

LIFTMODE

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CERTIFICATE OF ANALYSIS

Tongkat Ali Extract (*Eurycoma longifolia* root extract)

Material Lot #: 20190313 Manufacturer Analysis Date: 02/24/2020
Country of Origin: Malaysia Analysis Date: 04/24/2020
Retesting Date: 04/24/2023

Analysis	Claim	Result
Eurycomanone	≥12%	14.1%*

Test	Specification	Result
HPLC Assay	≥12%	14.1%
Arsenic	≤1.5 ppm	1.043 ppm
Lead	≤0.5 ppm	0.398 ppm
Cadmium	≤0.5 ppm	0.019 ppm
Mercury	≤3 ppm	<0.001 ppm
Total Aerobic Count	<1000 cfu/g	Conforms
Yeast & Mold	<100 cfu/g	Conforms
E.coli	Negative	Conforms
Salmonella	Negative	Conforms
Coliform	<10 cfu/g	Conforms

*We believe Alkemist Labs' specialized HPLC procedure provides the most accurate estimate of Eurycomanone content.

Tongkat Ali Extract should be stored at or below room temperature in a tightly sealed durable container. Tongkat Ali Extract should be protected from excess heat, direct sunlight, excess humidity, and moisture. Tongkat Ali Extract has a retesting period of 3 years from the date of analysis when properly stored.

CERTIFICATE OF ANALYSIS

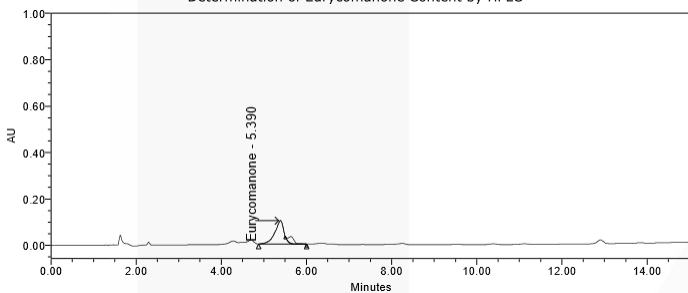


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Report Issued To: Synaptent
1442 W Fulton St
Chicago, IL 60607
United States

Sample Name: Eurycoma longifolia extract
Description: Powdered extract; Foil pouch
Lot #: 20190313
AL #: 20168TMN_1
Analysis ID: 137699
Received: 06/16/20

Determination of Eurycomanone Content by HPLC



Ret. Time (min)	Compound Name	Prep 1 (%)	Prep 2 (%)	Average (%)	Specification	Result
5.4	Eurycomanone	13.975	14.298	14.136	>12%	Pass

Chromatographic Conditions:

Method: ATM-815-0222
Column: AP22 Luna 5µ C18 (2) (150 x 4.6 mm)
Temperature: 40°C
Flow Rate: 1 mL/min
Injection Volume: 20 µL
UV Detection: 254 nm
Mobile Phase: 0.1% Formic Acid in Water
HPLC Instrument: Acetonitrile Alliance_4

Sample Preparation:

Weighed 250 mg sample into 10 mL volumetric flask and filled to volume with methanol. Vortexed for 30 seconds and sonicated for 15 minutes at room temperature. Let cool and filled to volume with methanol. Mixed by inversion. Diluted 1:50 in methanol. Filtered through 0.45 µm PTFE syringe filter.

Report Summary:

Conclusion: This "Eurycoma longifolia extract" test sample contains an average of 14% Eurycomanone on the as is basis.
OOS Reference: N/A
Notebook Reference: 17020 Eurycomanone



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Authorized By: Celine Deneuve,
Analytical Chemistry Supervisor

Analysis Date : 06/19/20

Analyzed By: D Jimenez

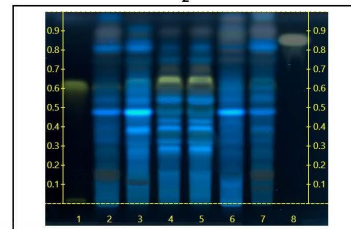
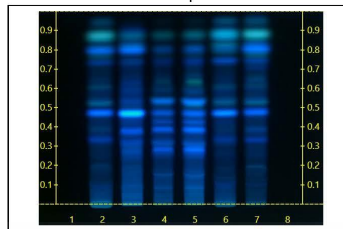
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Certificate of Analysis: Tongkat Ali Extract (20190313) High Performance Thin-Layer Chromatography with Photo-Documentation



