

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: S0143Product Name BASAL ROOTSLot# VFE170701BRCountry of Origin VANUATUCountry of Processing VANUATUManufacture Date 07/01/17Expiration Date 07/01/20**General Product Specifications**Product Species Piper MethysticumCommon Names Kava kava, Awa, YagonaPart Used RootAppearance Beige powder

<u>Analyzed Characteristics</u>	<u>Specification</u>	<u>Result</u>	<u>Test Method</u>
<u>Standardization</u>	2-15% Kavalactones	7.44%	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>		245361	HPLC
<u>K/DHM</u>		1.28	Calculation

Kavalactones	Code	Peaks Ref.	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2784.394			
Methysticin	M	1	2.19	685.455	10.65%	0.77%	6
Dihydromethysticin	DHM	2	3.23	704.798	10.95%	1.16%	5
Kavain	K	3	1	2902.578	45.11%	1.48%	4
Dihydrokavain	DHK	4	4.21	1230.854	19.13%	2.64%	2
Desmethoxyyangonin	Y	5	2.74	363.495	5.65%	0.51%	1
Yangonin	DMY	6	3.16	546.983	8.50%	0.88%	3
Kavalactones			Total:	6434.163	100.00%	7.44%	245361

*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.

Rustl Youngs 8/10/17

SAMPLE S0143
Vial 12

0.75299g/50ml

wavelength 246 nm

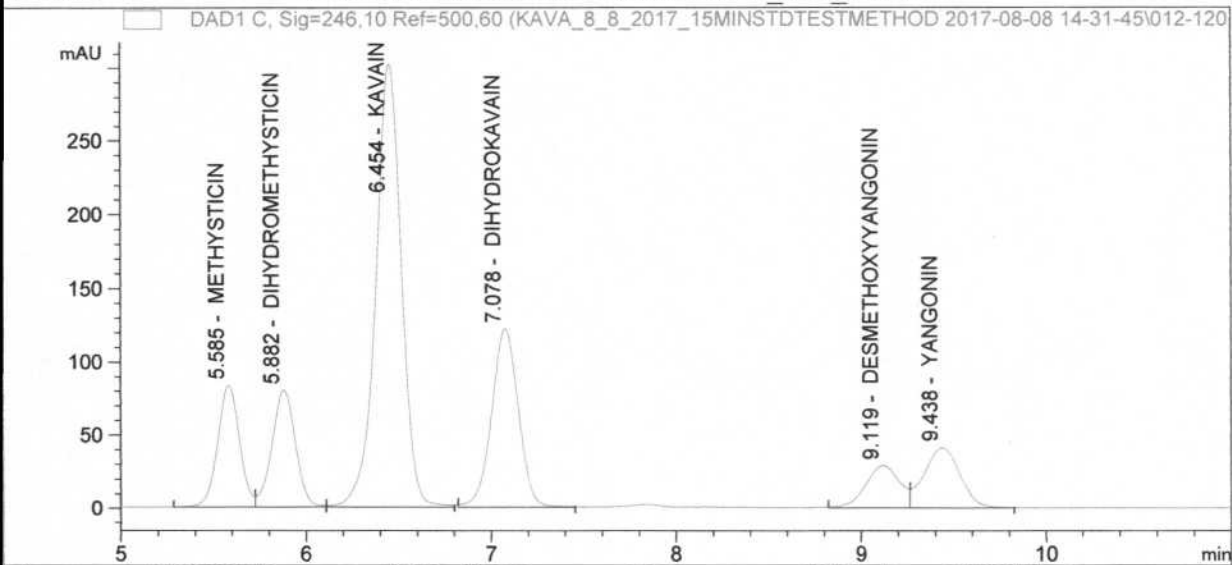
C:\CHEM32\1\DATA\KAVA_8_8_2017_15MINSTDTESTMETHOD 2017-08-08 14-31-45\012-->
SEQUENCE C:\CHEM32\1\DATA\KAVA_8_8_2017_ ->

Injection date 8/8/2017

Injection time 6:02:13 PM

Acq. operator KRISTL

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



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	METHYSTICIN	5.585	685.455	10.65	0.000
2	DIHYDROMETHYSTICIN	5.882	704.798	10.95	0.000
3	KAVAIN	6.454	2902.578	45.11	0.000
4	DIHYDROKAVAIN	7.078	1230.854	19.13	0.001
5	DESMETHOXY YANGONIN	9.119	363.495	5.65	0.000
6	YANGONIN	9.438	546.983	8.50	0.000

Handwritten signature 8/10/17