

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis**Sample Identification Information**Date of Analysis 9/18/2019Sample: S0720Product Name LATERAL ROOTSLot# VFE190826LRCountry of Origin VANUATUCountry of Processing VANUATUManufacture Date 08/26/19Best By Date 08/26/22**General Product Specifications**Product Species Piper MethysticumPart Used RootCommon Names Kava kava, Awa, YagonaAppearance Yellow, beige powder**Analyzed Characteristics****Specification****Result****Test Method**Standardization

2-17% Kavalactones

12.43%

HPLC

Identification

Complies by HPLC

Conform

HPLC

Kavalactone Profile

Noble

PASS

HPLC

Mesh Size

60-30

60

Sieve

Color

Beige to Yellow

Pass

Visual

Odor

Pass

Organoleptic

Taste

Pass

Organoleptic

Chemotype

423615

HPLC

K/DHM

3.30

Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2410.626			
Methysticin	M	1	2.21	1042.892	8.96%	1.25%	6
Dihydromethysticin	DHM	2	3.38	627.115	5.39%	1.11%	5
Kavain	K	3	1	6687.433	57.46%	3.67%	4
Dihydrokavain	DHK	4	3.08	1553.845	13.35%	3.59%	2
Desmethoxyyangonin	DMY	5	2.52	774.309	6.65%	1.16%	1
Yangonin	Y	6	3.12	953.788	8.19%	1.65%	3
Kavalactones			Total:	11639.382	100.00%	12.43%	423615

*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

Rustle Young

Date

9/19/19

SAMPLE S0720
Vial 17

0.75352g/50ml

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA_9_18_2019_15MINSTDTESTMETHOD 2019-09-18 15-50-27\017->

SEQUENCE C:\CHEM32\1\DATA\KAVA_9_18_2019_ ->

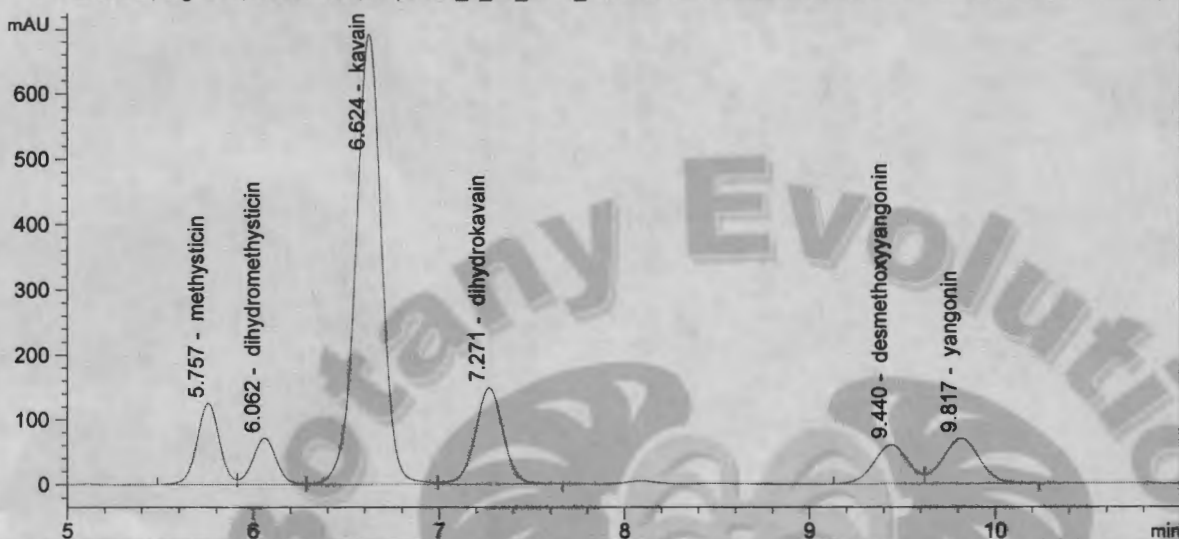
Injection date 9/18/2019

Injection time 9:14:00 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA_9_18_201->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_9_18_2019_15MINSTDTESTMETHOD 2019-09-18 15-50-27\017-1701.D)



COMPOUND RET. TIME AREA AREA % AMOUNT

#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.757	1042.892	8.96	0.000
2	dihydromethysticin	6.062	627.115	5.39	0.000
3	kavain	6.624	6687.433	57.46	0.001
4	dihydrokavain	7.271	1953.845	13.35	0.000
5	desmethoxyyangonin	9.440	774.309	6.65	0.000
6	yangonin	9.817	953.788	8.19	0.000

Handwritten signature: Kristl