

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis

Sample Identification Information

Date of Analysis 3/21/2022
Sample: S1512
Product Name 30% KAVA EXTRACT
Batch # CJ220301KE30

Country of Origin VANUATU
Country of Processing CHINA
Manufacture Date 12/20/21
Best By Date 12/19/24

General Product Specifications

Product Species Piper Methysticum
Part Used Root

Common Names Kava kava, Awa, Yagona
Appearance YELLOW POWDER

Analyzed Characteristics

Specification

Result

Test Method

| | | | |
|----------------------------|---------------------|---------|--------------|
| Standardization | 20-90% Kavalactones | 33.47% | HPLC |
| Identification | Complies by HPLC | Conform | HPLC |
| Kavalactone Profile | Noble | PASS | HPLC |
| Mesh Size | 60-30 | 30 | Sieve |
| Color | Beige to Yellow | Pass | Visual |
| Odor | | Pass | Organoleptic |
| Taste | | Pass | Organoleptic |
| Chemotype | | 245361 | HPLC |
| K/DHM | | 2.2 | Calculation |

| Kavalactones | Code | Peaks Ref. (elution order) | Correction Factor | Area * | Area % | Corrected Kavalactones | Chemotype Identifier |
|--------------------|------|-------------------------------|----------------------|------------------|----------------|---------------------------|----------------------|
| Standard Kavain | K | | | 12278.901 | | | |
| Methysticin | M | 1 | 2.21 | 2435.802 | 8.95% | 3.14% | 6 |
| Dihydromethysticin | DHM | 2 | 3.38 | 2015.724 | 7.41% | 3.84% | 5 |
| Kavain | K | 3 | 1 | 14306.913 | 52.57% | 8.43% | 4 |
| Dihydrokavain | DHK | 4 | 3.08 | 4512.029 | 16.58% | 11.19% | 2 |
| Desmethoxyyangonin | DMY | 5 | 2.52 | 1932.433 | 7.10% | 3.12% | 1 |
| Yangonin | Y | 6 | 3.12 | 2010.15 | 7.39% | 3.74% | 3 |
| Kavalactones | | | Total: | 27213.051 | 100.00% | 33.47% | 245361 |

*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

Hustle Young

Date

3/22/22

SAMPLE S1512
Vial 14

0.34637g/25mL

Wavelength 246 nm

Pathlength 10 mm
File: C:\CHEM32\1\DATA\KAVA_3_21_2022_15MINSTDTESTMETHOD 2022-03-21 16-03-22\014->
Sequence: C:\CHEM32\1\DATA\KAVA_3_21_2022_15MINSTDTESTMETHOD 2022-03-21 16-03-22\014->

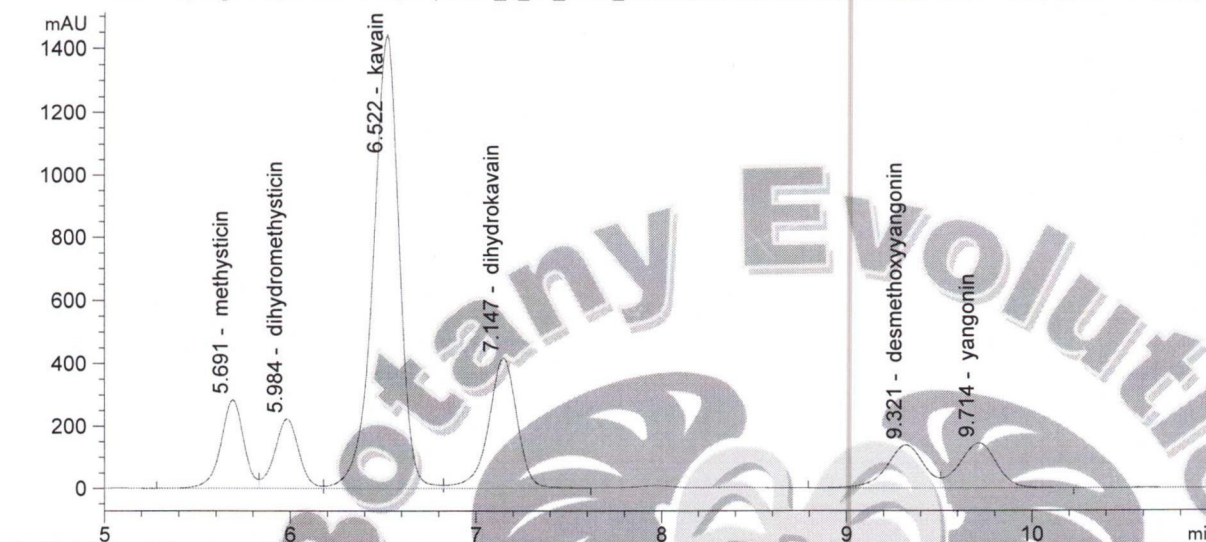
Injection date 3/21/2022

Injection time 9:26:30 PM

Operator KRISTL

Method C:\CHEM32\1\DATA\KAVA_3_21_2022_15MINSTDTESTMETHOD 2022-03-21 16-03-22\014->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_3_21_2022_15MINSTDTESTMETHOD 2022-03-21 16-03-22\014-1701.D)



| # | COMPOUND | RET. TIME | AREA | AREA % | AMOUNT |
|---|--------------------|-----------|-----------|--------|--------|
| | methysticin | 5.691 | 2435.802 | 8.95 | 0.000 |
| | dihydromethysticin | 5.984 | 2015.724 | 7.41 | 0.000 |
| | kavain | 6.522 | 14306.913 | 52.57 | 0.001 |
| | dihydrokavain | 7.147 | 4512.029 | 16.58 | 0.001 |
| | desmethoxyyangonin | 9.321 | 1932.433 | 7.10 | 0.000 |
| | yangonin | 9.714 | 2010.150 | 7.39 | 0.000 |

3/22/22
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**Microbiological and Heavy Metal
Certificate Of Analysis****Sample Identification Information**Date of Analysis 12/27/2021Sample: S1512Product Name 30% KAVA EXTRACTLot# CJ220301KE30Country of Origin

VANUATU

Country of Processing

CHINA

Manufacture Date

12/20/21

Expiration Date

12/19/24

General Product SpecificationsProduct Species Piper MethysticumPart Used RootCommon Names

Kava kava, Awa, Yagona

Appearance

YELLOW POWDER

Analyzed Characteristics**SPECIFICATION****RESULT****TEST METHOD**TOTAL AEROBIC PLATE COUNT

NMT 10,000 (cfu/g)

10

USP <2021>

TOTAL YEAST AND MOLD

NMT 1,000 (cfu/g)

10

USP <2021>

E. COLI

ABSENT (cfu/10g)

COMPLIES

USP <2022>

SALMONELLA SPECIES

ABSENT (cfu/10g)

COMPLIES

USP <2022>

STAPHYLOCOCCUS AUREUS

ABSENT (cfu/10g)

COMPLIES

USP <2022>

Heavy Metals**SPECIFICATION (PPM)****RESULT PPM (ug/g)****TEST METHOD**LEAD

NMT 2.0

0.0699

ICP-MS\\USP<730>

ARSENIC

NMT 2.0

0.0335

ICP-MS\\USP<730>

CADMIUM

NMT 1.0

0.0021

ICP-MS\\USP<730>

MERCURY

NMT 1.0

0.0120

ICP-MS\\USP<730>

NMT= NO MORE THAN

PPM= PARTS PER MILLION

cfu/g = colony forming units per gram

Analysis performed by a third party laboratory.

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CHEMIST/DATE

Hustle Youngs 3/22/22