

Botany Evolution LLC

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

Certificate Of Analysis

Sample Identification Information

Date of Analysis 12/30/2019
Sample: S0814
Product Name CEREMONIAL
Lot# VFE191204C

Country of Origin VANUATU
Country of Processing VANUATU
Manufacture Date 12/04/19
Best By Date 12/04/22

General Product Specifications

Product Species Piper Methysticum
Part Used Root

Common Names Kava kava, Awa, Yagona
Appearance Yellow, beige powder

Analyzed Characteristics

Specification

Result

Test Method

<u>Standardization</u>	2-17% Kavalactones	9.41%	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>		3.91	Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2444.068			
Methysticin	M	1	2.21	559.053	6.35%	0.66%	6
Dihydromethysticin	DHM	2	3.38	407.302	4.63%	0.71%	5
Kavain	K	3	1	5141.508	58.38%	2.78%	4
Dihydrokavain	DHK	4	3.08	1375.348	15.62%	3.13%	2
Desmethoxyyangonin	DMY	5	2.52	623.784	7.08%	0.92%	1
Yangonin	Y	6	3.12	699.505	7.94%	1.20%	3
Kavalactones			Total:	8806.500	100.00%	9.41%	243156

*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.

Chemist Mustie Youngs

Date 12/31/19

SAMPLE S0814
Vial 11

0.75334g/50mL

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA_12_30_2019_15MINSTDTESTMETHOD 2019-12-30 17-41-58\01->
SEQUENCE C:\CHEM32\1\DATA\KAVA_12_30_2019_ ->

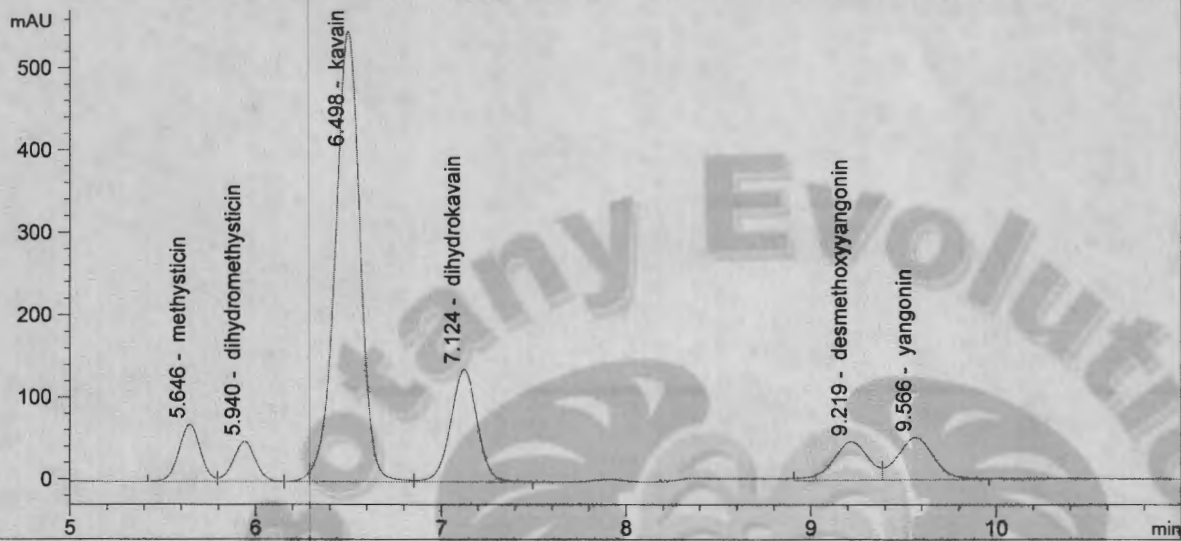
Injection date 12/30/2019

Injection time 9:45:03 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA_12_30_201->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_12_30_2019_15MINSTDTESTMETHOD 2019-12-30 17-41-58\011-1201.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.646	559.053	6.35	0.000
2	dihydromethysticin	5.940	407.302	4.63	0.000
3	kavain	6.498	5141.508	58.38	0.000
4	dihydrokavain	7.124	1375.348	15.62	0.001
5	desmethoxyyangonin	9.219	623.784	7.08	0.000
6	yangonin	9.566	699.505	7.94	0.000

12/31/19
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