

**Botany Evolution LLC**

2510 Kirby Circle NE  
Palm Bay, FL 32945  
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**Certificate Of Analysis**

**Sample Identification Information**

Date of Analysis 2/6/2018  
Sample: S0329  
Product Name LATERAL ROOTS  
Lot# VFE180122LR

Country of Origin VANUATU  
Country of Processing VANUATU  
Manufacture Date 01/22/18  
Expiration Date 01/22/21

**General Product Specifications**

Product Species Piper Methysticum  
Part Used Root

Common Names Kava kava, Awa, Yagona  
Appearance Beige powder

<u>Analyzed Characteristics</u>	<u>Specification</u>	<u>Result</u>	<u>Test Method</u>
<u>Standardization</u>	2-15% Kavalactones	12.07%	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>		423165	HPLC
<u>K/DHM</u>		5.41	Calculation

Kavalactones	Code	Peaks Ref.	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2988.211			
Methysticin	M	1	2.19	899.915	6.52%	0.93%	6
Dihydromethysticin	DHM	2	3.23	493.117	3.57%	0.75%	5
Kavain	K	3	1	8624.222	62.44%	4.07%	4
Dihydrokavain	DHK	4	4.21	1708.182	12.37%	3.39%	2
Desmethoxyyangonin	DMY	5	2.74	970.566	7.03%	1.25%	1
Yangonin	Y	6	3.16	1116.662	8.08%	1.67%	3
<b>Kavalactones</b>			<b>Total:</b>	<b>13812.664</b>	<b>100.00%</b>	<b>12.07%</b>	<b>423165</b>

\*See data in attachment HPLC1100 Agilent Certificate with Chromatogram graph.

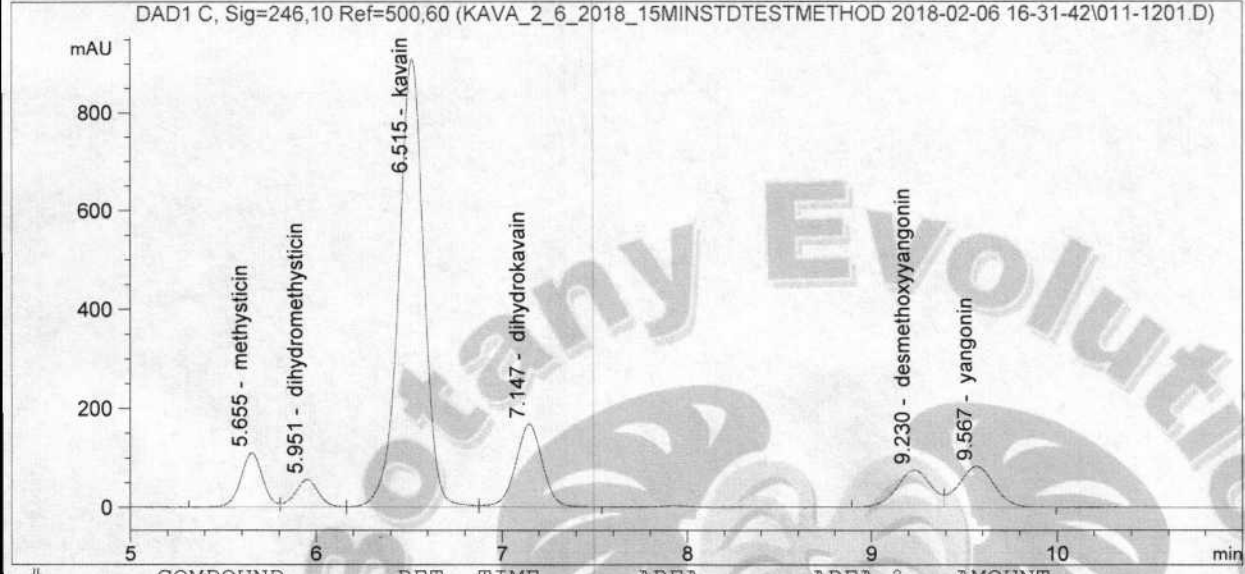
This result are in house tested and the best of our knowledge and experience. Using calibrated equipment.  
We are dedicated to offer the best Quality of Botanical products on the market. We test and stand behind our products.  
Disclaimer\* the test results are accurate to the best of our knowledge 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.

*Mistl Youngs 2/7/18*

SAMPLE S0329  
Vial 11

0.75879g/50ML

wavelength 246 nm  
C:\CHEM32\1\DATA\KAVA\_2\_6\_2018\_15MINSTDTESTMETHOD 2018-02-06 16-31-42\011-->  
SEQUENCE C:\CHEM32\1\DATA\KAVA\_2\_6\_2018\_ ->  
Injection date 2/6/2018  
Injection time 8:34:24 PM  
Acq. operator KRISTL  
Method C:\CHEM32\1\METHODS\KAVA15MIN STD TEST.M



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.655	899.915	6.52	0.000
2	dihydromethysticin	5.951	493.117	3.57	0.000
3	kavain	6.515	8624.222	62.44	0.001
4	dihydrokavain	7.147	1708.182	12.37	0.001
5	desmethoxyyangonin	9.230	970.566	7.03	0.000
6	yangonin	9.567	1116.662	8.08	0.000

KS  
2/7/18