

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis

Sample Identification Information

Date of Analysis 11/28/2022
Sample: S1772 A
Product Name 30% KAVA EXTRACT
Batch # CJ221101KE30

Country of Origin VANUATU
Country of Processing CHINA
Manufacture Date 09/13/22
Best By Date 09/12/25

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

<u>Standardization</u>	20-90% Kavalactones	35.77%	HPLC
<u>Identification</u>	Complies by HPLC	Conform	HPLC
<u>Kavalactone Profile</u>	Noble	PASS	HPLC
<u>Mesh Size</u>	60-30	30	Sieve
<u>Color</u>	Beige to Yellow	Pass	Visual
<u>Odor</u>		Pass	Organoleptic
<u>Taste</u>		Pass	Organoleptic
<u>Chemotype</u>		243561	HPLC
<u>K/DHM</u>		2.2	Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			11851.359			
Methysticin	M	1	2.21	3194.276	10.39%	3.91%	6
Dihydromethysticin	DHM	2	3.38	2261.126	7.36%	4.08%	5
Kavain	K	3	1	15852.796	51.57%	8.86%	4
Dihydrokavain	DHK	4	3.08	4750.286	15.45%	11.17%	2
Desmethoxyyangonin	DMY	5	2.52	2185.411	7.11%	3.35%	1
Yangonin	Y	6	3.12	2497.801	8.13%	4.41%	3
Kavalactones			Total:	30741.696	100.00%	35.77%	243561

*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

Musil Youngs

Date

12/1/22

SAMPLE S1772 A
Vial 14

0.37857g/25mL

wavelength 246 nm

C:\CHEM32\1\DATA\KAVA_11_28_2022_15MINSTDTESTMETHOD 2022-11-28 16-29-22\01->
SEQUENCE C:\CHEM32\1\DATA\KAVA_11_28_2022_ ->

