

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis**Sample Identification Information**Date of Analysis 8/8/2017Sample: S0150Product Name LATERAL ROOTSLot# VFE170619LRCountry of Origin VANUATUCountry of Processing VANUATUManufacture Date 06/19/17Expiration Date 06/19/20**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	13.06%	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>		4.32	Calculation

Kavalactones	Code	Peaks Ref.	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2784.394			
Methysticin	M	1	2.19	1001.671	7.28%	1.10%	6
Dihydromethysticin	DHM	2	3.23	594.187	4.32%	0.96%	5
Kavain	K	3	1	8282.791	60.19%	4.14%	4
Dihydrokavain	DHK	4	4.21	1752.294	12.73%	3.69%	2
Desmethoxyyangonin	Y	5	2.74	959.134	6.97%	1.31%	1
Yangonin	DMY	6	3.16	1170.198	8.50%	1.85%	3
Kavalactones			Total:	13760.275	100.00%	13.06%	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.

Hustle Youngs 8/10/17

SAMPLE S0150
Vial 19

0.76800g/50ml

wavelength 246 nm

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SEQUENCE C:\CHEM32\1\DATA\KAVA_8_8_2017_ ->

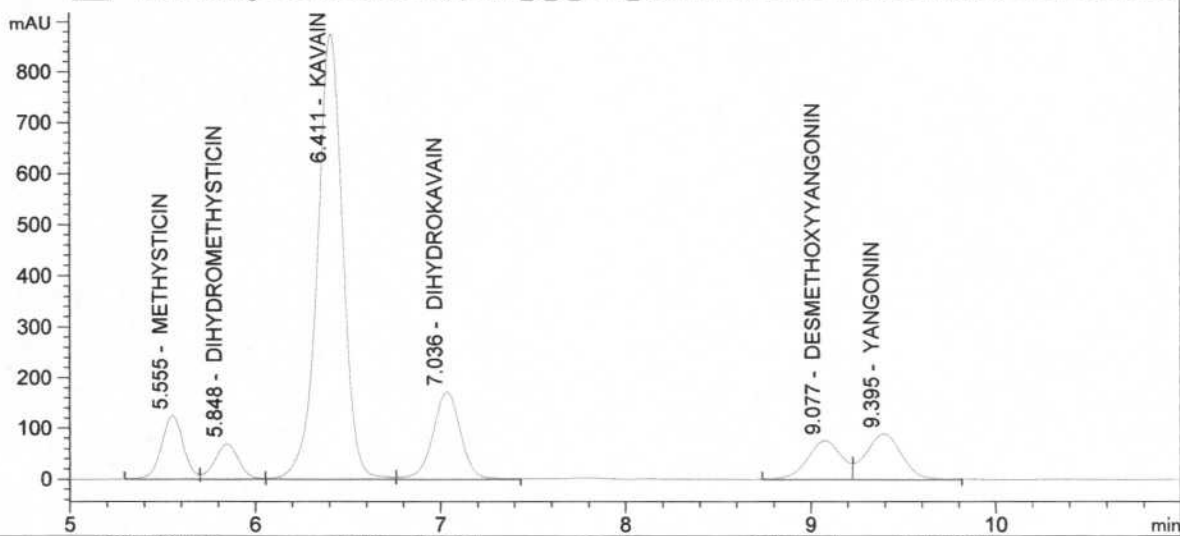
Injection date 8/8/2017

Injection time 8:59:31 PM

Acq. operator KRISTL

Method C:\CHEM32\1\METHODS\KAVA15MIN_STD_TEST.M

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_8_8_2017_15MINSTDTESTMETHOD 2017-08-08 14-31-45\019-230)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	METHYSTICIN	5.555	1001.671	7.28	0.000
2	DIHYDROMETHYSTICIN	5.848	594.187	4.32	0.000
3	KAVAIN	6.411	8282.791	60.19	0.001
4	DIHYDROKAVAIN	7.036	1752.294	12.73	0.001
5	DESMETHOXYANGONIN	9.077	959.134	6.97	0.000
6	YANGONIN	9.395	1170.198	8.50	0.000

Handwritten signature
8/10/17