

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: S0815Product Name LATERAL ROOTSLot# VFE191204LRCountry of Origin VANUATUCountry of Processing VANUATUManufacture Date 12/04/19Best By Date 12/04/22**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

13.85%

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

423165

HPLC

K/DHM

4.91

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 | 943.29 | 6.90% | 1.12% | 6 |
| Dihydromethysticin | DHM | 2 | 3.38 | 526.43 | 3.85% | 0.92% | 5 |
| Kavain | K | 3 | 1 | 8356.902 | 61.12% | 4.51% | 4 |
| Dihydrokavain | DHK | 4 | 3.08 | 1693.554 | 12.39% | 3.85% | 2 |
| Desmethoxyyangonin | DMY | 5 | 2.52 | 971.678 | 7.11% | 1.44% | 1 |
| Yangonin | Y | 6 | 3.12 | 1180.943 | 8.64% | 2.02% | 3 |
| Kavalactones | | | Total: | 13672.797 | 100.00% | 13.85% | 423165 |

*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 S0815
Vial 12

0.75449g/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_ ->

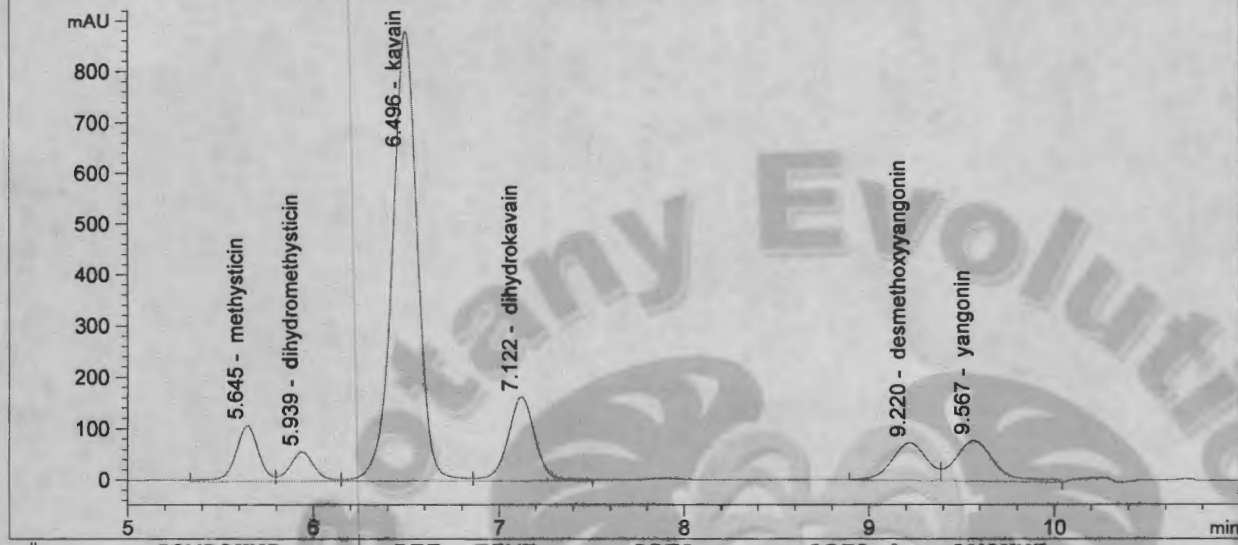
Injection date 12/30/2019

Injection time 10:01:14 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\012-1301.D)



| # | COMPOUND | RET. TIME | AREA | AREA % | AMOUNT |
|---|--------------------|-----------|----------|--------|--------|
| 1 | methysticin | 5.645 | 943.290 | 6.90 | 0.000 |
| 2 | dihydromethysticin | 5.939 | 526.430 | 3.85 | 0.000 |
| 3 | kavain | 6.496 | 8356.902 | 61.12 | 0.001 |
| 4 | dihydrokavain | 7.122 | 1693.554 | 12.39 | 0.001 |
| 5 | desmethoxyyangonin | 9.220 | 971.678 | 7.11 | 0.000 |
| 6 | yangonin | 9.567 | 1180.943 | 8.64 | 0.000 |

12/31/19
8