

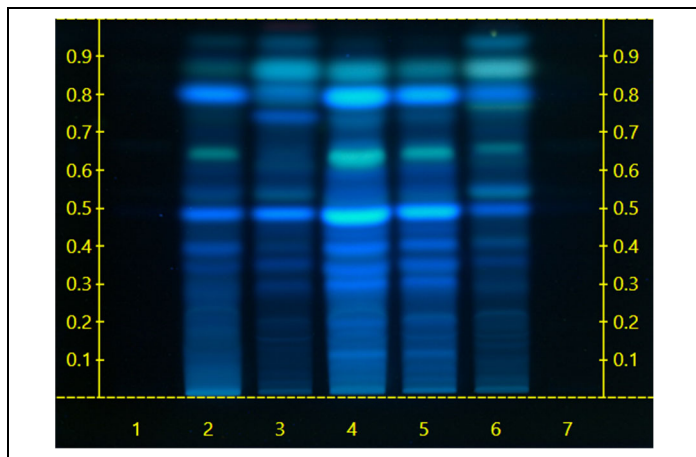
Certificate Issued To:  
**Yaju**  
**Frans Halsstraat 62**  
**Utrecht, 3583BS**  
**Netherlands**



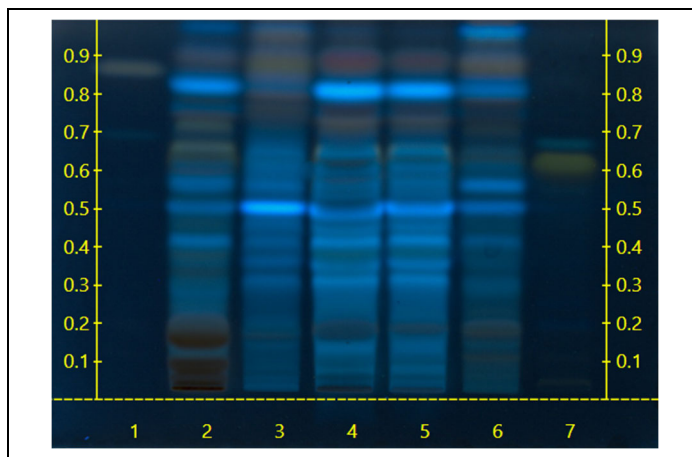
Work performed at:  
**Alkemist Labs**  
12661 Hoover Street  
Garden Grove, CA 92841  
714-754-HERB (4372)  
714-668-9972 (FAX)  
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**Certificate of Analysis: Tongkat Ali Root Extract (TKA230415)**  
**High Performance Thin-Layer Chromatography with Photo-Documentation**

1



2



Company Name: Yaju  
Title: Tongkat Ali Root Extract  
Plant Part: root  
Sample Received: 05/30/23  
Sample Packaging: Foil Pouch  
Form of Botanical: powdered extract  
Appearance: Fine powder  
Lot Number: (TKA230415) → Lanes 4(5µl), 5(2µl)  
Sample: 23150VYM\_1  
Latin Name: *Eurycoma longifolia*  
Reference Sample: Lane 2(10µl) (XY23215NTX3), Lane 3(10µl) (XY23215NTX2), Lane 6(10µl) (XY23215NTX3) *Eurycoma longifolia* (root); held at Alkemist Labs, Garden Grove, CA.  
Analyst: A.Faults, D.Robinson, J.Mares, K.Chopra, K.Montoya, K.Tran, L.Tang, M.Fox, N.Alvarez, N.Hoang, N.Afendikova, N.Waldstreicher, P.Hoang, S.Kabbaj, S.Sudberg 201965  
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) Oleanolic acid (00015303-109, CHR), Methanol (216552, VWR); Lane 7(3µl) Eurycomanone (00005393-104, CHR), Methanol (218266, FC)  
Reference Source: HPTLC Association Tongkat Ali root (*Eurycoma longifolia*)  
IDT-SOP-72-01

**Comments & Conclusions:** Lanes 4, 5 are the test sample Tongkat Ali Root Extract (TKA230415). Lanes 2, 3, 6, are the reference samples used for comparison. This test sample, Tongkat Ali Root Extract (TKA230415) is consistent with the chromatographic profile of the reference samples of *Eurycoma longifolia*, used above. **This test sample Tongkat Ali Root Extract (TKA230415) has characteristics 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.

Examined, Reviewed & Authorized by: Nam Hoang, HPTLC, R&D Lead Chemist, Alkemist Labs

Report Date: 06/07/23

ISO/IEC 17025



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to TKA230415. This report applies to the sample investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. This report is for the exclusive use of the party who requested the report and not for public dissemination or use by third parties, including for promotional purposes, without the prior written permission of Alkemist Labs, Inc. This report provides technical results for a specific sample and the report shall not be altered, modified, supplemented or abstracted in any manner. Any violation of these conditions renders the report and its results void. © 2023Alkemist Labs, Inc. All Rights Reserved