

# CERTIFICATE OF ANALYSIS

## GENERAL INFORMATION

Report Date	30-Apr-2025	Country of Origin	Vanuatu
Sample Number	S2243	Country of Processing	USA
Product Name	Lateral Roots	Manufacture Date	May-25
Lot Number	VSSC2504-LR5	Best By Date	May-28

ITEM	SPECIFICATION	TEST RESULTS	METHOD
------	---------------	--------------	--------

## PHYSICAL & CHEMICAL

Identification	Piper methysticum	Complies	HPLC
Appearance	Beige to Yellow Powder	Complies	Organoleptic
Kavalactone Standard	2-17 % Kavalactones	11.31%	HPLC
Kavalactone Profile	Noble	Pass	HPLC
Chemotype	If # 5 is in 1st or 2nd in Abundance	243561	HPLC
K/DHM	> 1.2 for Noble	1.9	Calculation

## HEAVY METALS

		Results	
Arsenic (As)	NMT 1,000 (ppb)*	59.5 ppb	FDA EAM 4.7
Cadmium (Cd)	NMT 1,000 (ppb)*	261 ppb	FDA EAM 4.7
Lead (Pb)	NMT 1,000 (ppb)*	63.1 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	41,000 cfu / 10 g	USP 2022
E. COLI	ABSENT (cfu/10g)	Negative cfu / 10 g	USP 2022
LISTERIA MONOCYTOGENES	ABSENT (cfu/10g)	Negative cfu / 10 g	AOAC 2004.02
PSEUDOMONAS AERUGINOSA	ABSENT (cfu/10g)	Negative cfu / 10 g	USP 2022
SALMONELLA	ABSENT (cfu/10g)	Negative cfu / 10 g	USP 2022
STAPHYLOCOCCUS AUREUS	ABSENT (cfu/10g)	Negative cfu / 10 g	USP 2022
YEAST	NMT 100,000 cfu (Combined)	< 10 cfu / 10 g	USP 2022
MOLD		40 cfu / 10 g	USP 2022
TOTAL YEAST & MOLD	NMT 100,000 cfu (Combined)	50 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.

Kava Republic, 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.

Authorized By (Name / Title ):

Tony Sabeh

Operations Manager

Signature:

Tony Sabeh



Botany Evolution LLC  
2510 Kirby Circle NE  
Palm Bay, FL 32905  
321-802-4583

Certificate Of Analysis

Sample Identification Information

<u>Date of Analysis</u>	4/30/2025	<u>Country of Origin</u>	VANUATU
<u>Sample:</u>	S2243	<u>Country of Processing</u>	USA
<u>Product Name</u>	LATERAL ROOTS	<u>Manufacture Date</u>	May-25
<u>Lot#</u>	VSSC2504-LR5	<u>Best By Date</u>	May-28

General Product Specifications

<u>Product Species</u>	Piper Methysticum	<u>Common Names</u>	Kava kava, Awa, Yagona
<u>Part Used</u>	Root	<u>Appearance</u>	Yellow, Brown, beige powder

Analyzed Characteristics	Specification	Result	Test Method
<u>Standardization</u>	2-17% Kavalactones	11.31%	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>		243561	HPLC
<u>K/DHM</u>	TUDEI < 1.2 > NOBLE	1.9	Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2326.967			
Methysticin	M	1	2.21	936.197	9.86%	1.24%	6
Dihydromethysticin	DHM	2	3.38	739.796	7.79%	1.49%	5
Kavain	K	3	1	4817.374	50.74%	2.88%	4
Dihydrokavain	DHK	4	3.48	1532.04	16.14%	3.19%	2
Desmethoxyyangonin	DMY	5	2.52	632.343	6.66%	0.95%	1
Yangonin	Y	6	3.12	836.97	8.82%	1.56%	3
Kavalactones			Total:	9494.720	100.00%	11.31%	243561

\*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 5/2/25



SAMPLE S2243  
Vial 11

0.75385g/50mL

wavelength 246 nm

\\:\CHEM32\1\DATA\KAVA\_04\_30\_2025\_15MINSTDTESTMETHOD 2025-04-30 18-15-21\01->

SEQUENCE C:\CHEM32\1\DATA\KAVA\_04\_30\_2025\_ ->

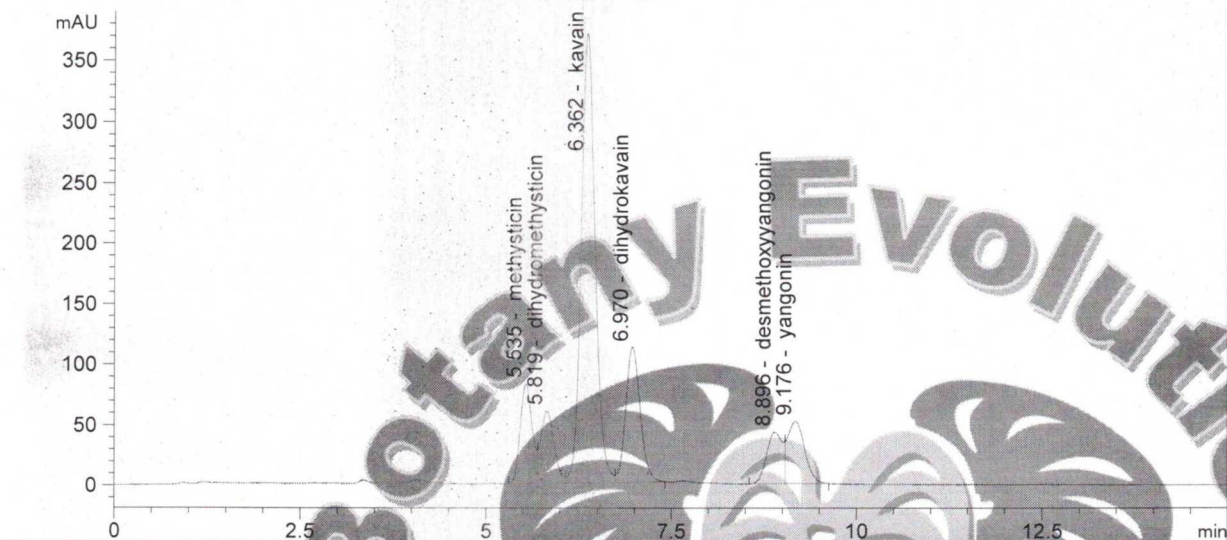
Injection date 4/30/2025

Injection time 10:02:29 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA\_04\_30\_202->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA\_04\_30\_2025\_15MINSTDTESTMETHOD 2025-04-30 18-15-21\011-1101.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.535	936.197	9.86	0.000
2	dihydromethysticin	5.819	739.796	7.79	0.000
3	kavain	6.362	4817.374	50.74	0.000
4	dihydrokavain	6.970	1532.040	16.14	0.000
5	desmethoxyyangonin	8.896	632.343	6.66	0.000
6	yangonin	9.176	836.970	8.82	0.000

5/2/25  
y