

# Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

## Certificate Of Analysis

### Sample Identification Information

Date of Analysis 5/1/2024

Sample: S2100

Product Name INSTANT CHIEF

Lot# SIK2309-CI4

Country of Origin

SOLOMON ISLANDS

Country of Processing

USA

Manufacture Date

Sep-23

Best By Date

Sep-26

### 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

7.82%

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

245361

HPLC

K/DHM

1.4

Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2304			
Methysticin	M	1	2.21	622.836	9.68%	0.79%	<b>6</b>
Dihydromethysticin	DHM	2	3.38	636.87	9.90%	1.24%	<b>5</b>
Kavain	K	3	1	2998.68	46.62%	1.73%	<b>4</b>
Dihydrokavain	DHK	4	3.48	1324.776	20.60%	2.65%	<b>2</b>
Desmethoxyyangonin	DMY	5	2.52	331.212	5.15%	0.48%	<b>1</b>
Yangonin	Y	6	3.12	517.314	8.04%	0.93%	<b>3</b>
<b>Kavalactones</b>			<b>Total:</b>	<b>6431.688</b>	<b>100.00%</b>	<b>7.82%</b>	<b>245361</b>

\*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

*Mustil Younger*

Date

*5/2/24*

SAMPLE S2100  
Vial 12

0.75146g/50mL

wavelength 246 nm

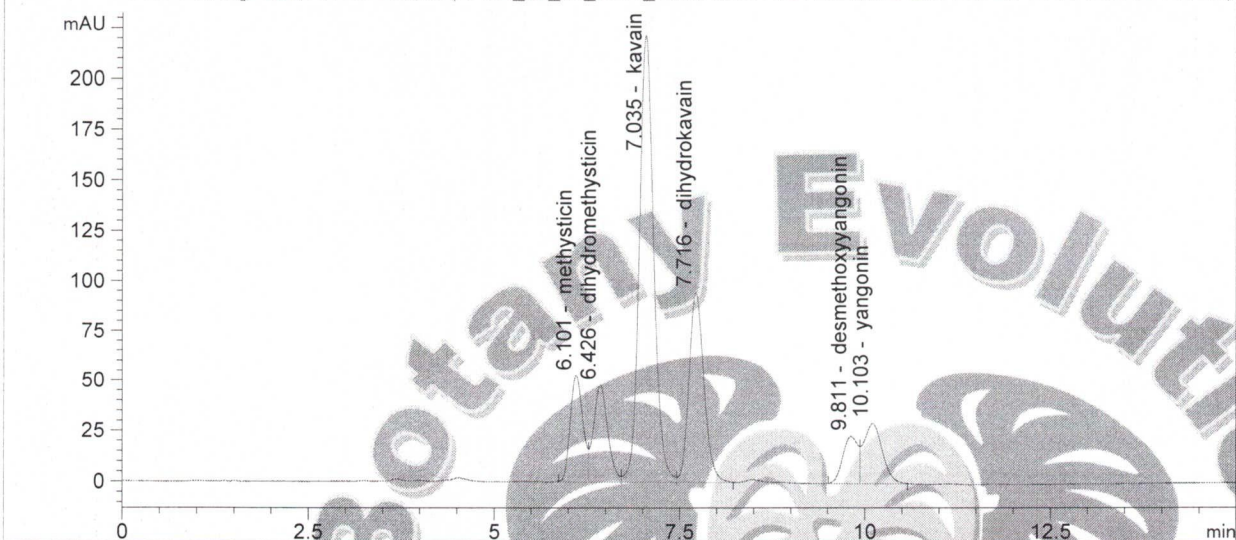
C:\CHEM32\1\DATA\KAVA\_05\_01\_2024\_15MINSTDTESTMETHOD 2024-05-01 14-33-50\01->  
SEQUENCE C:\CHEM32\1\DATA\KAVA\_05\_01\_2024\_ ->

Injection date 5/1/2024  
Injection time 8:13:40 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA\_05\_01\_202->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA\_05\_01\_2024\_15MINSTDTESTMETHOD 2024-05-01 14-33-50\012-1501.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	6.101	622.836	9.68	0.000
2	dihydromethysticin	6.426	636.870	9.90	0.000
3	kavain	7.035	2998.680	46.62	0.000
4	dihydrokavain	7.716	1324.776	20.60	0.000
5	desmethoxyyangonin	9.811	331.212	5.15	0.000
6	yangonin	10.103	517.314	8.04	0.000

5/2/24  
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# CERTIFICATE OF ANALYSIS

**GENERAL INFORMATION**

Report Date	5/1/2024	Country of Origin	Solomon Islands
Sample Number	S2100	Country of Processing	USA
Product Name	Chief Instant	Manufacture Date	Sep-23
Lot Number	SIK2309-CI4	Best By Date	Sep-26

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	7.82%	HPLC
Kavalactone Profile	Noble	Pass	HPLC
Chemotype	If # 5 is in 1st or 2nd in Abundance	245361	HPLC
K/DHM	> 1.2 for Noble	1.4	Calculation

**HEAVY METALS**

		Basal	Lateral		
Arsenic (As)	NMT 1,000 (ppb)*	12.4	12.4	ppb	FDA EAM 4.7
Cadmium (Cd)	NMT 1,000 (ppb)*	775	775	ppb	FDA EAM 4.7
Lead (Pb)	NMT 1,000 (ppb)*	131	131	ppb	FDA EAM 4.7
Mercury (Hg)	NMT 1,000 (ppb)*	< 10	< 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**

		Basal	Lateral		
AEROBIC PLATE COUNT	NMT 10,000,000 cfu	17,000	17,000	cfu / 10 g	USP 2021
E. COLI	ABSENT (cfu/10g)	Absent	Absent	cfu / 10 g	USP 2022
PSEUDOMONAS AERUGINOSA	ABSENT (cfu/10g)	Absent	Absent	cfu / 10 g	USP 2022
SALMONELLA	ABSENT (cfu/10g)	Absent	Absent	cfu / 10 g	USP 2022
STAPHYLOCOCCUS AUREUS	ABSENT (cfu/10g)	Absent	Absent	cfu / 10 g	USP 2022
YEAST	NMT 100,000 cfu (Combined)	5,800	88,000	cfu / 10 g	
MOLD		< 10	< 10	cfu / 10 g	USP 2021
TOTAL YEAST & MOLD	NMT 100,000 cfu (Combined)	5,800	88,000	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*

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Completed By: Tony Sabeh                      Title: Manager                      Signature: [Signature]