

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis**Sample Identification Information**Date of Analysis 4/25/2017Sample: S0104Product Name PIA TANNALot# VFE151201PTCountry of Origin VANUATUCountry of Processing VANUATUManufacture Date 12/01/15Expiration Date 12/01/18**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	6.15%	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>		246351	HPLC
<u>K/DHM</u>		3.06	Calculation

Kavalactones	Code	Peaks Ref.	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2729.7			
Methysticin	M	1	2.19	584.3	9.68%	0.67%	6
Dihydromethysticin	DHM	2	3.23	352.7	5.84%	0.59%	5
Kavain	K	3	1	3483.1	57.70%	1.81%	4
Dihydrokavain	DHK	4	4.21	916.5	15.18%	2.01%	2
Desmethoxyyangonin	Y	5	2.74	317.9	5.27%	0.45%	1
Yangonin	DMY	6	3.16	381.9	6.33%	0.63%	3
Kavalactones			Total:	6036.400	100.00%	6.15%	246351

*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.

SAMPLE S0104
 Vial 8

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA_4_25_2017_15MINSTDTESTMETHOD 2017-04-25 17-30-48\008->

SEQUENCE C:\CHEM32\1\DATA\KAVA_4_25_2017_ ->

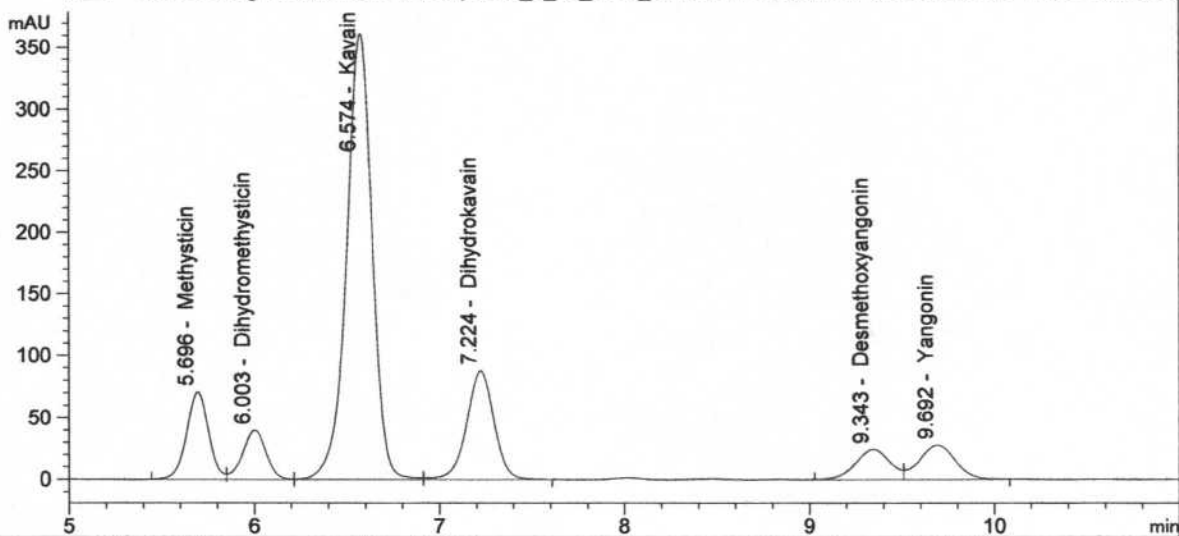
Injection date 4/25/2017

Injection time 7:40:14 PM

Acq. operator KRISTL

Method C:\CHEM32\1\METHODS\KAVA15MIN STD TEST.M

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_4_25_2017_15MINSTDTESTMETHOD 2017-04-25 17-30-48\008-06)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	Methysticin	5.696	584.257	9.68	0.000
2	Dihydromethysticin	6.003	352.722	5.84	0.000
3	Kavain	6.574	3483.100	57.70	0.000
4	Dihydrokavain	7.224	916.547	15.18	0.001
5	Desmethoxyangonin	9.343	317.882	5.27	0.000
6	Yangonin	9.692	381.917	6.33	0.000