

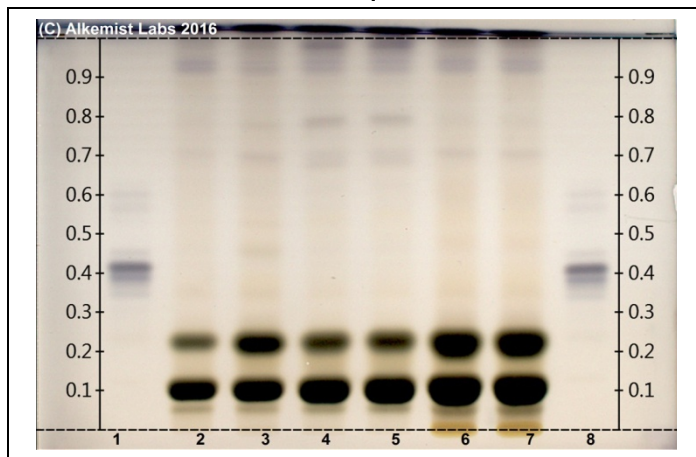
Certificate Issued To:  
Lost Empire Herbs  
2825 S. Rodeo Gulch Rd #12  
Soquel, CA 95073



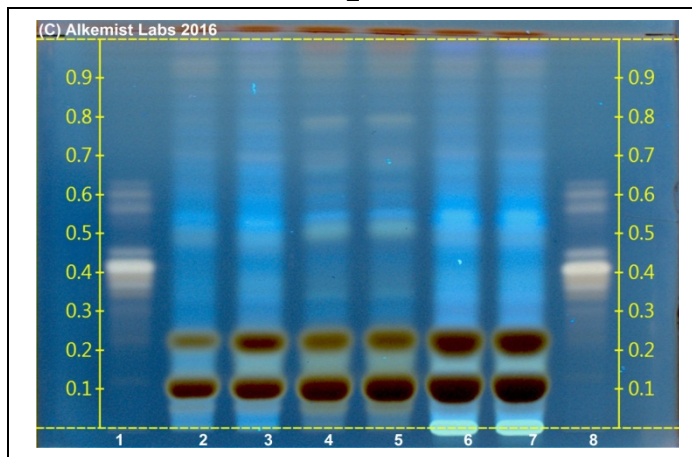
Work performed at:  
**Alkemist Labs**  
1260 Logan Ave B2  
Costa Mesa, CA 92626  
714-754-HERB (4372)  
714-668-9972 (FAX)  
sales@alkemist.com  
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**Certificate of Analysis: Maca Root (MAC824)**  
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name: Lost Empire Herbs  
Title: Maca Root  
Plant Part: root  
Sample Received: 9/26/2016  
Sample Description: Clear Reclosable Plastic Bag  
Form of Botanical: powder  
Appearance: light beige fine powder  
Lot: (MAC824) → Lanes 4(5µl), 5(5µl)  
Sample: GC27016SUP1\_1  
Latin Name: Lepidium meyenii Walp. [Brassicaceae]  
Reference Sample: Lane 2(5µl) (GC07005CHR) Lepidium meyenii (root); Lane 3(5µl) (GC23809CRB) Lepidium meyenii (root); Lane 6(5µl) (GC07905ELF1) Lepidium meyenii (root); Lane 7(5µl) (GC07905ELF1) Lepidium meyenii (root); held at Alkemist Labs, Costa Mesa, CA.  
Analyst: J. Nguyen, N. Hoang, P. Fast, S. Kabbaj, K. Tran 74961  
Sample Prep: 0.3g+3mL CH<sub>3</sub>OH sonicate/heat @-50° C ~ 1/2 hr.  
Stationary Phase: Silica gel 60, F<sub>254</sub>, HPTLC plates  
Mobile Phase: chloroform: glacial acetic acid: methanol: water [6/3.2/1.2/0.8]  
Detection: (1) Vanillin/H<sub>2</sub>SO<sub>4</sub> Reagent → 110° C 5 min → visible light  
(2) Vanillin/H<sub>2</sub>SO<sub>4</sub> Reagent → 110° C 5 min → UV 365 nm  
Reference Std: Lanes 1(3µl) and 8(3µl) Escin (SLBC6907V, SigAl) ~0.1%  
Reference Source: Method Developed by Alkemist Labs; BTM 715-0066  
IDT-SOP-72-01

**Comments & Conclusions:** Lanes 4, 5 are the test sample Maca Root (MAC824). Lanes 2, 3, 6, 7 are the reference samples used for comparison. This test sample, Maca Root (MAC824), is consistent with the chromatographic profile of the reference sample of Lepidium meyenii Walp. [Brassicaceae], used above. **This test sample, Maca Root (MAC824) has characteristics of Lepidium meyenii Walp. [Brassicaceae] 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: Sandy Sudberg, Senior Data Analyst, Alkemist Labs

Report Date: 9/30/2016



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to MAC824. 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. © 2016 Alkemist Labs, Inc. All Rights Reserved