

CERTIFICATE OF ANALYSIS

GENERAL INFORMATION

Report Date	3/5/2025	Country of Origin	Solomon Islands
Sample Number	S2233	Country of Processing	USA
Product Name	Kastom Basal Roots	Manufacture Date	Mar-25
Lot Number	SIK2502-KBR3	Best By Date	Mar-28

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	9.92%	HPLC
Kavalactone Profile	Noble	Pass	HPLC
Chemotype	If # 5 is in 1st or 2nd in Abundance	243516	HPLC
K/DHM	> 1.2 for Noble	3.7	Calculation

HEAVY METALS

		Results		
Arsenic (As)	NMT 1,000 (ppb)*	13.5	ppb	FDA EAM 4.7
Cadmium (Cd)	NMT 1,000 (ppb)*	236	ppb	FDA EAM 4.7
Lead (Pb)	NMT 1,000 (ppb)*	53.3	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	7,400	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)	3,800	cfu / 10 g	
MOLD		200	cfu / 10 g	USP 2021
TOTAL YEAST & MOLD	NMT 100,000 cfu (Combined)	4000	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: Tony Salah Title: Manager Date: 3/7/2025

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis**Sample Identification Information**Date of Analysis 3/5/2025Sample: S2233Product Name KASTOM BASAL ROOTSLot# SIK2502-KBR-3Country of Origin

SOLOMON ISLANDS

Country of Processing

USA

Manufacture Date

Mar-25

Best By Date

Mar-28

General Product SpecificationsProduct Species Piper MethysticumPart Used RootCommon Names

Kava kava, Awa, Yagona

Appearance

Yellow, Brown, beige powder

<u>Analyzed Characteristics</u>	<u>Specification</u>	<u>Result</u>	<u>Test Method</u>
<u>Standardization</u>	2-17% Kavalactones	9.92%	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>	TUDEI < 1.2 > NOBLE	3.7	Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2380.544			
Methysticin	M	1	2.21	391.139	4.39%	0.50%	6
Dihydromethysticin	DHM	2	3.38	414.646	4.65%	0.82%	5
Kavain	K	3	1	5145.504	57.69%	3.00%	4
Dihydrokavain	DHK	4	3.48	1653.071	18.53%	3.36%	2
Desmethoxyyangonin	DMY	5	2.52	458.766	5.14%	0.68%	1
Yangonin	Y	6	3.12	856.461	9.60%	1.56%	3
Kavalactones			Total:	8919.587	100.00%	9.92%	243516

*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

3/16/25

SAMPLE S2233
Vial 12

0.75385g/50mL

wavelength 246 nm

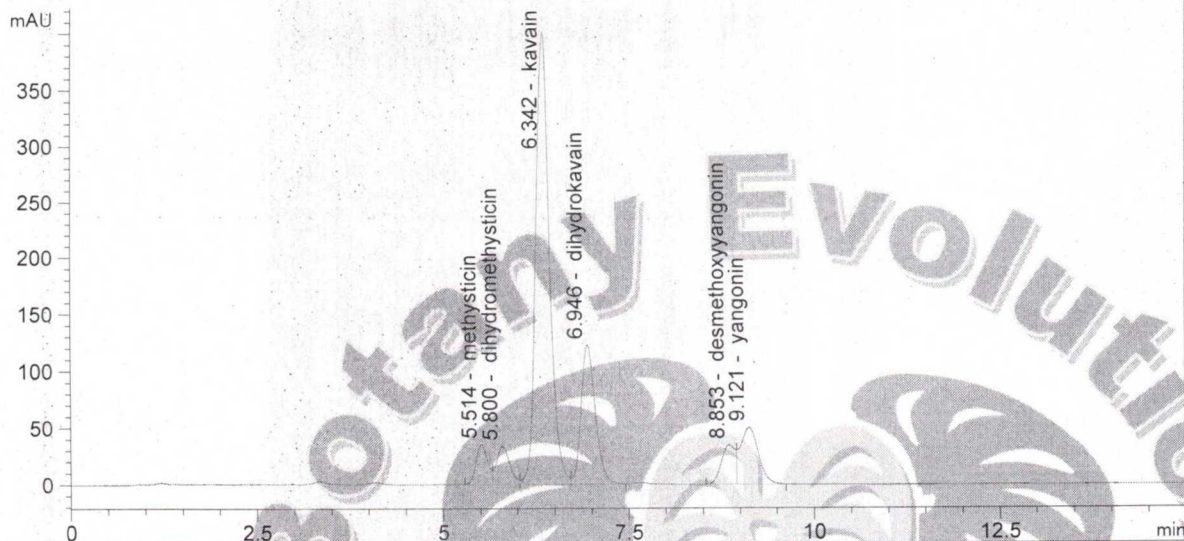
C:\CHEM32\1\DATA\KAVA_03_05_2025_15MINSTDTESTMETHOD 2025-03-05 16-07-05\01->
SEQUENCE C:\CHEM32\1\DATA\KAVA_03_05_2025_ ->

Injection date 3/5/2025
Injection time 8:10:14 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA_03_05_202->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_03_05_2025_15MINSTDTESTMETHOD 2025-03-05 16-07-05\012-1201.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.514	391.139	4.39	0.000
2	dihydromethysticin	5.800	414.646	4.65	0.000
3	kavain	6.342	5145.504	57.69	0.000
4	dihydrokavain	6.946	1653.071	18.53	0.000
5	desmethoxyyangonin	8.853	458.766	5.14	0.000
6	yangonin	9.121	856.461	9.60	0.000

3/6/25
J