

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis**Sample Identification Information****Date of Analysis** 8/8/2017**Sample:** S0148**Product Name** CEREMONIAL**Lot#** VFE170619C**Country of Origin** VANUATU**Country of Processing** VANUATU**Manufacture Date** 06/19/17**Expiration Date** 06/19/20**General Product Specifications****Product Species** Piper Methycticum**Part Used** Root**Common Names** Kava kava, Awa, Yagona**Appearance** Beige powder

<u>Analyzed Characteristics</u>	<u>Specification</u>	<u>Result</u>	<u>Test Method</u>
<u>Standardization</u>	2-15% Kavalactones	9.06%	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>		243561	HPLC
<u>K/DHM</u>		2.37	Calculation

Kavalactones	Code	Peaks Ref.	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2784.394			
Methysticin	M	1	2.19	711.633	8.27%	0.79%	6
Dihydromethysticin	DHM	2	3.23	601.347	6.99%	0.99%	5
Kavain	K	3	1	4605.156	53.50%	2.34%	4
Dihydrokavain	DHK	4	4.21	1395.508	16.21%	2.99%	2
Desmethoxyyangonin	Y	5	2.74	562.775	6.54%	0.78%	1
Yangonin	DMY	6	3.16	731.53	8.50%	1.17%	3
Kavalactones			Total:	8607.949	100.00%	9.06%	243561

*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 8/10/17

SAMPLE S0148
Vial 17

0.75615g/50ml

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA_8_8_2017_15MINSTDTESTMETHOD 2017-08-08 14-31-45\017-->

SEQUENCE C:\CHEM32\1\DATA\KAVA_8_8_2017_ ->

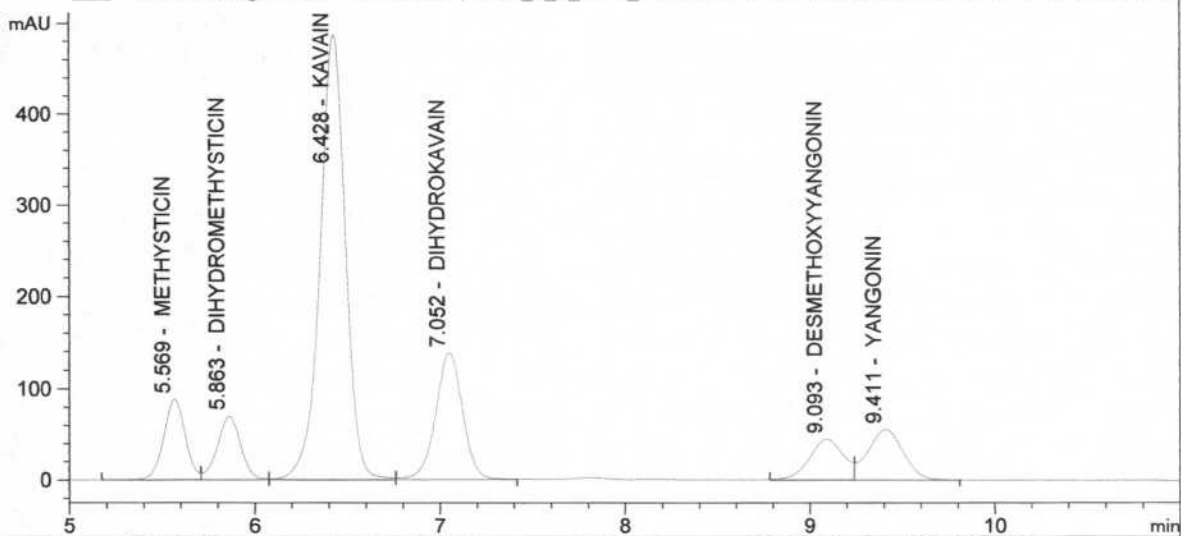
Injection date 8/8/2017

Injection time 8:27:14 PM

Acq. operator KRISTL

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

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_8_8_2017_15MINSTDTESTMETHOD 2017-08-08 14-31-45\017-210)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	METHYSTICIN	5.569	711.633	8.27	0.000
2	DIHYDROMETHYSTICIN	5.863	601.347	6.99	0.000
3	KAVAIN	6.428	4605.156	53.50	0.000
4	DIHYDROKAVAIN	7.052	1395.508	16.21	0.001
5	DESMETHOXY YANGONIN	9.093	562.775	6.54	0.000
6	YANGONIN	9.411	731.530	8.50	0.000

Handwritten signature
8/10/17