

Botany Evolution LLC

2510 Kirby Circle NE
 Palm Bay, FL 32945
 321-802-4583

Certificate Of Analysis

Sample Identification Information

<u>Date of Analysis</u> 11/1/2018	<u>Country of Origin</u> VANUATU
<u>Sample:</u> S0570	<u>Country of Processing</u> VANUATU
<u>Product Name</u> CEREMONIAL	<u>Manufacture Date</u> 08/17/18
<u>Lot#</u> VFE180817C	<u>Expiration Date</u> 08/17/21

General Product Specifications

<u>Product Species</u> Piper Methysticum	<u>Common Names</u> Kava kava, Awa, Yagona
<u>Part Used</u> Root	<u>Appearance</u> Beige powder

<u>Analyzed Characteristics</u>	<u>Specification</u>	<u>Result</u>	<u>Test Method</u>
<u>Standardization</u>	2-15% Kavalactones	11.33%	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>		3.24	Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2423.995			
Methysticin	M	1	2.21	743.577	7.31%	0.91%	6
Dihydromethysticin	DHM	2	3.38	555.807	5.46%	1.003%	5
Kavain	K	3	1	5821.12	57.20%	3.25%	4
Dihydrokavain	DHK	4	3.08	1565.638	15.38%	3.68%	2
Desmethoxyyangonin	DMY	5	2.52	650.769	6.39%	0.996%	1
Yangonin	Y	6	3.12	840.197	8.26%	1.48%	3
Kavalactones			Total:	10177.108	100.00%	11.33%	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 11/5/18

SAMPLE S0570
Vial 13

0.75182g/50ml

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA_11_1_2018_15MINSTDTESTMETHOD 2018-11-01 17-59-36\013->

SEQUENCE C:\CHEM32\1\DATA\KAVA_11_1_2018_ ->

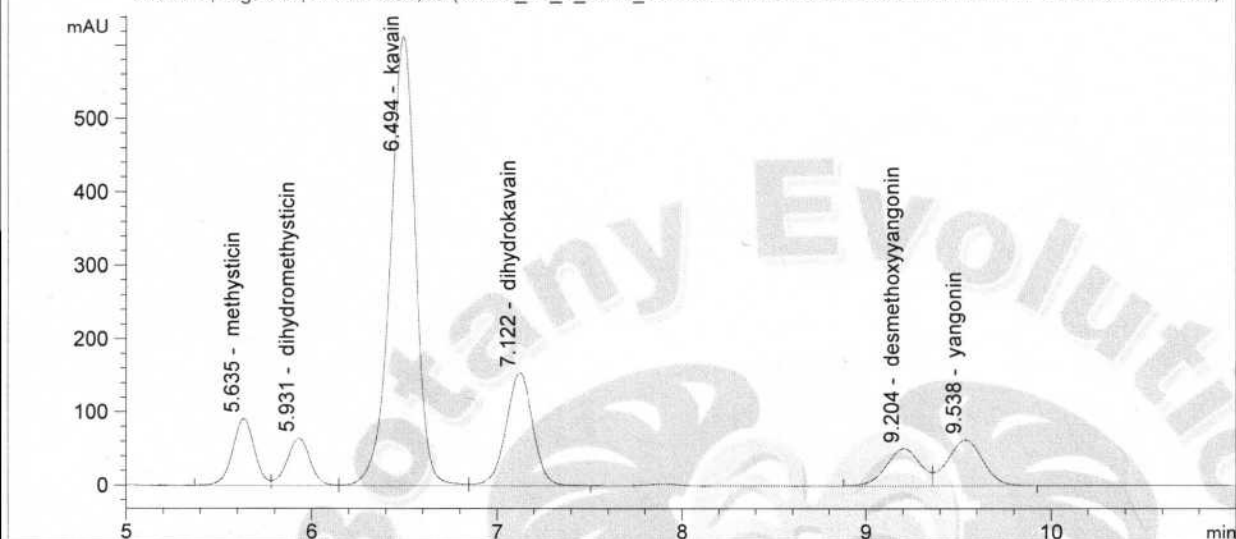
Injection date 11/1/2018

Injection time 10:18:56 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA_11_1_201->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_11_1_2018_15MINSTDTESTMETHOD 2018-11-01 17-59-36\013-1301.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.635	743.577	7.31	0.000
2	dihydromethysticin	5.931	555.807	5.46	0.000
3	kavain	6.494	5821.120	57.20	0.000
4	dihydrokavain	7.122	1565.638	15.38	0.000
5	desmethoxyyangonin	9.204	650.769	6.39	0.000
6	yangonin	9.538	840.197	8.26	0.000

11/5/18
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