Jotany Evolution LLC

510 Kirby Circle NE alm Bay, FL 32945 21-802-4583

Certificate Of Analysis

ample Identification Information

7/3/2024	Country of Origin	SOLOMON ISLANDS
S2153	Country of Processing	USA
GOLD BASAL	Manufacture Date	Jun-24
SIK2406-GBR7	Best By Date	Jun-27
	S2153 GOLD BASAL	S2153Country of ProcessingGOLD BASALManufacture Date

General Product Specifications

Product Species Piper Methysticum Part Used Root

Common Names Appearance Kava kava, Awa, Yagona Yellow, Brown, beige powder

7/3/24

Date

Analyzed Characteristics	Specification	Result	Test Method
Standardization	2-17% Kavalactones	9.62%	HPLC
Identification	Complies by HPLC	Conform	HPLC
Kavalactone Profile	Noble	PASS	HPLC
Mesh Size	60-30	60	Sieve
Color	Beige to Yellow	Pass	Visual
<u>Odor</u>		Pass	Organoleptic
<u>Taste</u>		Pass	Organoleptic
Chemotype		243516	HPLC
K/DHM		3.8	Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	К			2365.094	An at		
Methysticin	M	1	2.21	360.625	4.19%	0.47%	6
Dihydromethysticin	DHM	2	3.38	383.751	4.45%	0.76%	5
Kavain	к	3	1	4988.554	57.91%	2.92%	4
Dihydrokavain	DHK	4	3.48	1653.144	19.19%	3.37%	2
Desmethoxyyangonin	DMY	5	2.52	417.897	4.85%	0.62%	1
Yangonin	Y	6	3.12	810.342	9.41%	1.48%	3
Kavalactones			Total:	8614.313	100.00%	9.62%	243516

*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

tany Evolution LLC					
10 Kirby Circle NE			Kavalactone	Analysis	
lm Bay, FL 32945				-	
1-802-4583		SAMPLE	S2153		
		Vial 1	.5		
75633g/50mL					
velength 246 nm					
CHEM32\1\DATA\KAVA	07 02 202	4 15MINSTDTES	STMETHOD 2024-	07-02 15-46-08	01-
QUENCE C:\CHEM32\1\D			->		
jection date 7/2/20					
jection time 8:37:32	PM				
q. operator KRISTL					
thod		HEM32\1\DATA\F	XAVA 07 02 202	->	
DAD1 C, Sig=246,10 Re					5-1501.D)
mAU		2018-00-00			
		- kavain			
350 -		× .			
		6.352 - ain			
300		ain a			
		kav	je		
250		hysticin 6.3 dihydrokavain	iobi		
		lihy	yan		
200		- Jett	uir vxi		
		ysticin rometh 960 - 0	iethoxy igonin		
200 – 150 –	. 0	6.960 - 0	yangonin		
	N. 2	6.960 -	- desmethoxyyangonin 1 - yangonin		
150	N.C.	6.960 -	1		
150	×Q	5.513 - methysticin 5.804 - dihydrometh 6.960 - 0	8.853 - desmethoxy 9.111 - yangonin		
150 - 100 - 50 -	8. 0	6.960 - 6.960 - 6.960 -	9.111		
150 -		6.960 - 6.960 - 6.960 -	9.111		
150 - 100 - 50 -		5.513 - methysticin 5.804 - dihydromet 6.960 -	9.111	12.5	min
150 100 50 0		5.513 - methysticin 5.804 - dihydromet 6.960 -	9.111	12.5 AMOUNT	- min
150 100 50 0 0 2.5		5.513 - methysticin 5.804 - dihydromet 6.960 -	- 8.853 9.111	and an anti-restance of the design of the de	min
150 100 50 0 0 2.5 COMPOUND	RET. TI	6.960 - 6.960	255 88 9 10 AREA 8	AMOUNT	min
150 100 50 0 0 COMPOUND 2.5 COMPOUND	RET. TI	6.960 - 0.960	2556 80 10 AREA % 4.19	AMOUNT 0.000	min
150 100 50 0 0 0 2.5 COMPOUND methysticin dihydromethysticin	RET. TI 5.513 5.804	9.360.625 380.751	4.19 4.45	AMOUNT 0.000 0.000	min
150 100 50 0 0 2.5 COMPOUND methysticin dihydromethysticin kavain	RET. TI 5.513 5.804 6.352	9:060 - 010	4.19 4.45 57.91	AMOUNT 0.000 0.000 0.000 0.000	min
150 100 50 0 2.5 COMPOUND methysticin dihydromethysticin kavain dihydrokavain	RET. TI 5.513 5.804 6.352 6.960	e. 360. 625 383. 751 9. 360. 625 383. 751 4988. 554 1653. 144	4.19 4.45 57.91 19.19	AMOUNT 0.000 0.000 0.000 0.000 0.000	min
150 100 50 0 2.5 COMPOUND methysticin dihydromethysticin kavain dihydrokavain desmethoxyyangonin	RET. TI 5.513 5.804 6.352 6.960 8.853	9:00- 0:00	4.19 4.45 57.91 19.19 4.85	AMOUNT 0.000 0.000 0.000 0.000 0.000 0.000	min
150 100 50 0 2.5 COMPOUND methysticin dihydromethysticin kavain dihydrokavain	RET. TI 5.513 5.804 6.352 6.960	e. 360. 625 383. 751 9. 360. 625 383. 751 4988. 554 1653. 144	4.19 4.45 57.91 19.19	AMOUNT 0.000 0.000 0.000 0.000 0.000	min
150 100 50 0 2.5 COMPOUND methysticin dihydromethysticin kavain dihydrokavain desmethoxyyangonin	RET. TI 5.513 5.804 6.352 6.960 8.853	9:00- 0:00	4.19 4.45 57.91 19.19 4.85	AMOUNT 0.000 0.000 0.000 0.000 0.000 0.000	min