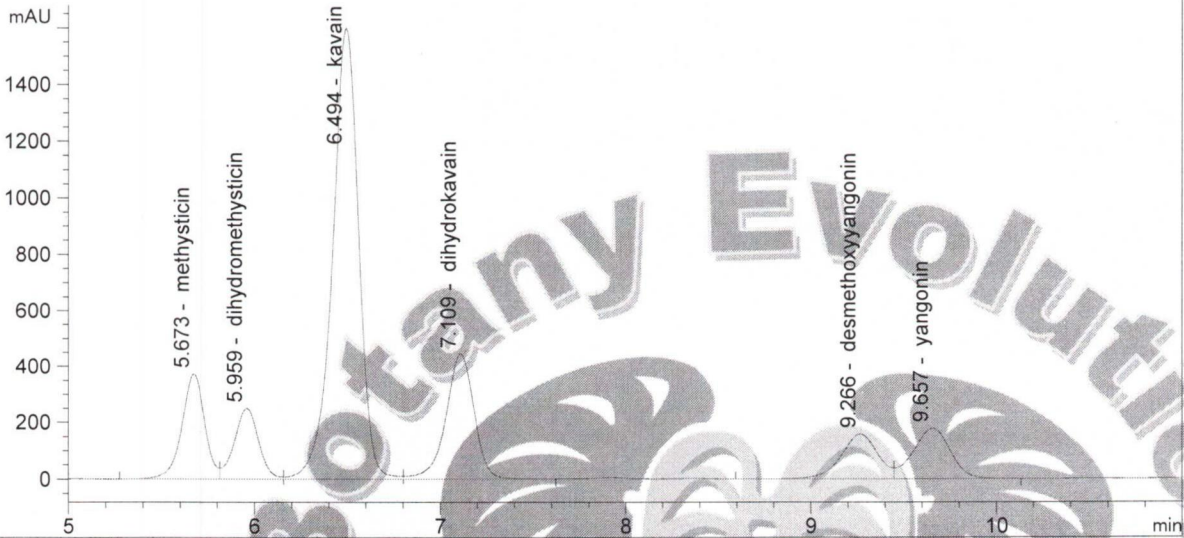
Injection date 11/28/2022

Injection time 9:04:22 PM

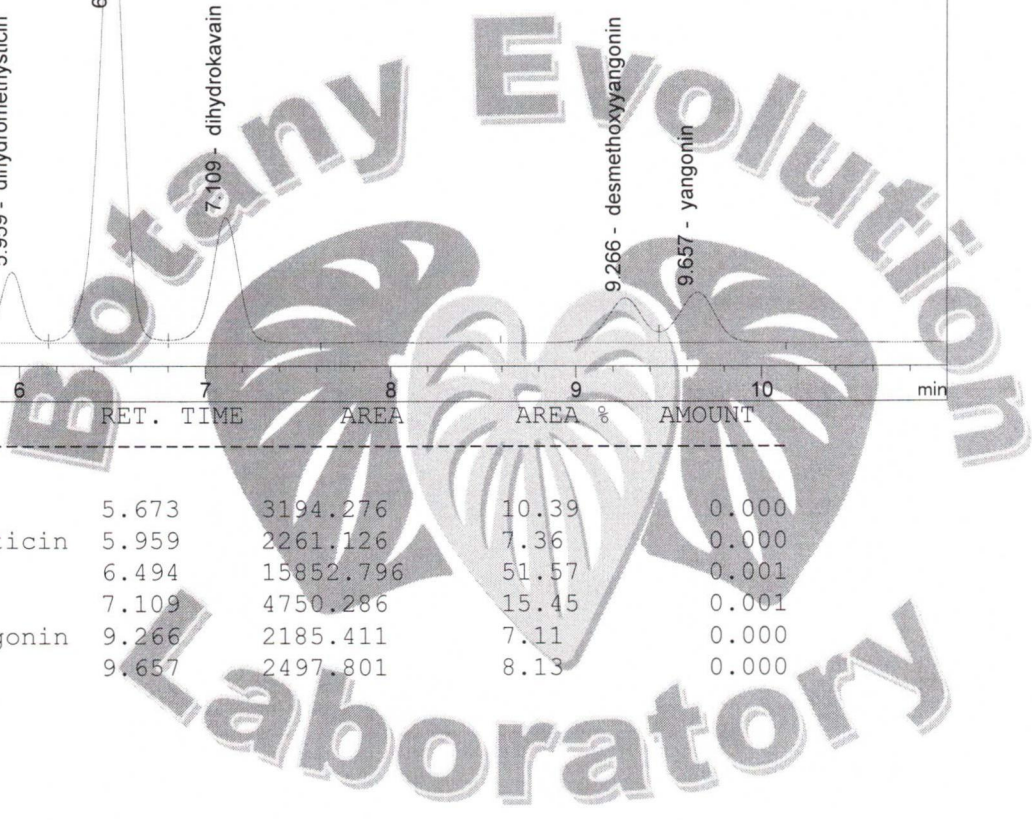
Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA_11_28_202->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_11_28_2022_15MINSTDTESTMETHOD 2022-11-28 16-29-22\014-1401.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.673	3194.276	10.39	0.000
2	dihydromethysticin	5.959	2261.126	7.36	0.000
3	kavain	6.494	15852.796	51.57	0.001
4	dihydrokavain	7.109	4750.286	15.45	0.001
5	desmethoxyyangonin	9.266	2185.411	7.11	0.000
6	yangonin	9.657	2497.801	8.13	0.000



11/29/22
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Microbiological and Heavy Metal Certificate Of Analysis

Sample Identification Information

<u>Date of Analysis</u> 9/20/2022	<u>Country of Origin</u> VANUATU
<u>Sample:</u> S1772	<u>Country of Processing</u> CHINA
<u>Product Name</u> 30% KAVA EXTRACT	<u>Manufacture Date</u> 09/13/22
<u>Lot#</u> CJ221101KE30	<u>Expiration Date</u> 09/12/25

General Product Specifications

<u>Product Species</u> Piper Methysticum	<u>Common Names</u> Kava kava, Awa, Yagona
<u>Part Used</u> Root	<u>Appearance</u> yellow powder

Analyzed Characteristics

<u>SPECIFICATION</u>	<u>RESULT</u>	<u>TEST METHOD</u>
<u>TOTAL AEROBIC PLATE COUNT</u> NMT 10,000 (cfu/g)	10	USP <2021>
<u>TOTAL YEAST AND MOLD</u> NMT 1,000 (cfu/g)	10	USP <2021>
<u>E. COLI</u> ABSENT (cfu/10g)	COMPLIES	USP <2022>
<u>SALMONELLA SPECIES</u> ABSENT (cfu/10g)	COMPLIES	USP <2022>
<u>STAPHYLOCOCCUS AUREUS</u> ABSENT (cfu/10g)	COMPLIES	USP <2022>

Heavy Metals

<u>SPECIFICATION (PPM)</u>	<u>RESULT PPM (ug/g)</u>	<u>TEST METHOD</u>
<u>LEAD</u> NMT 2.0	0.0837	ICP-MS\\USP<730>
<u>ARSENIC</u> NMT 2.0	0.0114	ICP-MS\\USP<730>
<u>CADMIUM</u> NMT 1.0	0.0034	ICP-MS\\USP<730>
<u>MERCURY</u> NMT 1.0	0.0124	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

Russell Youngs 12/1/22