

**Botany Evolution LLC**

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

**Certificate Of Analysis****Sample Identification Information**Date of Analysis 10/17/2017Sample: S0219Product Name CEREMONIALLot# VFE171008CCountry of Origin VANUATUCountry of Processing VANUATUManufacture Date 10/08/17Expiration Date 10/08/20**General Product Specifications**Product Species Piper MethysticumPart Used RootCommon Names Kava kava, Awa, YagonaAppearance Beige powder

<u>Analyzed Characteristics</u>	<u>Specification</u>	<u>Result</u>	<u>Test Method</u>
<u>Standardization</u>	2-15% Kavalactones	9.75%	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>		2.11	Calculation

Kavalactones	Code	Peaks Ref.	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2876.599			
Methysticin	M	1	2.19	804.486	8.52%	0.86%	6
Dihydromethysticin	DHM	2	3.23	715.221	7.57%	1.12%	5
Kavain	K	3	1	4883.344	51.70%	2.38%	4
Dihydrokavain	DHK	4	4.21	1619.99	17.15%	3.32%	2
Desmethoxyyangonin	Y	5	2.74	601.101	6.36%	0.80%	1
Yangonin	DMY	6	3.16	821.87	8.70%	1.26%	3
<b>Kavalactones</b>			<b>Total:</b>	<b>9446.012</b>	<b>100.00%</b>	<b>9.75%</b>	<b>243561</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.

Austl Youngs 10/18/17

SAMPLE S0219  
Vial 22

0.76406g/50ml

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA\_10\_17\_2017\_15MINSTDTESTMETHOD 2017-10-17 17-31-34\02->

SEQUENCE C:\CHEM32\1\DATA\KAVA\_10\_17\_2017\_ ->

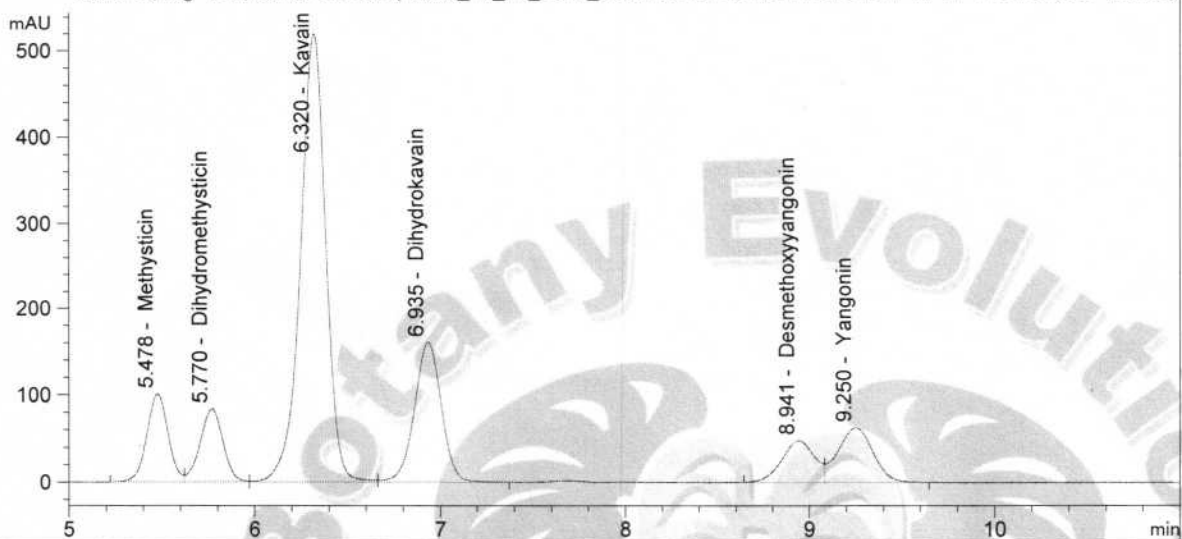
Injection date 10/17/2017

Injection time 9:50:12 PM

Acq. operator KRISTL

Method C:\CHEM32\1\METHODS\KAVA15MIN STD TEST.M

DAD1 C, Sig=246,10 Ref=500.60 (KAVA\_10\_17\_2017\_15MINSTDTESTMETHOD 2017-10-17 17-31-34\022-1501.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	Methysticin	5.478	804.486	8.52	0.000
2	Dihydromethysticin	5.770	715.221	7.57	0.000
3	Kavain	6.320	4883.344	51.70	0.000
4	Dihydrokavain	6.935	1619.990	17.15	0.001
5	Desmethoxyyangonin	8.941	601.101	6.36	0.000
6	Yangonin	9.250	821.870	8.70	0.000

*Handwritten signature*  
10/18/17