

CERTIFICATE OF ANALYSIS

GENERAL INFORMATION

Report Date	4/9/2024	Country of Origin	Tonga
Sample Number	S2098	Country of Processing	USA
Product Name	Tanaki	Manufacture Date	Feb-24
Lot Number	TAT2402-T3	Best By Date	Feb-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	7.37%	HPLC
Kavalactone Profile	Noble	Pass	HPLC
Chemotype	If # 5 is in 1st or 2nd in Abundance	426351	HPLC
K/DHM	> 1.2 for Noble	1.7	Calculation

HEAVY METALS

		Basal	Lateral		
Arsenic (As)	NMT 1,000 (ppb)*	33.6	40.9	ppb	FDA EAM 4.7
Cadmium (Cd)	NMT 1,000 (ppb)*	436	609	ppb	FDA EAM 4.7
Lead (Pb)	NMT 1,000 (ppb)*	229	59.3	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	880	880	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 62
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)	6800	40	cfu / 10 g	
MOLD	NMT 100,000 cfu (Combined)	290	1,000	cfu / 10 g	USP 2021
TOTAL YEAST & MOLD	NMT 100,000 cfu (Combined)	7090	1040	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:  Title: Manager Signature: Tony Sebeh

Botany Evolution LLC

2510 Kirby Circle NE

Palm Bay, FL 32945

321-802-4583

Certificate Of Analysis

Sample Identification Information

Date of Analysis 4/9/2024

Sample: S2098

Product Name TANAKI

Lot# TAT2402-T3

Country of Origin TONGA

Country of Processing USA

Manufacture Date Feb-24

Best By Date Feb-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

7.37%

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

426351

HPLC

K/DHM

1.7

Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2448			
Methysticin	M	1	2.21	1124.192	16.49%	1.35%	6
Dihydromethysticin	DHM	2	3.38	575.682	8.45%	1.05%	5
Kavain	K	3	1	3213.941	47.15%	1.74%	4
Dihydrokavain	DHK	4	3.48	744.633	10.92%	1.40%	2
Desmethoxyyangonin	DMY	5	2.52	424.914	6.23%	0.58%	1
Yangonin	Y	6	3.12	733.347	10.76%	1.24%	3
Kavalactones			Total:	6816.709	100.00%	7.37%	426351

*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

4/11/24

SAMPLE S2098
Vial 14

0.75080g/50mL

wavelength 246 nm

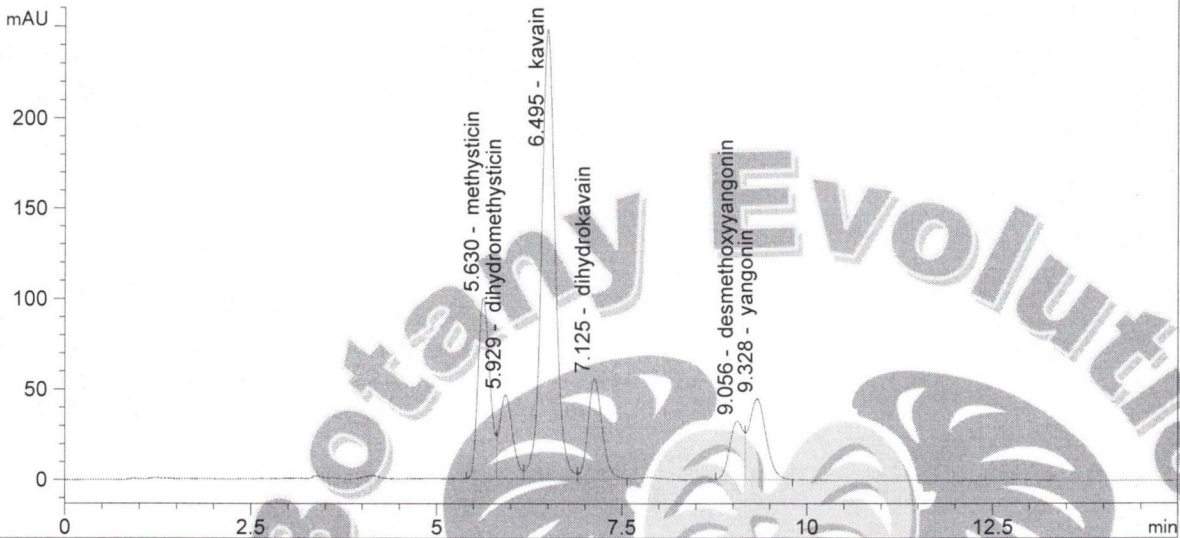
C:\CHEM32\1\DATA\KAVA_04_09_2024_15MINSTDTESTMETHOD 2024-04-09 16-31-10\01->
SEQUENCE C:\CHEM32\1\DATA\KAVA_04_09_2024_ ->

Injection date 4/9/2024
Injection time 9:06:58 PM

Acq. operator KRISTL

Method C:\CHEM32\1\DATA\KAVA_04_09_202->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_04_09_2024_15MINSTDTESTMETHOD 2024-04-09 16-31-10\014-1401.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.630	1124.192	16.49	0.000
2	dihydromethysticin	5.929	575.682	8.45	0.000
3	kavain	6.495	3213.941	47.15	0.000
4	dihydrokavain	7.125	744.633	10.92	0.000
5	desmethoxyyangonin	9.056	424.914	6.23	0.000
6	yangonin	9.328	733.347	10.76	0.000

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