Botany Evolution LLC

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CERTIFICATE OF ANALYSIS

GENERAL INFORMATION

Report Date	2/5/2025	**Country of Origin**	Tonga
Sample Number	S2223	**Country of Processing**	USA
Product Name	Tanaki	**Manufacture Date**	Jan-25
Lot Number	TAT2412-T2	**Best By Date**	Jan-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**	8.09%	**HPLC**
Kavalactone Profile	**Noble**	Pass	**HPLC**
Chemotype	**If # 5 is in 1st or 2nd in Abundance**	423651	**HPLC**
K/DHM	**> 1.2 for Noble**	2.2	**Calculation**

HEAVY METALS

		Results		
Arsenic (As)	**NMT 1,000 (ppb)***	64	ppb	**FDA EAM 4.7**
Cadmium (Cd)	**NMT 1,000 (ppb)***	507	ppb	**FDA EAM 4.7**
Lead (Pb)	**NMT 1,000 (ppb)***	249	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**		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 62**
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)**		cfu / 10 g	
MOLD		55	cfu / 10 g	**USP 2021**
TOTAL YEAST & MOLD	**NMT 100,000 cfu (Combined)**	55	cfu / 10 g	

:fu/g = Colony Forming Units Per Gran 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 Sabeh Title: Manager Signature: Tony Sabeh

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Certificate Of Analysis

Sample Identification Information

Date of Analysis 2/5/2025
Sample: S2223
Product Name TANAKI
Lot# TAT2412T2

Country of Origin TONGA
Country of Processing USA
Manufacture Date Feb-25
Best By Date Feb-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	8.09%	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		423651	HPLC
K/DHM	TUDEI < 1.2 > NOBLE	**2.2**	Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2353.051			
Methysticin	M	1	2.21	812.843	11.66%	1.06%	6
Dihydromethysticin	DHM	2	3.38	486.999	6.98%	0.97%	5
Kavain	K	3	1	3545.709	50.84%	2.09%	4
Dihydrokavain	DHK	4	3.48	957.999	13.74%	1.97%	2
Desmethoxyyangonin	DMY	5	2.52	436.057	6.25%	0.65%	1
Yangonin	Y	6	3.12	734.048	10.53%	1.35%	3
Kavalactones			**Total:**	**6973.655**	**100.00%**	**8.09%**	**423651**

*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 Young Date 2/11/25

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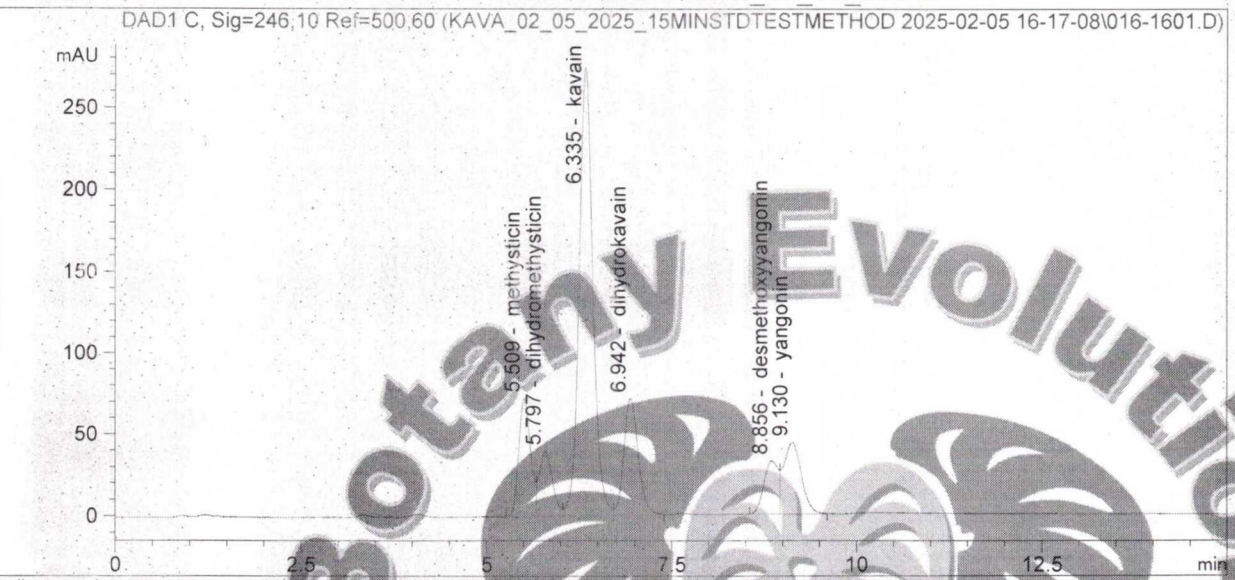
Kavalactone Analysis

SAMPLE S2223
Vial 16

0.75443g/50mL

wavelength 246 nm
C:\CHEM32\1\DATA\KAVA_02_05_2025_15MINSTDTESTMETHOD 2025-02-05 16-17-08\01->
SEQUENCE C:\CHEM32\1\DATA\KAVA_02_05_2025_ ->
Injection date 2/5/2025
Injection time 9:24:32 PM
Acq. operator KRISTL
Method C:\CHEM32\1\DATA\KAVA_02_05_202->



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.509	812.843	11.66	0.000
2	dihydromethysticin	5.797	486.999	6.98	0.000
3	kavain	6.335	3545.709	50.84	0.000
4	dihydrokavain	6.942	957.999	13.74	0.000
5	desmethoxyyangonin	8.856	436.057	6.25	0.000
6	yangonin	9.130	734.048	10.53	0.000

2/11/25