

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis**Sample Identification Information**Date of Analysis 8/7/2018Sample: S0513Product Name TANNALot# VBE180814TPCountry of Origin/Region VANUATUCountry of Processing USAManufacture Date 08/07/18Expiration Date 08/07/21**General Product Specifications**Product Species Piper MethysticumPart Used RootCommon Names Kava kava, Awa, YagonaAppearance Beige powder**Analyzed Characteristics****Specification****Result****Test Method**Standardization

2-15% Kavalactones

10.65%

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

243516

HPLC

K/DHM

2.88

Calculation

Kavalactones	Code	Peaks Ref.	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2437.821			
Methysticin	M	1	2.21	602.114	6.46%	0.73%	6
Dihydromethysticin	DHM	2	3.38	553.446	5.93%	0.99%	5
Kavain	K	3	1	5151.542	55.23%	2.85%	4
Dihydrokavain	DHK	4	3.08	1631.412	17.49%	3.80%	2
Desmethoxyyangonin	DMY	5	2.52	587.542	6.30%	0.89%	1
Yangonin	Y	6	3.12	800.878	8.59%	1.40%	3
Kavalactones			Total:	9326.934	100.00%	10.65%	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

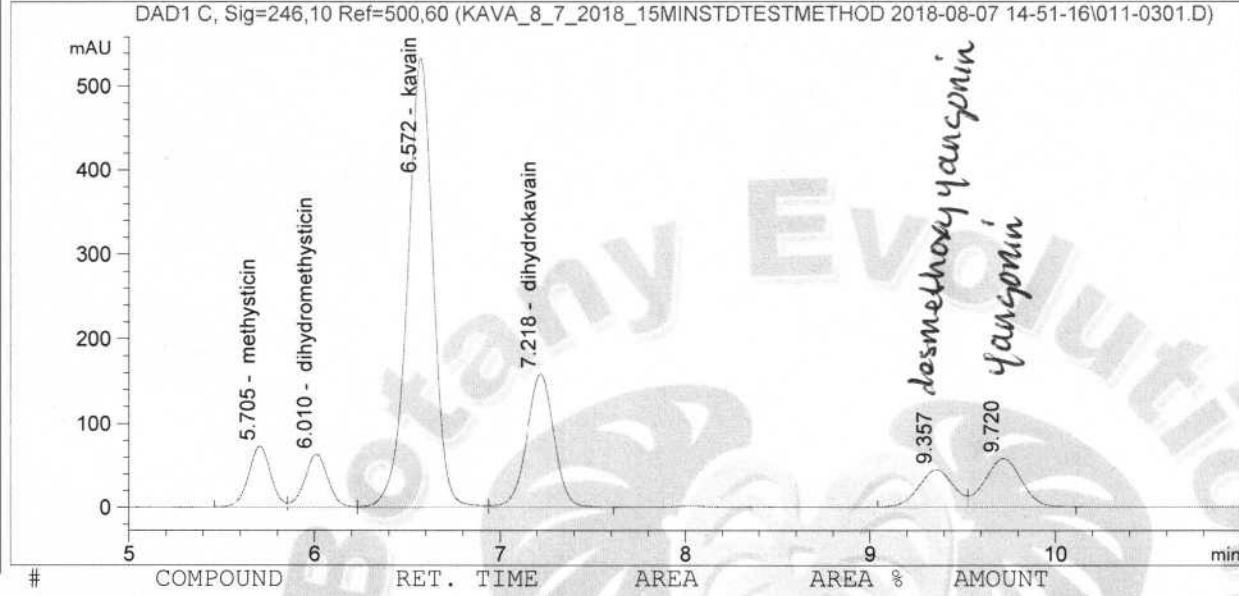
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use or misuse of this document. The appropriate use of this product is the sole responsibility of the user of the purchasing party.

