

Botany Evolution LLC

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Palm Bay, FL 32945
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Certificate Of Analysis

Sample Identification Information

<u>Date of Analysis</u> 11/12/2018	<u>Country of Origin</u> CHINA
<u>Sample:</u> S0578	<u>Country of Processing</u> CHINA
<u>Product Name</u> 40% KAVALACTONE EXTRACT	<u>Manufacture Date</u> 09/18/18
<u>Lot#</u> CHKB180918KE40	<u>Expiration Date</u> 09/18/21

General Product Specifications

<u>Product Species</u> Piper Methysticum	<u>Common Names</u> Kava kava, Awa, Yagona
<u>Part Used</u> Root	<u>Appearance</u> Beige powder

<u>Analyzed Characteristics</u>	<u>Specification</u>	<u>Result</u>	<u>Test Method</u>
<u>Standardization</u>	20-90% Kavalactones	44.81%	HPLC
<u>Identification</u>	Complies by HPLC	Conform	HPLC
<u>Kavalactone Profile</u>	Noble	PASS	HPLC
<u>Mesh Size</u>	60-30	30	Sieve
<u>Color</u>	Beige to Yellow	Pass	Visual
<u>Odor</u>		Pass	Organoleptic
<u>Taste</u>		Pass	Organoleptic
<u>Chemotype</u>		245631	HPLC
<u>K/DHM</u>		2.10	Calculation

Kavalactones	Code	Peaks Ref. (elution order)	Correction Factor	Area *	Area %	Corrected Kavalactones	Chemotype Identifier
Standard Kavain	K			2468.978			
Methysticin	M	1	2.21	3858.12	10.62%	5.05%	6
Dihydromethysticin	DHM	2	3.38	2796.14	7.70%	5.40%	5
Kavain	K	3	1	18987.488	52.27%	11.35%	4
Dihydrokavain	DHK	4	3.08	5550.92	15.28%	13.97%	2
Desmethoxyyangonin	DMY	5	2.52	2558.425	7.04%	4.19%	1
Yangonin	Y	6	3.12	2574.214	7.09%	4.86%	3
Kavalactones			Total:	36325.307	100.00%	44.81%	245631

*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.

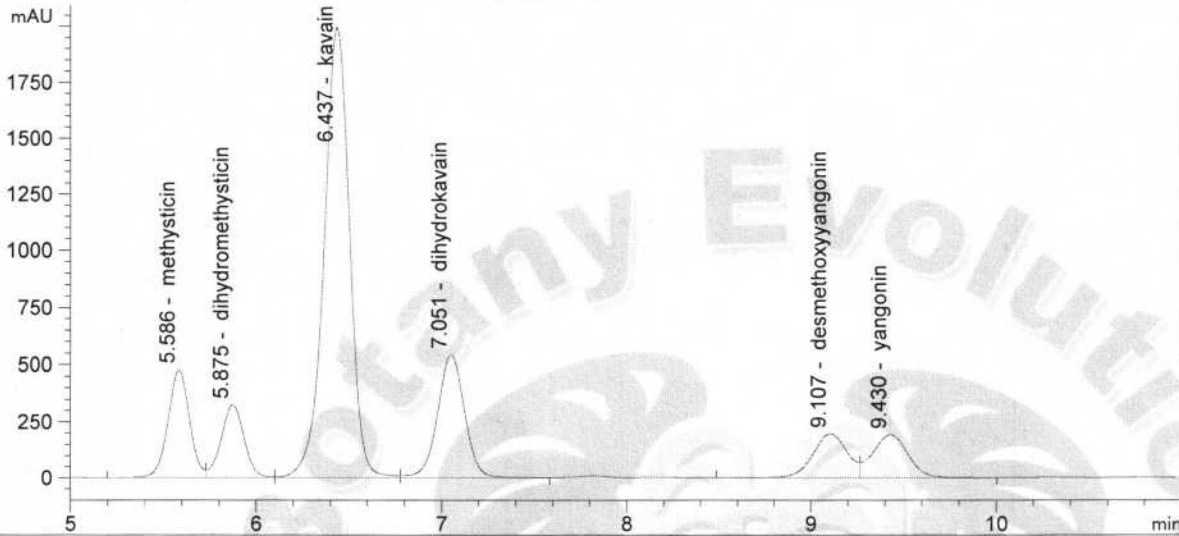
Mustel Youngs 11/12/18

SAMPLE S0578
Vial 11

0.34498 g/25 ml

wavelength 246 nm
C:\CHEM32\1\DATA\KAVA_11_12_2018_15MINSTDTESTMETHOD 2018-11-12 14-08-59\01->
SEQUENCE C:\CHEM32\1\DATA\KAVA_11_12_2018_ ->
Injection date 11/12/2018
Injection time 4:02:32 PM
Acq. operator KRISTL
Method C:\CHEM32\1\DATA\KAVA_11_12_201->

DAD1 C, Sig=246,10 Ref=500,60 (KAVA_11_12_2018_15MINSTDTESTMETHOD 2018-11-12 14-08-59\011-0501.D)



#	COMPOUND	RET. TIME	AREA	AREA %	AMOUNT
1	methysticin	5.586	3858.120	10.62	0.001
2	dihydromethysticin	5.875	2796.140	7.70	0.001
3	kavain	6.437	18987.488	52.27	0.002
4	dihydrokavain	7.051	5550.920	15.28	0.003
5	desmethoxyyangonin	9.107	2558.425	7.04	0.001
6	yangonin	9.430	2574.214	7.09	0.000

11/12/18
[Signature]