

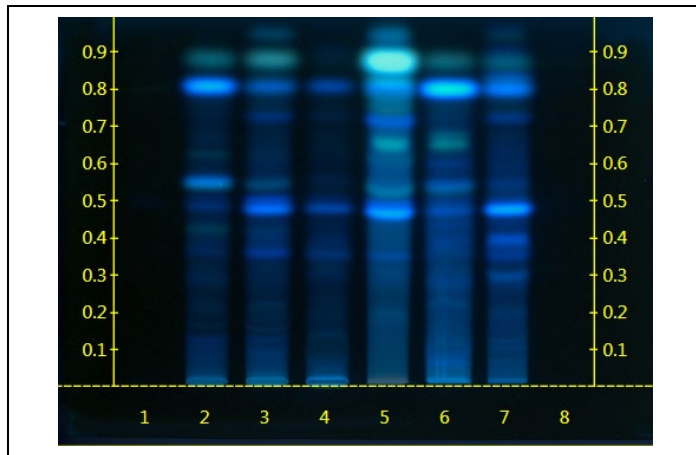
Certificate Issued To:
Lost Empire Herbs
195 Aviation Way Suite 102
Watsonville, LA 95076
USA



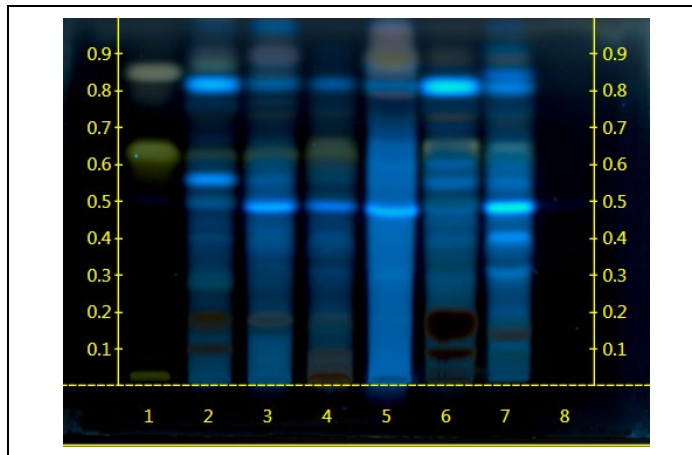
Work performed at:
Alkemist Labs
12661 Hoover Street
Garden Grove, CA 92841
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
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Certificate of Analysis: Tongkat Ali (TKA10121418)
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name: Lost Empire Herbs
Title: Tongkat Ali
Plant Part: root
Sample Received: 01/11/19
Sample Packaging: Clear Reclosable Plastic Bag
Form of Botanical: powdered extract
Appearance: tan powder
Lot Number: (TKA10121418) → Lane 6(8µl)
Sample: 19011VJL_1
Latin Name: *Eurycoma longifolia*
Reference Sample: Lane 2(10µl) (XY21417CHR1), Lane 3(10µl) (XY18715JVA1), Lane 7(8µl) (XY23215NTX2) *Eurycoma longifolia* (root); Lane 8(8µl) (XY23215NTX3) *Eurycoma longifolia* (bark); held at Alkemist Labs, Garden Grove, CA.
Analyst: A. Davis, N. Afendikova, M. Edwards, S. Rodriguez, S. Kabbaj, K. Johnston, D. Jimenez, M. Lababidi, J. Nguyen, N. Hoang, K. Tran 113889
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 (5393-005548, CHR), Methanol (57326, EMD), Oleanolic acid (81300116, ALF), Methanol (56189, EMD)
Reference Source: HPTLC Association Tongkat Ali root (*Eurycoma longifolia*)
IDT-SOP-72-01

Comments & Conclusions: Lane 6 is the test sample Tongkat Ali (TKA10121418). Lanes 2, 3, 7, 8, are the reference samples used for comparison. This test sample, Tongkat Ali (TKA10121418) is consistent with the chromatographic profile of the reference samples of *Eurycoma longifolia*, used above. **This test sample Tongkat Ali (TKA10121418) 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: Jonathan Nguyen, HPTLC Supervisor, Alkemist Labs

Report Date: 01/18/19

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 TKA10121418. 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. © 2019 Alkemist Labs, Inc. All Rights Reserved