

**Botany Evolution LLC**

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

**Certificate Of Analysis****Sample Identification Information**Date of Analysis 1/10/2019Sample: S0590Product Name BLACK LABELLot# VFE181115BLCountry of Origin VANUATUCountry of Processing VANUATUManufacture Date 11/15/18Best By Date 11/15/21**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>	2-17% Kavalactones	8.51%	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>		243156	HPLC
<u>K/DHM</u>		3.57	Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2510.868			
Methysticin	M	1	2.21	613.305	7.48%	0.72%	6
Dihydromethysticin	DHM	2	3.38	421.8	5.15%	0.73%	5
Kavain	K	3	1	4869.576	59.42%	2.62%	4
Dihydrokavain	DHK	4	3.08	1182.904	14.43%	2.68%	2
Desmethoxyyangonin	DMY	5	2.52	527.475	6.44%	0.78%	1
Yangonin	Y	6	3.12	580.474	7.08%	0.99%	3
Kavalactones			<b>Total:</b>	<b>8195.534</b>	<b>100.00%</b>	<b>8.51%</b>	<b>243156</b>

\*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.

*Must Young 1/10/19*

SAMPLE S0590  
Vial 14

0.75399g/50ml

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA\_1\_10\_2019\_15MINSTDTESTMETHOD 2019-01-10 15-03-02\014->

SEQUENCE C:\CHEM32\1\DATA\KAVA\_1\_10\_2019\_ ->

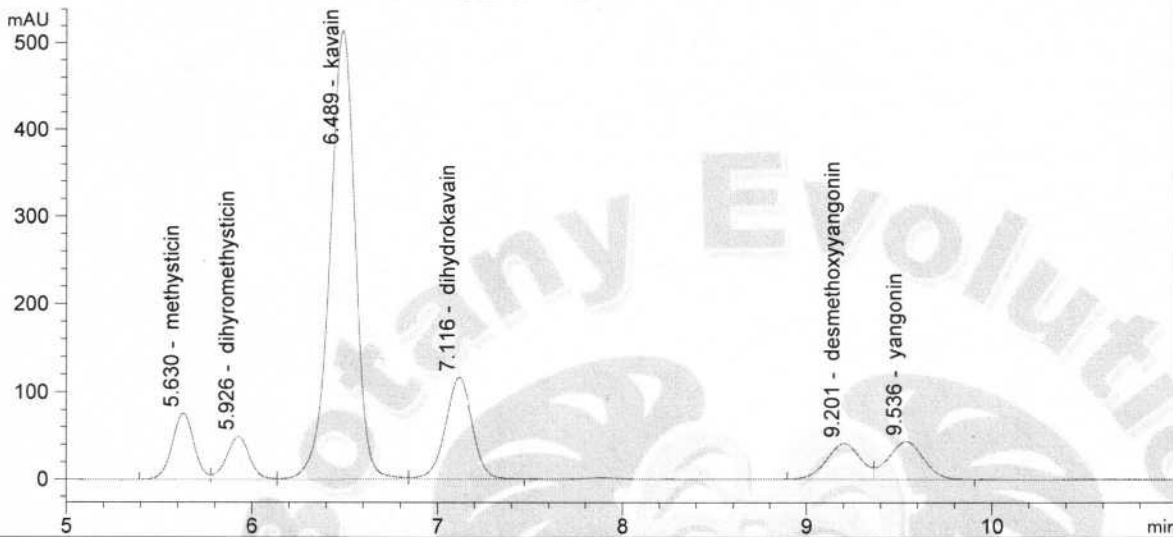
Injection date 1/10/2019

Injection time 7:54:19 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA\_1\_10\_201->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA\_1\_10\_2019\_15MINSTDTESTMETHOD 2019-01-10 15-03-02\014-1501.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.630	613.305	7.48	0.000
2	dihyromethysticin	5.926	421.800	5.15	0.000
3	kavain	6.489	4869.576	59.42	0.000
4	dihydrokavain	7.116	1182.904	14.43	0.000
5	desmethoxyyangonin	9.201	527.475	6.44	0.000
6	yangonin	9.536	580.474	7.08	0.000

*Handwritten signature/initials*