Company Name: Synaptent
Title: Tongkat Ali Extract
Plant Part: root
Sample Received: 04/29/20
Sample Packaging: Foil Pouch
Form of Botanical: powdered extract
Appearance: Powder [silver foil pouch]
Lot Number: (20190313) → Lanes 4(0.5µl), 5(1µl)
Sample: Eurycoma longifolia
Latin Name: Eurycoma longifolia
Reference Sample: Lane 2(10µl) (XY18715JVA1), Lane 3(10µl) (XY23215NTX2), Lane 4(10µl) (XY23215NTX2), Lane 7(10µl) (XY18715JVA1)
Eurycoma longifolia (root); held at Alkemist Labs, Garden Grove, CA.
Analyst: A. Davis, N. Afendikova, M. Edwards, S. Kabbaj, N. Hoang, K. Tran, J. Lopez, J. Mares 135478
Sample Preparation: 0.3g+3mL Methanol, sonicate/heat at 50°C for 30 min.
Stationary Phase: Silica gel 60, HPTLC plates
Mobile Phase: Dichloromethane: Methanol: Water [7/3/0.4]
Detection: (1) UV 366 nm
(2) 10% Sulfuric, 100°C, 2min, 366nm (Reich, E., 2007)
Reference Standard: Lane 1(3µl) Eurycomanone (5393-005648, CHR), Methanol (57326, EMD); Lane 8(3µl) Oleonolic acid (81300116, ALF), Methanol (56189, EMD)
Reference Source: HPTLC Association Tongkat Ali root (Eurycoma longifolia)
IDI-SOP-72-01

Comments & Conclusions: Lanes 4, 5 are the test sample Tongkat Ali Extract (20190313). Lanes 2, 3, 6, 7, are the reference samples used for comparison. This test sample, Tongkat Ali Extract (20190313) has characteristics of the chromatographic profile of the reference samples of Eurycoma longifolia, used above. **This test sample Tongkat Ali Extract (20190313) indicates the presence of Eurycoma longifolia root.**

NOTE: The above conclusion may be a function of the natural variance found in botanicals &/or the extraction process used to create specific extracts. The growing and drying conditions, age, seasonal variations, geographic location, extraction solvents, etc. all play a role in the phytochemical fingerprint of botanicals as well as their extracts; hence, chromatographic variations are expected.



Digitally signed by Khanh Tran
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Examined, Reviewed & Authorized by: Khanh N Tran, HPTLC, R&D Supervisor, Alkemist Labs

Report Date: 05/29/20



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Certificate of Analysis

Client:
Synaptent LLC
47 W Polk Street, 100-241
Chicago, IL 60654

Sample Collected By: Client

Product Name	Tongkat Ali	Product Lot Number	20190313
Report Date	04/24/20	Laboratory Number	20030048

Description	Method	Result
Eurycomanone	HPLC	37.4%
Lead	ICP-MS	0.398 ppm
Arsenic	ICP-MS	1.043 ppm
Cadmium	ICP-MS	0.019 ppm
Mercury	ICP-MS	<0.001 ppm
Total Aerobic Count	Biolumix	<1,000 cfu/g
Yeast and Mold	Biolumix	<100 cfu/g
E. Coli	Biolumix	Absent
Coliform	Biolumix	<10 cfu/g
Salmonella	Biolumix	Absent

Collin Thomas
Laboratory Manager

04/24/2020
Date

The result(s) stated in this report is only for the sample submitted. This report may not be reproduced in whole or in part, nor may any reference be made to the work, the result, or the company in any news release, public announcements or advertising without our prior written consent.

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Tel: 615-239-8604

Main Benefits

- Tongkat Ali root extract is a traditional preparation of *Eurycoma longifolia* used in Southeastern Asia known for its bitter taste.
- It has a wide variety of uses, with many sources suggesting it has aphrodisiac, immune modulating, and anti-cortisol properties.
- The primary active compound in Tongkat Ali is Eurycomanone and its glycosides which are known for their bitterness.

Main Cautions

- Tongkat Ali extract may modulate certain hormones (other than cortisol) but there is not enough strong research to indicate which hormones.
- This extract is significantly more bitter than many other similar extracts and may cause discomfort if tasted.
- Consult your physician before using Tongkat Ali if you are taking any medication. Yohimbine has not been tested for safety in pregnant or breastfeeding women

Usage Tips

- A 0.15cc measuring scoop is included. One level scoop contains approximately one serving of approximately **60mg of Tongkat Ali extract**. As a dietary supplement, take 1 servings 1-2 times per day. Start at the lower suggested quantity to assess response.
- There are no known negative side effects attributed to Tongkat Ali, but it is still recommended to cycle it for 6-10 weeks at a time
- Due to this extract's high concentration of Eurycomanone, the use of capsules is highly recommended.
- This supplement is not intended to treat, diagnose, prevent, or cure any diseases. Consult your healthcare provider before use if you have a medical condition or if you are taking any prescription medications.
- It is safe to stack Tongkat Ali with other **non-hormonal supplements**, so long as the amount consumed does not exceed the suggested serving size.
- The benefits of Tongkat Ali are most effective when they are supported by a healthy diet and plenty of exercise.

Tongkat Ali Root Extract

