

**Botany Evolution LLC**

2510 Kirby Circle NE  
Palm Bay, FL 32945  
321-802-4583

**Certificate Of Analysis**

**Sample Identification Information**

Date of Analysis 4/5/2018  
Sample: S0386  
Product Name LATERAL ROOTS  
Lot# PNGNK180123LR

Country of Origin/Region PAPUA NEW GUINEA  
Country of Processing PAPUA NEW GUINEA  
Manufacture Date 01/23/18  
Expiration Date 01/23/21

**General Product Specifications**

Product Species Piper Methysticum  
Part Used Root

Common Names Kava kava, Awa, Yagona  
Appearance Beige powder

**Analyzed Characteristics**

**Specification**

**Result**

**Test Method**

<u>Standardization</u>	2-15% Kavalactones	7.34%	HPLC
<u>Identification</u>	Complies by HPLC	Conform	HPLC
<u>Kavalactone Profile</u>	Noble	TUDEI	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>		256431	HPLC
<u>K/DHM</u>		0.65	Calculation

Kavalactones	Code	Peaks Ref.	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2973.866			
Methysticin	M	1	2.19	1067.48	16.74%	1.10%	6
Dihydromethysticin	DHM	2	3.23	1065.369	16.70%	1.63%	5
Kavain	K	3	1	2222.559	34.85%	1.05%	4
Dihydrokavain	DHK	4	4.21	1199.927	18.81%	2.39%	2
Desmethoxyyangonin	DMY	5	2.74	295.765	4.64%	0.38%	1
Yangonin	Y	6	3.16	527.128	8.26%	0.79%	3
<b>Kavalactones</b>			<b>Total:</b>	<b>6378.228</b>	<b>100.00%</b>	<b>7.34%</b>	<b>256431</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.

*Mustie Youngs 4/6/18*

SAMPLE S0386  
 Vial 18

0.76157g/50ml

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA\_4\_5\_2018\_15MINSTDTESTMETHOD 2018-04-05 15-58-41\018-->

SEQUENCE C:\CHEM32\1\DATA\KAVA\_4\_5\_2018\_ ->

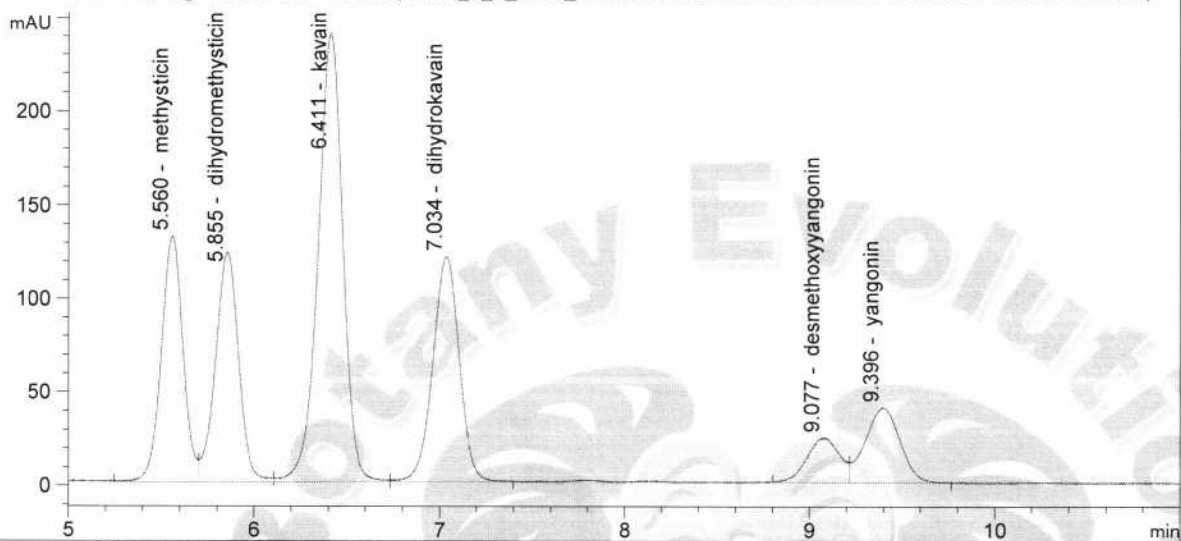
Injection date 4/5/2018

Injection time 9:54:20 PM

Acq. operator KRISTL

Method C:\CHEM32\1\METHODS\KAVA15MIN\_STD\_TEST.M

DAD1 C, Sig=246,10 Ref=500.60 (KAVA\_4\_5\_2018\_15MINSTDTESTMETHOD 2018-04-05 15-58-41\018-1901.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.560	1067.480	16.74	0.000
2	dihydromethysticin	5.855	1065.369	16.70	0.000
3	kavain	6.411	2222.559	34.85	0.000
4	dihydrokavain	7.034	1199.927	18.81	0.001
5	desmethoxyyangonin	9.077	295.765	4.64	0.000
6	yangonin	9.396	527.128	8.26	0.000

4/6/18