

**Botany Evolution LLC**

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

**Certificate Of Analysis****Sample Identification Information**Date of Analysis 12/30/2019Sample: S0821Product Name 30% EXTRACTLot# CJ191217KE30Country of Origin CHINACountry of Processing CHINAManufacture Date 12/17/19Best By Date 12/17/22**General Product Specifications**Product Species Piper MethysticumPart Used RootCommon Names Kava kava, Awa, YagonaAppearance Yellow powder

<u>Analyzed Characteristics</u>	<u>Specification</u>	<u>Result</u>	<u>Test Method</u>
<u>Standardization</u>	20-90% Kavalactones	35.12%	HPLC
<u>Identification</u>	Complies by HPLC	Conform	HPLC
<u>Kavalactone Profile</u>	Noble	PASS	HPLC
<u>Mesh Size</u>	60-30	30	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>		2.22	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	2877.992	9.82%	3.66%	6
Dihydromethysticin	DHM	2	3.38	2159.2	7.37%	4.05%	5
Kavain	K	3	1	15463.915	52.78%	8.98%	4
Dihydrokavain	DHK	4	3.08	4517.453	15.42%	11.05%	2
Desmethoxyyangonin	DMY	5	2.52	2009.865	6.86%	3.20%	1
Yangonin	Y	6	3.12	2272.903	7.76%	4.17%	3
Kavalactones			<b>Total:</b>	<b>29301.328</b>	<b>100.00%</b>	<b>35.12%</b>	<b>243561</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.

Chemist

*Mustel Youngs*

Date

*12/31/19*

SAMPLE S0821  
 Vial 18

0.35072g/25mL

wavelength 246 nm

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 SEQUENCE C:\CHEM32\1\DATA\KAVA\_12\_30\_2019\_ ->

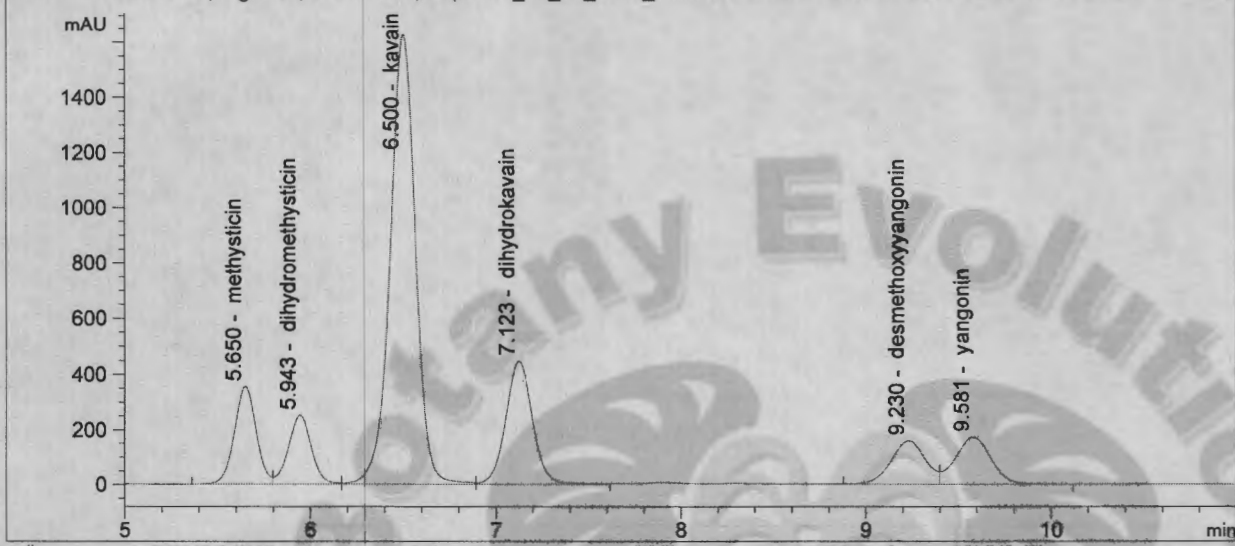
Injection date 12/30/2019

Injection time 11:38:21 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\018-1901.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.650	2877.992	9.82	0.001
2	dihydromethysticin	5.943	2159.200	7.37	0.001
3	kavain	6.500	15463.915	52.78	0.001
4	dihydrokavain	7.123	4517.453	15.42	0.004
5	desmethoxyyangonin	9.230	2009.865	6.86	0.001
6	yangonin	9.581	2272.903	7.76	0.001