

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

Certificate Of Analysis

Sample Identification Information

<u>Date of Analysis</u> 4/10/2019	<u>Country of Origin</u> VANUATU
<u>Sample:</u> S0636	<u>Country of Processing</u> VANUATU
<u>Product Name</u> LATERAL ROOTS	<u>Manufacture Date</u> 03/22/19
<u>Lot#</u> VFE190322LR	<u>Best By Date</u> 03/22/22

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> Beige powder

<u>Analyzed Characteristics</u>	<u>Specification</u>	<u>Result</u>	<u>Test Method</u>
<u>Standardization</u>	2-17% Kavalactones	12.88%	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>		4.36	Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2574.441			
Methysticin	M	1	2.21	967.284	7.44%	1.11%	6
Dihydromethysticin	DHM	2	3.38	560.159	4.31%	0.95%	5
Kavain	K	3	1	7895.696	60.76%	4.16%	4
Dihydrokavain	DHK	4	3.08	1644.446	12.65%	3.64%	2
Desmethoxyyangonin	DMY	5	2.52	876.52	6.75%	1.26%	1
Yangonin	Y	6	3.12	1050.98	8.09%	1.75%	3
Kavalactones			Total:	12995.085	100.00%	12.88%	423165

*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 Justin Youngs Date 4/11/19

SAMPLE S0636
 Vial 15

0.75137g/50mL

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA_4_10_2019_15MINSTDTESTMETHOD 2019-04-10 14-46-27\015->

SEQUENCE C:\CHEM32\1\DATA\KAVA_4_10_2019_ ->

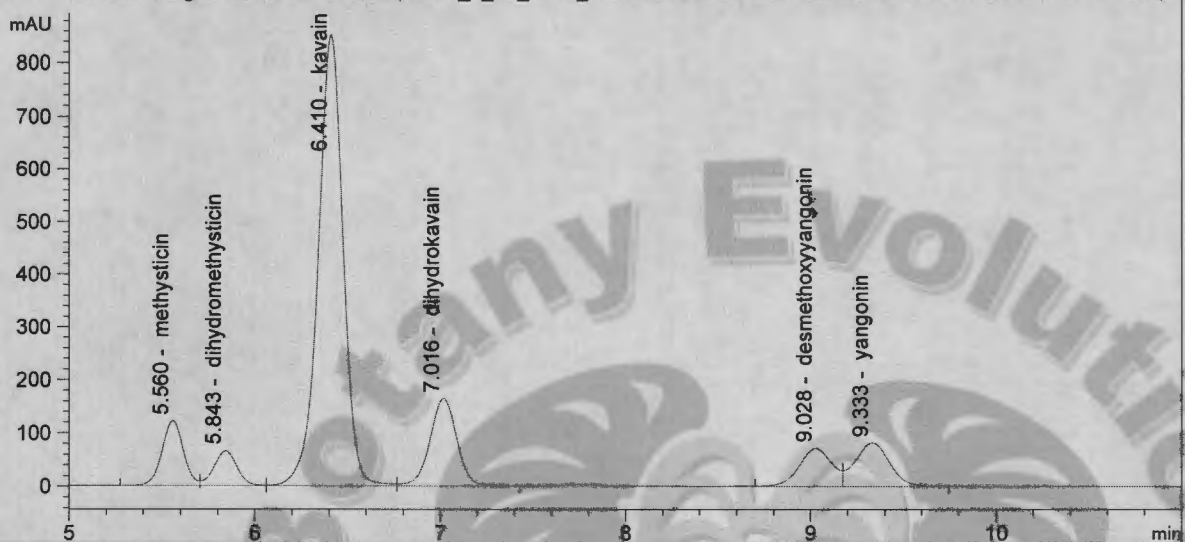
Injection date 4/10/2019

Injection time 7:37:40 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA_4_10_201->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_4_10_2019_15MINSTDTESTMETHOD 2019-04-10 14-46-27\015-1501.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.560	967.284	7.44	0.000
2	dihydromethysticin	5.843	560.159	4.31	0.000
3	kavain	6.410	7895.696	60.76	0.001
4	dihydrokavain	7.016	1644.446	12.65	0.000
5	desmethoxyyangonin	9.028	876.520	6.75	0.000
6	yangonin	9.333	1050.980	8.09	0.000

4/11/19
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