Botany Evolution LLC

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CERTIFICATE OF ANALYSIS

GENERAL INFORMATION

Report Date	4/16/2024	**Country of Origin**	Solomon Islands
Sample Number	S2241	**Country of Processing**	United States
Product Name	Chief Instant	**Manufacture Date**	Apr-25
Lot Number	SIK2412-CI4	**Best By Date**	Apr-28

ITEM	SPECIFICATION	TEST RESULTS	METHOD
PHYSICAL & CHEMICAL			
Identification	**Piper methysticum**	**Complies**	**HPLC**
Appearance	**Beige to Yellow Powder**	**Complies**	**Organoleptic**
Kavalactone Standard	**2-17 % Kavalactones**	6.86%	**HPLC**
Kavalactone Profile	**Noble**	Pass	**HPLC**
Chemotype	If # 5 is in 1st or 2nd in Abundance	245361	**HPLC**
K/DHM	**> 1.2 for Noble**	1.1	**Calculation**

HEAVY METALS

		Result		
Arsenic (As)	NMT 1,000 (ppb)*	34.3	ppb	FDA EAM 4.7
Cadmium (Cd)	NMT 1,000 (ppb)*	810	ppb	FDA EAM 4.7
Lead (Pb)	NMT 1,000 (ppb)*	196	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

		Result		
AEROBIC PLATE COUNT	NMT 10,000,000 cfu	50,000	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)	100	cfu / 10 g	
MOLD		10	cfu / 10 g	USP 2021
TOTAL YEAST & MOLD	NMT 100,000 cfu (Combined)	110	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.

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.

Completed By: Tony Sabb Title: Manager Date: 4/22/2025

Botany Evolution LLC
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321-802-4583

Certificate Of Analysis

Sample Identification Information

Date of Analysis 4/16/2025
Sample: S2241
Product Name CHIEF INSTANT
Lot# SIK2412-CI4

Country of Origin SOLOMON ISLANDS
Country of Processing USA
Manufacture Date Apr-25
Best By Date Apr-28

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	6.86%	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	TUDEI < 1.2 > NOBLE	1.1	Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2265.378			
Methysticin	M	1	2.21	565.539	11.00%	0.77%	6
Dihydromethysticin	DHM	2	3.38	583.977	11.36%	1.21%	5
Kavain	K	3	1	2230.484	43.39%	1.37%	4
Dihydrokavain	DHK	4	3.48	1064.766	20.72%	2.28%	2
Desmethoxyyangonin	DMY	5	2.52	265.958	5.17%	0.41%	1
Yangonin	Y	6	3.12	429.285	8.35%	0.82%	3
Kavalactones			**Total:**	**5140.009**	**100.00%**	**6.86%**	**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.

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Chemist Kristl Youngs Date 4/16/25

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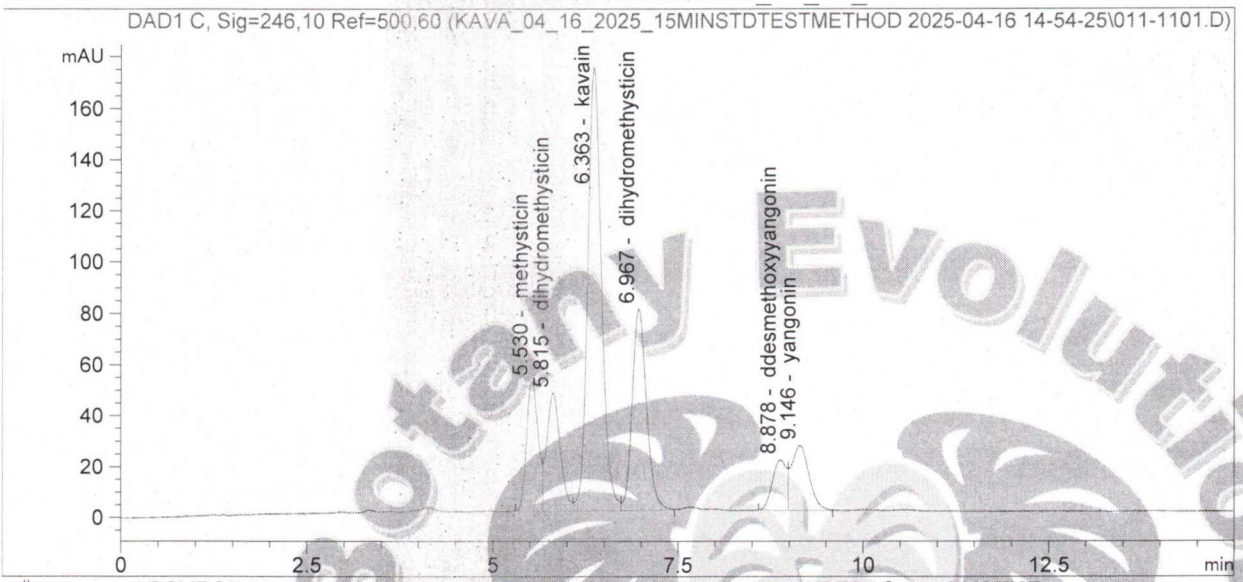
Kavalactone Analysis

SAMPLE S2241
Vial 11

0.75273g/50mL

wavelength 246 nm
C:\CHEM32\1\DATA\KAVA_04_16_2025_15MINSTDTESTMETHOD 2025-04-16 14-54-25\01->
SEQUENCE C:\CHEM32\1\DATA\KAVA_04_16_2025_ ->
Injection date 4/16/2025
Injection time 6:40:57 PM
Acq. operator KRISTL
Method C:\CHEM32\1\DATA\KAVA_04_16_202->



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.530	565.539	11.00	0.000
2	dihydromethysticin	5.815	583.977	11.36	0.000
3	kavain	6.363	2230.484	43.39	0.000
4	dihydromethysticin	6.967	1064.766	20.72	0.000
5	ddesmethoxyyangonin	8.878	265.958	5.17	0.000
6	yangonin	9.146	429.285	8.35	0.000

4/16/25