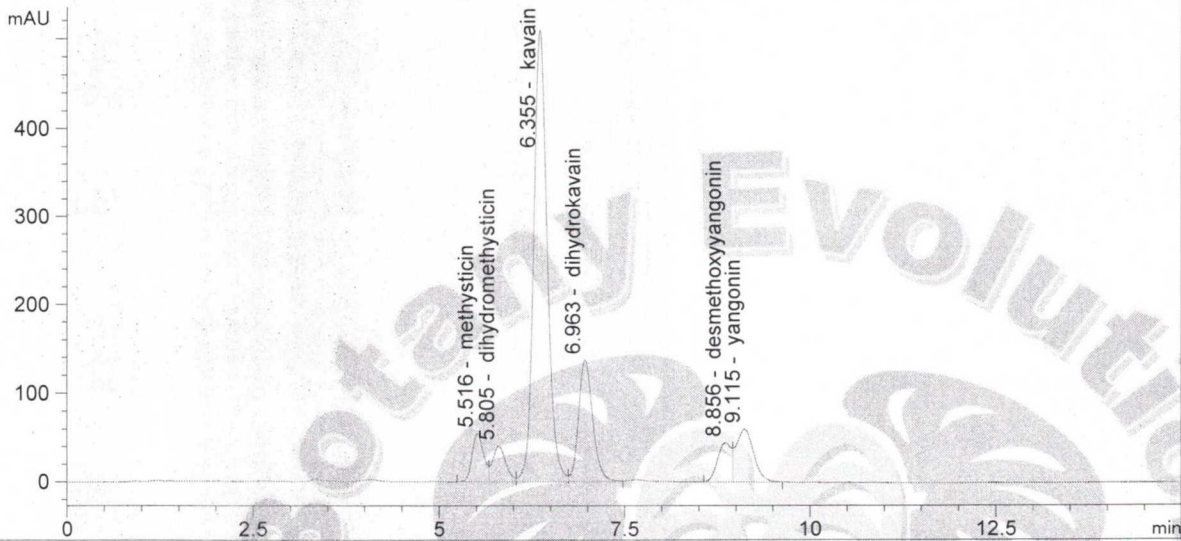
Injection date 6/28/2024

Injection time 9:09:11 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA\_06\_28\_202->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA\_06\_28\_2024\_15MINSTDTESTMETHOD 2024-06-28 17-21-00\011-1101.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.516	609.924	5.57	0.000
2	dihydromethysticin	5.805	497.019	4.54	0.000
3	kavain	6.355	6452.580	58.97	0.001
4	dihydrokavain	6.963	1821.943	16.65	0.000
5	desmethoxyyangonin	8.856	568.440	5.20	0.000
5	yangonin	9.115	991.904	9.07	0.000

7/1/24  
8

# CERTIFICATE OF ANALYSIS

**GENERAL INFORMATION**

Report Date	28-Jun	Country of Origin	Solomon Islands
Sample Number	S2144	Country of Processing	USA
Product Name	Gold	Manufacture Date	Jun-24
Lot Number	SIK2406-G6	Best By Date	Jun-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	11.93%	HPLC
Kavalactone Profile	Noble	Pass	HPLC
Chemotype	If # 5 is in 1st or 2nd in Abundance	423516	HPLC
K/DHM	> 1.2 for Noble	3.8	Calculation

**HEAVY METALS**

		Results	
Arsenic (As)	NMT 1,000 (ppb)*	13.36 ppb	FDA EAM 4.7
Cadmium (Cd)	NMT 1,000 (ppb)*	356 ppb	FDA EAM 4.7
Lead (Pb)	NMT 1,000 (ppb)*	779 ppb	FDA EAM 4.7
Mercury (Hg)	NMT 1,000 (ppb)*	< 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**

		Results	
AEROBIC PLATE COUNT	NMT 10,000,000 cfu	10,540 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)	9,340 cfu / 10 g	
MOLD		220 cfu / 10 g	USP 2021
TOTAL YEAST & MOLD	NMT 100,000 cfu (Combined)	9560 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: *Tony Sahly* Title: Manager Date: 7/1/2024