

**Botany Evolution LLC**

2510 Kirby Circle NE

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**Certificate Of Analysis****Sample Identification Information**Date of Analysis 11/9/2017Sample: S0242Product Name LATERAL ROOTSLot# VFE171019LRCountry of Origin VANUATUCountry of Processing VANUATUManufacture Date 10/19/17Expiration Date 10/19/20**General Product Specifications**Product Species Piper MethysticumPart Used RootCommon Names Kava kava, Awa, YagonaAppearance Beige powder**Analyzed Characteristics****Specification****Result****Test Method**Standardization

2-15% Kavalactones

13.12%

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

4.57

Calculation

Kavalactones	Code	Peaks Ref.	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			<b>2901.86</b>			
Methysticin	M	1	2.19	1032.658	7.18%	1.09%	<b>6</b>
Dihydromethysticin	DHM	2	3.23	589.314	4.10%	0.92%	<b>5</b>
Kavain	K	3	1	8705.181	60.55%	4.21%	<b>4</b>
Dihydrokavain	DHK	4	4.21	1791.694	12.46%	3.65%	<b>2</b>
Desmethoxyyangonin	Y	5	2.74	1017.01	7.07%	1.35%	<b>1</b>
Yangonin	DMY	6	3.16	1240.351	8.63%	1.90%	<b>3</b>
<b>Kavalactones</b>			<b>Total:</b>	<b>14376.208</b>	<b>100.00%</b>	<b>13.12%</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.

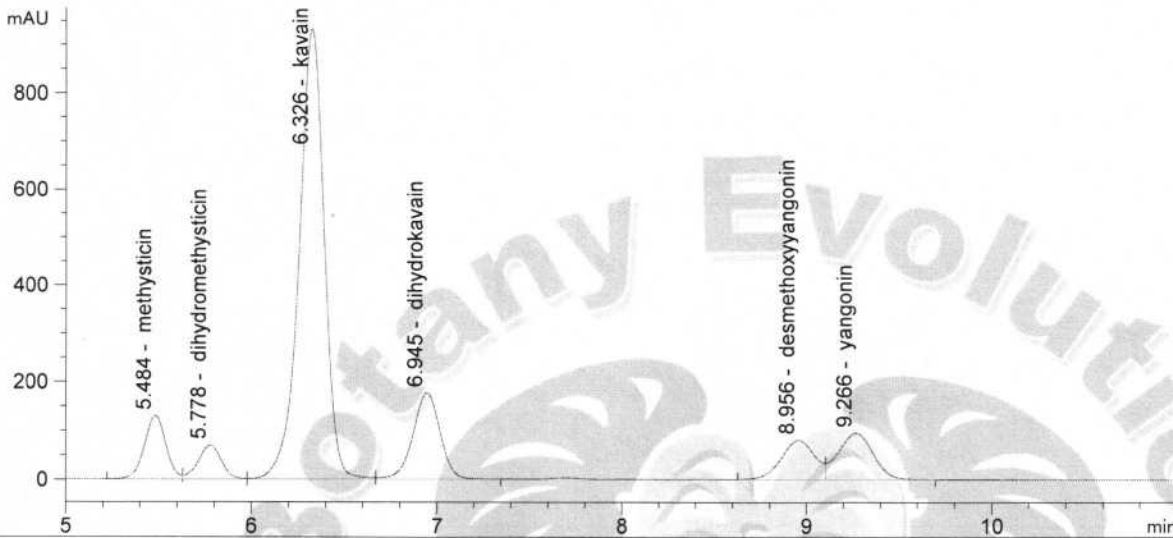
*Muste Youngs* 11/10/17

SAMPLE S0242  
Vial 13

0.76234g/50ml

wavelength 246 nm  
C:\CHEM32\1\DATA\KAVA\_11\_9\_2017\_15MINSTDTESTMETHOD 2017-11-09 17-29-07\013->  
SEQUENCE C:\CHEM32\1\DATA\KAVA\_11\_9\_2017\_ ->  
Injection date 11/9/2017  
Injection time 9:15:48 PM  
Acq. operator KRISTL  
Method C:\CHEM32\1\DATA\KAVA\_11\_9\_201->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA\_11\_9\_2017\_15MINSTDTESTMETHOD 2017-11-09 17-29-07\013-1301.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.484	1032.658	7.18	0.000
2	dihydromethysticin	5.778	589.314	4.10	0.000
3	kavain	6.326	8705.181	60.55	0.001
4	dihydrokavain	6.945	1791.694	12.46	0.001
5	desmethoxyyangonin	8.956	1017.010	7.07	0.000
6	yangonin	9.266	1240.351	8.63	0.000

11/10/17  
v8