

# CERTIFICATE OF ANALYSIS

**GENERAL INFORMATION**

Report Date	12/17/2024	Country of Origin	Solomon Islands
Sample Number	S2194	Country of Processing	United States
Product Name	Gold Basal Roots	Manufacture Date	Dec-24
Lot Number	SIK2411-GBR12	Best By Date	Dec-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	10.17%	HPLC
Kavalactone Profile	Noble	Pass	HPLC
Chemotype	If # 5 is in 1st or 2nd in Abundance	243516	HPLC
K/DHM	> 1.2 for Noble	3.8	Calculation

**HEAVY METALS**

		Result	
Arsenic (As)	NMT 1,000 (ppb)*	< 10 ppb	FDA EAM 4.7
Cadmium (Cd)	NMT 1,000 (ppb)*	320 ppb	FDA EAM 4.7
Lead (Pb)	NMT 1,000 (ppb)*	55.5 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**

		Result	
AEROBIC PLATE COUNT	NMT 10,000,000 cfu	50,000 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)	3,400 cfu / 10 g	
MOLD		340 cfu / 10 g	USP 2021
TOTAL YEAST & MOLD	NMT 100,000 cfu (Combined)	3740 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*

*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.*

Completed By: *Jay Salt*      Title: *Manager*      Date: *12/18/24*

**Botany Evolution LLC**

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 Palm Bay, FL 32945  
 321-802-4583

**Certificate Of Analysis**

**Sample Identification Information**

Date of Analysis 12/17/2024

Sample: S2194

Product Name GOLD BASAL

Lot# SIK2411-GBR12

Country of Origin SOLOMON ISLANDS

Country of Processing USA

Manufacture Date Nov-24

Best By Date Nov-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**

<u>Standardization</u>	2-17% Kavalactones	10.17%	HPLC
<u>Identification</u>	Complies by HPLC	Conform	HPLC
<u>Kavalactone Profile</u>	Noble	PASS	HPLC
<u>Mesh Size</u>	60-30	60	Sieve
<u>Color</u>	Beige to Yellow	Pass	Visual
<u>Odor</u>		Pass	Organoleptic
<u>Taste</u>		Pass	Organoleptic
<u>Chemotype</u>		243516	HPLC
<u>K/DHM</u>		3.8	Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2472.728			
Methysticin	M	1	2.21	386.783	4.12%	0.49%	<b>6</b>
Dihydromethysticin	DHM	2	3.38	422.923	4.50%	0.81%	<b>5</b>
Kavain	K	3	1	5427.992	57.82%	3.08%	<b>4</b>
Dihydrokavain	DHK	4	3.48	1765.015	18.80%	3.49%	<b>2</b>
Desmethoxyyangonin	DMY	5	2.52	484.02	5.16%	0.69%	<b>1</b>
Yangonin	Y	6	3.12	901.338	9.60%	1.60%	<b>3</b>
<b>Kavalactones</b>			<b>Total:</b>	<b>9388.071</b>	<b>100.00%</b>	<b>10.17%</b>	<b>243516</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.  
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Chemist Hustle Youngs Date 12/18/24

SAMPLE S2194  
Vial 14

0.75802g/50mL

wavelength 246 nm

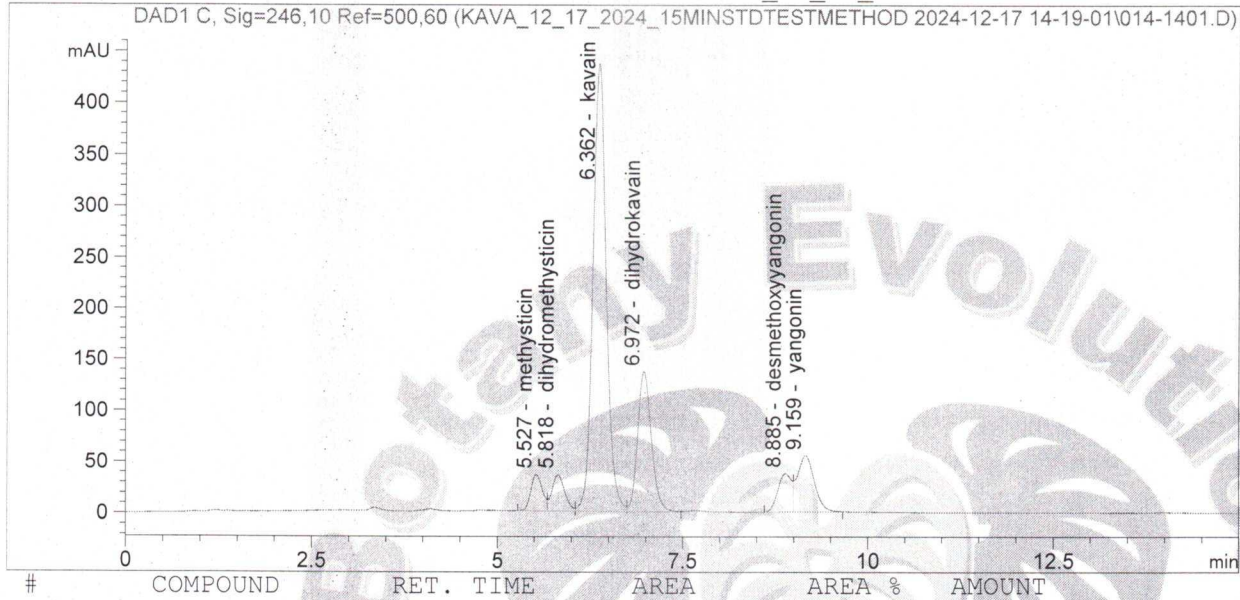
C:\CHEM32\1\DATA\KAVA\_12\_17\_2024\_15MINSTDTESTMETHOD 2024-12-17 14-19-01\01->  
SEQUENCE C:\CHEM32\1\DATA\KAVA\_12\_17\_2024\_ ->

Injection date 12/17/2024

Injection time 6:54:04 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA\_12\_17\_202->



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.527	386.783	4.12	0.000
2	dihydromethysticin	5.818	422.923	4.50	0.000
3	kavain	6.362	5427.992	57.82	0.000
4	dihydrokavain	6.972	1765.015	18.80	0.000
5	desmethoxyyangonin	8.885	484.020	5.16	0.000
6	yangonin	9.159	901.338	9.60	0.000

12/18/24  
K