

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis**Sample Identification Information**Date of Analysis 9/26/2018Sample: S0556Product Name LATERAL ROOTSLot# VFE180911LRCountry of Origin VANUATUCountry of Processing VANUATUManufacture Date 09/11/18Expiration Date 09/11/21**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	12.40%	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>		423615	HPLC
<u>K/DHM</u>		3.76	Calculation

Kavalactones	Code	Peaks Ref.	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2451.91			
Methysticin	M	1	2.21	987.661	8.42%	1.19%	6
Dihydromethysticin	DHM	2	3.38	570.095	4.86%	1.02%	5
Kavain	K	3	1	6927.481	59.07%	3.82%	4
Dihydrokavain	DHK	4	3.08	1558.971	13.29%	3.62%	2
Desmethoxyyangonin	DMY	5	2.52	777.018	6.63%	1.17%	1
Yangonin	Y	6	3.12	905.622	7.72%	1.58%	3
Kavalactones			Total:	11726.848	100.00%	12.40%	423615

*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.

Austil Youngs 9/27/18

SAMPLE S0556
Vial 13

0.75299g/50mL

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA_9_26_2018_15MINSTDTESTMETHOD 2018-09-26 15-52-58\013->

SEQUENCE C:\CHEM32\1\DATA\KAVA_9_26_2018_ ->

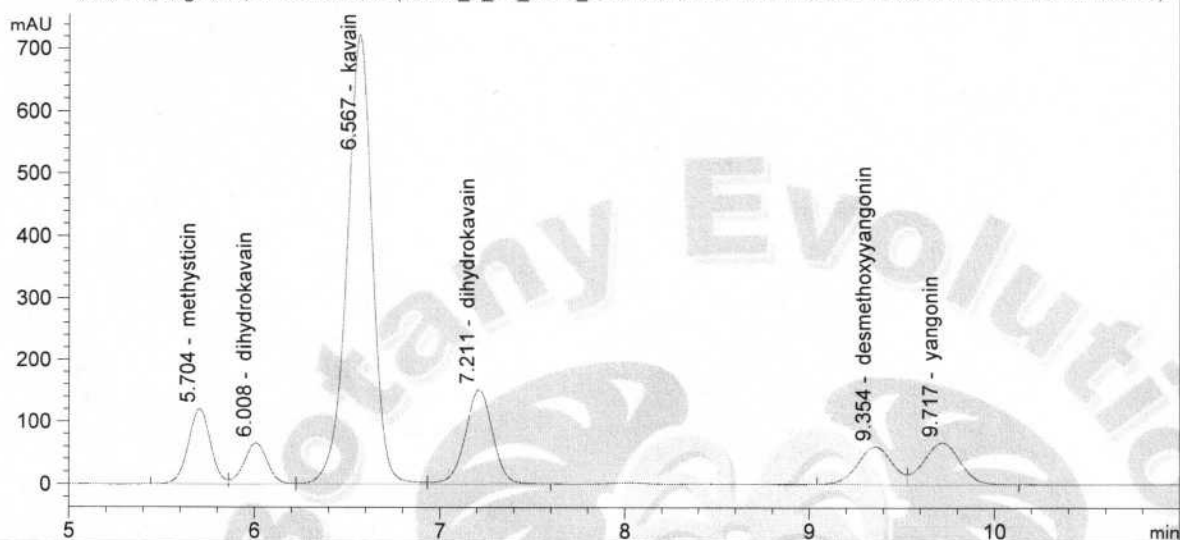
Injection date 9/26/2018

Injection time 8:11:37 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA_9_26_201->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_9_26_2018_15MINSTDTESTMETHOD 2018-09-26 15-52-58\013-1301.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.704	987.661	8.42	0.000
2	dihydrokavain	6.008	570.095	4.86	0.000
3	kavain	6.567	6927.481	59.07	0.001
4	dihydrokavain	7.211	1558.971	13.29	0.000
5	desmethoxyyangonin	9.354	777.018	6.63	0.000
6	yangonin	9.717	905.622	7.72	0.000

9/27/18
V8