

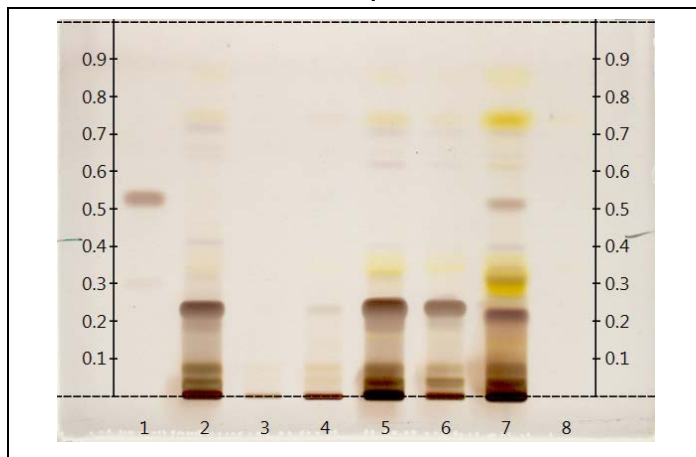
Certificate Issued To:
Lost Empire Herbs
2825 S. Rodeo Gulch Rd #12
Soquel, CA 95073



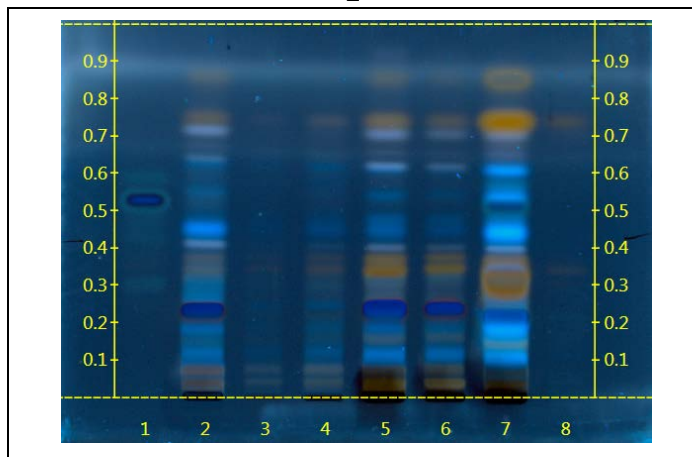
Work performed at:
Alkemist Labs
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Costa Mesa, CA 92626
714-754-HERB (4372)
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Certificate of Analysis: He Shou Wu Root (HSW0811)
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name: Lost Empire Herbs
Title: He Shou Wu Root
Plant Part: root
Sample Received: 09/26/16
Sample Packaging: Light Sensitive Reclosable Plastic Bag
Form of Botanical: powdered extract
Appearance: Light Sensitive Reclosable Plastic Bag
Lot Number: (HSW0811) → Lanes 3(0.5µl), 4(2µl)
Sample: BJ27016SUP1_1
Latin Name: *Polygonum multiflorum* Thunb. [Polygonaceae]
Reference Sample: Lane 2(3µl) (BJ12310MRH) *Polygonum multiflorum* (root); Lane 7(3µl) (OQ11109SWH) *Polygonum cuspidatum* (root & rhizome); held at Alkemist Labs, Costa Mesa, CA.
Analyst: J. Kim, N. Hoang, P. Fast, N. Afendikova, K. Tran, S. Kabbaj, E. Garcia 79779
Sample Preparation: 0.3g+3mL 70% grain Ethanol, sonicate/heat at 50° C for 30 min.
Stationary Phase: Silica gel 60, HPTLC plates
Mobile Phase: toluene: EtOH: Acetic acid: develop to 3.5cm, then run w: toluene: EtOH: to the mark [8/6/1//8/2/]
Detection: (1) UV 365 nm
(2) 10% Ethanolic H₂SO₄ --> 120° C 10 min --> UV 365 nm
Reference Standard: Lane 8(3µl) Emodin (13 0621/0, XSYN), Methanol (030515B, VWR); Lane 1(3µl) t-Resveratrol (00018090-014, CHR), Methanol (54212, EMD)
Reference Source: Method Developed by Alkemist Labs
IDT-SOP-72-01

Comments & Conclusions: Lanes 3, 4 are the test sample He Shou Wu Root (HSW0811). Lanes 2, 7, are the reference samples used for comparison. This test sample, He Shou Wu Root (HSW0811) is consistent with the chromatographic profile of the reference samples of *Polygonum multiflorum*, used above. **This test sample He Shou Wu Root (HSW0811) has characteristics of *Polygonum multiflorum* 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: 01/19/17



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to HSW0811. 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. © 2017 Alkemist Labs, Inc. All Rights Reserved