

**Botany Evolution LLC**

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**Certificate Of Analysis****Sample Identification Information**Date of Analysis 2/28/2017Sample: S0090Product Name LEWENA (BASAL ROOT)Lot# FSS161108LCountry of Origin FIJICountry of Processing USAManufacture Date 11/08/16Expiration Date 11/08/19**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>	2-15% Kavalactones	4.89%	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>		246531	HPLC
<u>K/DHM</u>		1.63	Calculation

Kavalactones	Code	Peaks Ref.	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2630.323			
Methysticin	M	1	2.19	700.031	16.30%	0.84%	6
Dihydromethysticin	DHM	2	3.23	396.816	9.24%	0.70%	5
Kavain	K	3	1	2085.407	48.57%	1.14%	4
Dihydrokavain	DHK	4	4.21	580.219	13.51%	1.34%	2
Desmethoxyyangonin	Y	5	2.74	208.807	4.86%	0.31%	1
Yangonin	DMY	6	3.16	322.222	7.50%	0.56%	3
<b>Kavalactones</b>			<b>Total:</b>	<b>4293.502</b>	<b>100.00%</b>	<b>4.89%</b>	<b>246531</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.

SAMPLE S0090  
Vial 5

wt 0.74322 g

wavelength 246 nm

Path: \CHEM32\1\DATA\KAVA\_2\_28\_2017\_STD\_CHECK\_15MINMETHOD 2017-02-28 15-42-26\->

SEQUENCE C:\CHEM32\1\DATA\KAVA\_2\_28\_2017\_STD\_CHECK->

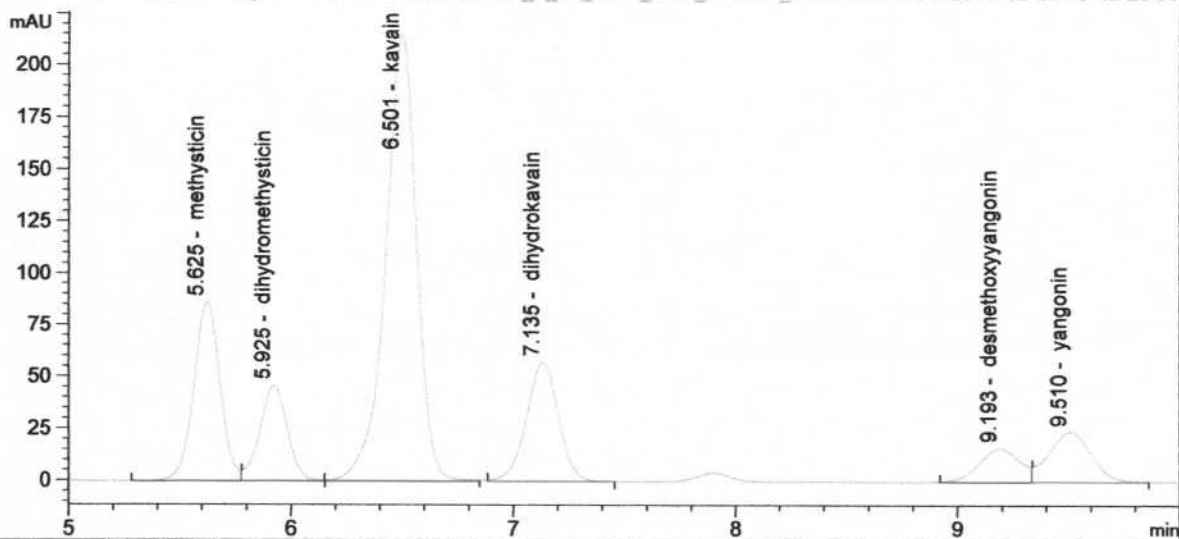
Injection date 2/28/2017

Injection time 8:17:19 PM

Acq. operator KRISTL

Method C:\CHEM32\1\METHODS\KAVA15MIN\_STD\_TEST.M

DAD1 C, Sig=246.10 Ref=500.60 (KAVA\_2\_28\_2017\_STD\_CHECK\_15MINMETHOD 2017-02-28 15-42-26)100



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
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1	methysticin	5.625	700.031	16.30	0.050
2	dihydromethysticin	5.925	396.816	9.24	0.037
3	kavain	6.501	2085.407	48.57	0.786
4	dihydrokavain	7.135	580.219	13.51	0.151
5	desmethoxyyangonin	9.193	208.807	4.86	0.015
6	yangonin	9.510	322.222	7.50	0.027