213/24

Botany Evolution LLC

Date: 07 05/2025

CERTIFICATE OF ANALYSIS

CEMEDAL	INFORMATION
GENERAL	. INFORMATION

GENERAL INFORMATION					
Report Date	7/3/2024	Country of Origin		Solomon Islands	
Sample Number	S2153	Country of Processing		USA	
Product Name Gol	d Basal Roots	Manufacture Date Best By Date		Jun-24 Jun-27	
Lot Number SI	K2406-GBR7				
ITEM	SPECIFICATION	TEST RESULTS		METHOD	
PHYSICAL & CHEMICAL					
Identification	Piper methysticum	Complies		HPLC	
Appearance	Beige to Yellow Powder	Complies		Organoleptic	
Kavalactone Standard	2-17 % Kavalactones	9.62%		HPLC	
Kavalactone Profile	Noble	Pass		HPLC	
Chemotype	If # 5 is in 1st or 2nd in Abundance	243516		HPLC	
K/DHM	> 1.2 for Noble	3.8		Calculation	
HEAVY METALS		Results		all a	
Arsenic (As)	NMT 1,000 (ppb)*	< 10	ppb	FDA EAM 4.7	
Cadmium (Cd)	NMT 1,000 (ppb)*	190	ppb	FDA EAM 4.7	
Lead (Pb)	NMT 1,000 (ppb)*	1,050	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 N	Aay Exceed 1,000 ppb action i	Imit with higher I	cavalactone contents.	
MICROBIOLOGICAL	AVAL CON				
	EV LER I CARAN	Results			
AEROBIC PLATE COUNT	NMT 10,000,000 cfu	11,000	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)	8,000	cfu / 10 g		
MOLD	Real 200,000 cia (compared)	240	cfu / 10 g	USP 2021	
TOTAL YEAST & MOLD	NMT 100,000 cfu (Combined)	8240	cfu / 10 g		
cfu/g = Colony Forming Units Per	Gram NMT = No More Than	PDE = Permitted Dails	/ Exposure	PPB = Parts Per Bi	

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.

Manager

Completed By: _____

Title: