

CERTIFICATE OF ANALYSIS

GENERAL INFORMATION

Report Date	8/14/2024	Country of Origin	Solomon Islands
Sample Number	S2167	Country of Processing	USA
Product Name	Chief Lateral Roots	Manufacture Date	Jun-24
Lot Number	SIK2406-CLR8	Best By Date	Jun-27

ITEM	SPECIFICATION	TEST RESULTS	METHOD
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PHYSICAL & CHEMICAL

Identification	Piper methysticum	Complies	HPLC
Appearance	Beige to Yellow Powder	Complies	Organoleptic
Kavalactone Standard	2-17 % Kavalactones	17.13%	HPLC
Kavalactone Profile	Noble	Pass	HPLC
Chemotype	If # 5 is in 1st or 2nd in Abundance	246531	HPLC
K/DHM	> 1.2 for Noble	1.7	Calculation

HEAVY METALS

		Results	
Arsenic (As)	NMT 1,000 (ppb)*	11 ppb	FDA EAM 4.7
Cadmium (Cd)	NMT 1,000 (ppb)*	956 ppb	FDA EAM 4.7
Lead (Pb)	NMT 1,000 (ppb)*	119 ppb	FDA EAM 4.7
Mercury (Hg)	NMT 1,000 (ppb)*	< 10 ppb	FDA EAM 4.7

*Heavy Metals Action Limits Based on Maximum PDE at 5% Kavalactones. Results May Exceed 1,000 ppb action limit with higher kavalactone contents.

MICROBIOLOGICAL

		Results	
AEROBIC PLATE COUNT	NMT 10,000,000 cfu	5,200 cfu / 10 g	USP 2021
E. COLI	ABSENT (cfu/10g)	Absent cfu / 10 g	USP 2022
PSEUDOMONAS AERUGINOSA	ABSENT (cfu/10g)	Absent cfu / 10 g	USP 2022
SALMONELLA	ABSENT (cfu/10g)	Absent cfu / 10 g	USP 2022
STAPHYLOCOCCUS AUREUS	ABSENT (cfu/10g)	Absent cfu / 10 g	USP 2022
YEAST	NMT 100,000 cfu (Combined)	5,200 cfu / 10 g	
MOLD		8,400 cfu / 10 g	USP 2021
TOTAL YEAST & MOLD	NMT 100,000 cfu (Combined)	13,600 cfu / 10 g	

cfu/g = Colony Forming Units Per Gram NMT = No More Than PDE = Permitted Daily Exposure PPB = Parts Per Billion

Analysis Performed by a Third-Party Laboratory

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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Completed By: Amy Sabek Title: Manager Date: 8/14/2024

SAMPLE S2167
Vial 14

0.75606g/50mL

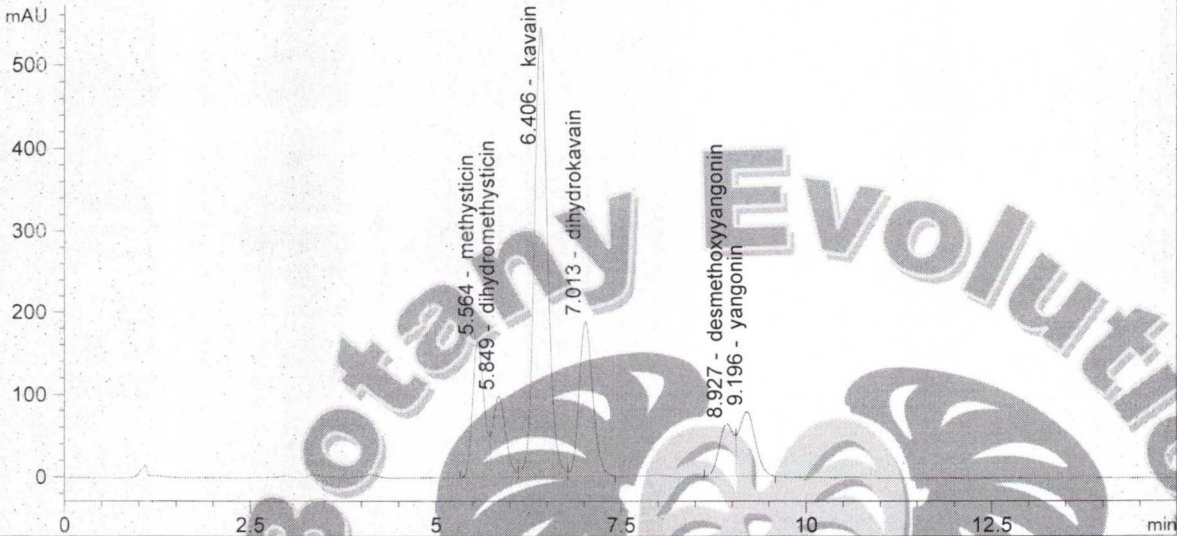
wavelength 246 nm

C:\CHEM32\1\DATA\KAVA_08_09_2024_15MINSTDTESTMETHOD 2024-08-09 12-47-50\01->
SEQUENCE C:\CHEM32\1\DATA\KAVA_08_09_2024_ ->

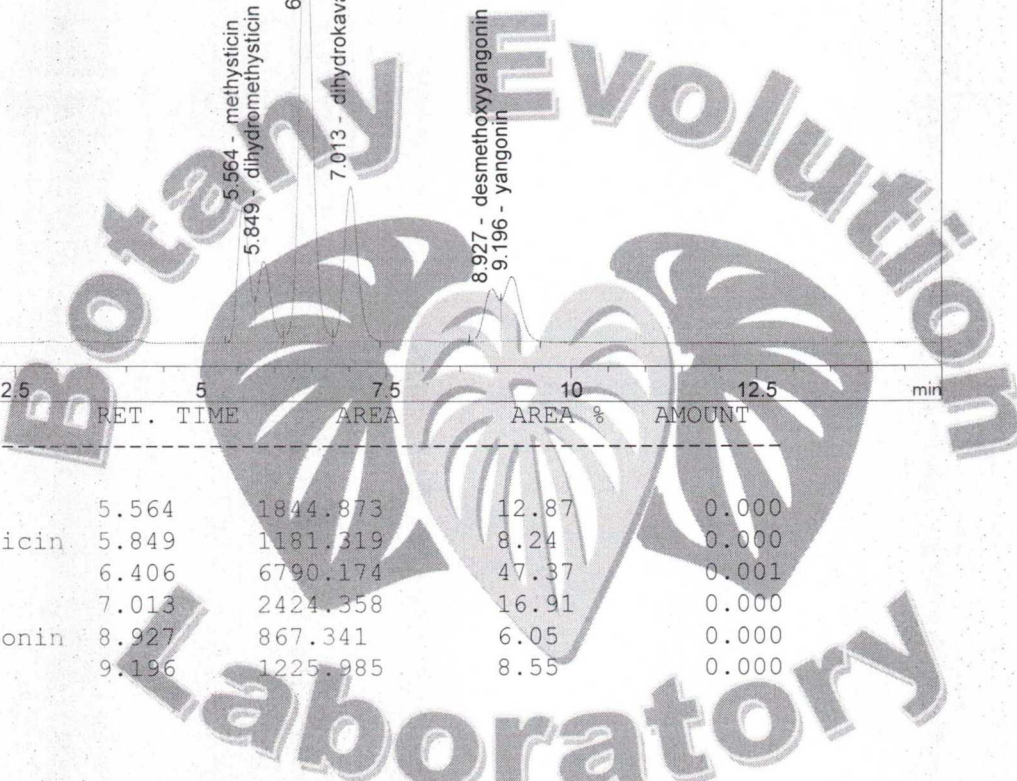
Injection date 8/9/2024
Injection time 5:23:16 PM
Acq. operator KRISTL
Method

C:\CHEM32\1\DATA\KAVA_08_09_202->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_08_09_2024_15MINSTDTESTMETHOD 2024-08-09 12-47-50\014-1401.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.564	1844.873	12.87	0.000
2	dihydromethysticin	5.849	1181.319	8.24	0.000
3	kavain	6.406	6790.174	47.37	0.001
4	dihydrokavain	7.013	2424.358	16.91	0.000
5	desmethoxyyangonin	8.927	867.341	6.05	0.000
6	yangonin	9.196	1225.985	8.55	0.000



8/13/24
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Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis

Sample Identification Information

Date of Analysis 8/9/2024

Sample: S2167

Product Name CHIEF LATERAL

Lot# SIK2406-CLR8

Country of Origin SOLOMON ISLANDS

Country of Processing USA

Manufacture Date Jun-24

Best By Date Jun-27

General Product Specifications

Product Species Piper Methysticum

Part Used Root

Common Names Kava kava, Awa, Yagona

Appearance Yellow, Brown, beige powder

Analyzed Characteristics

Specification

Result

Test Method

Standardization

2-17% Kavalactones

17.13%

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

246531

HPLC

K/DHM

1.7

Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2372.192			
Methysticin	M	1	2.21	1844.873	12.87%	2.38%	6
Dihydromethysticin	DHM	2	3.38	1181.319	8.24%	2.33%	5
Kavain	K	3	1	6790.174	47.37%	3.97%	4
Dihydrokavain	DHK	4	3.48	2424.358	16.91%	4.93%	2
Desmethoxyyangonin	DMY	5	2.52	867.341	6.05%	1.28%	1
Yangonin	Y	6	3.12	1225.985	8.55%	2.24%	3
Kavalactones			Total:	14334.050	100.00%	17.13%	246531

* 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.

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Chemist

Mustel Youngs

Date

8/13/24