

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis**Sample Identification Information**Date of Analysis 7/20/2018Sample: S0498Product Name BLACK LABELLot# VFE180613BLCountry of Origin/Region VANUATUCountry of Processing VANUATUManufacture Date 06/13/18Expiration Date 06/13/21**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	8.62%	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>		243516	HPLC
<u>K/DHM</u>		2.94	Calculation

Kavalactones	Code	Peaks Ref.	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			3034.394			
Methysticin	M	1	2.19	761.359	8.24%	0.780%	6
Dihydromethysticin	DHM	2	3.23	549.461	5.94%	0.83%	5
Kavain	K	3	1	5214.288	56.40%	2.44%	4
Dihydrokavain	DHK	4	4.21	1361.818	14.73%	2.68%	2
Desmethoxyangonin	DMY	5	2.74	611.379	6.61%	0.783%	1
Yagonin	Y	6	3.16	746.122	8.07%	1.10%	3
Kavalactones			Total:	9244.427	100.00%	8.62%	243516

*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.

*Mustel Youngs**7/26/18*

SAMPLE S0498
Vial 11

0.75394g/50ML

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA_7_20_2018_15MINSTDTESTMETHOD 2018-07-20 15-09-19\011->

SEQUENCE C:\CHEM32\1\DATA\KAVA_7_20_2018_ ->

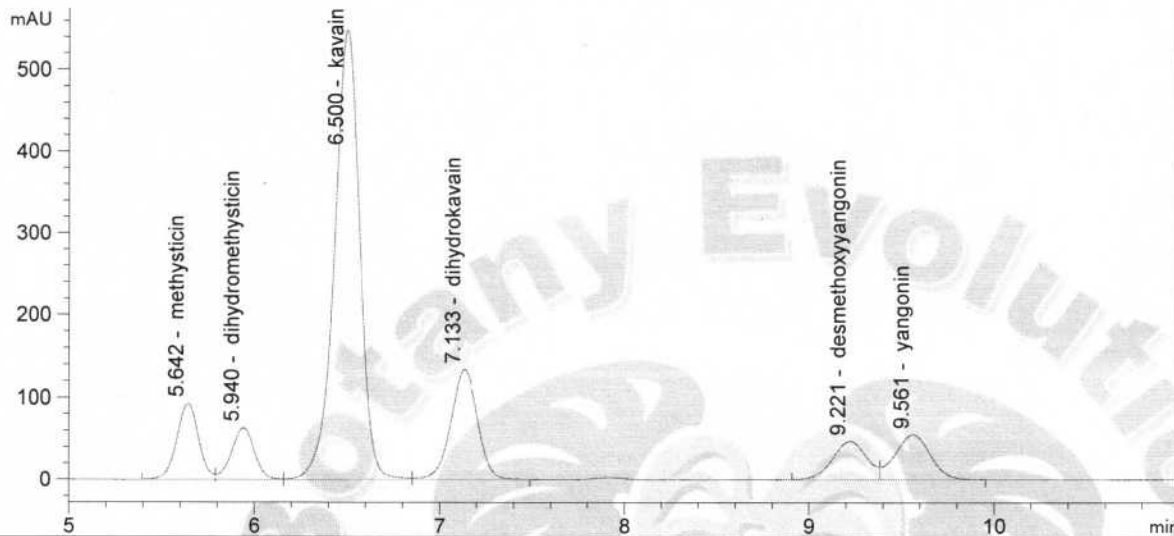
Injection date 7/20/2018

Injection time 5:19:13 PM

Acq. operator KRISTL

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

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_7_20_2018_15MINSTDTESTMETHOD 2018-07-20 15-09-19\011-0501.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.642	761.359	8.24	0.000
2	dihydromethysticin	5.940	549.461	5.94	0.000
3	kavain	6.500	5214.288	56.40	0.000
4	dihydrokavain	7.133	1361.818	14.73	0.001
5	desmethoxyyangonin	9.221	611.379	6.61	0.000
6	yangonin	9.561	746.122	8.07	0.000

Handwritten signature
7/24/18