SAMPLE S0513
 Vial 11

0.75557g/50mL

wavelength 246 nm
 C:\CHEM32\1\DATA\KAVA_8_7_2018_15MINSTDTESTMETHOD 2018-08-07 14-51-16\011-->
 SEQUENCE
 Injection date 8/7/2018
 Injection time 3:56:45 PM
 Acq. operator KRISTL
 Method C:\CHEM32\1\METHODS\KAVA15MIN_STD_TEST.M



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.705	602.114	6.46	0.000
2	dihydromethysticin	6.010	553.446	5.93	0.000
3	kavain	6.572	5151.542	55.23	0.000
4	dihydrokavain	7.218	1631.412	17.49	0.001
5	desmethoxyyangonin	0.000	0.000	0.00	0.000
6	yangonin	0.000	0.000	0.00	0.000
7		9.357	587.542	6.30	0.000
8		9.720	800.878	8.59	0.000

RT'S OIL ✓

* used attached low std to calculate.

9/18/18
 VS

SAMPLE Kavain low std
Vial 1

0.00509g/25mL

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA_8_7_2018_15MINSTDTESTMETHOD 2018-08-07 14-51-16\001-->

SEQUENCE C:\CHEM32\1\DATA\KAVA_8_7_2018_ ->

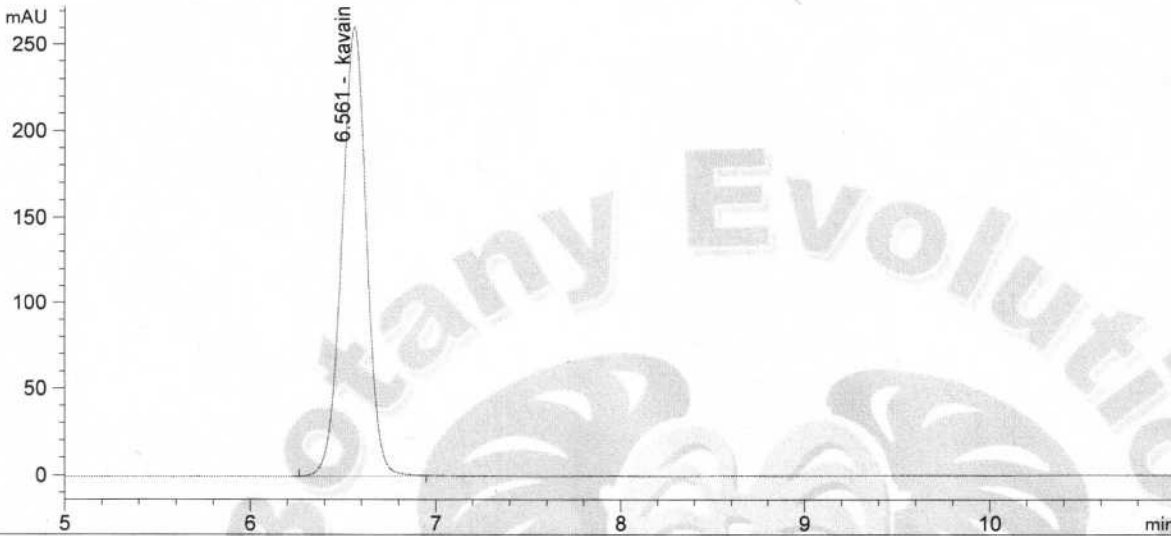
Injection date 8/7/2018

Injection time 3:40:38 PM

Acq. operator KRISTL

Method C:\Chem32\1\METHODS\KAVA15MIN_STD_TEST.M

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_8_7_2018_15MINSTDTESTMETHOD 2018-08-07 14-51-16\001-0202.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	0.000	0.000	0.00	0.000
2	dihydromethysticin	0.000	0.000	0.00	0.000
3	kavain	6.561	2437.821	100.00	0.000
4	dihydrokavain	0.000	0.000	0.00	0.000
5	desmethoxyyangonin	0.000	0.000	0.00	0.000
6	yangonin	0.000	0.000	0.00	0.000

8/7/18
KS