

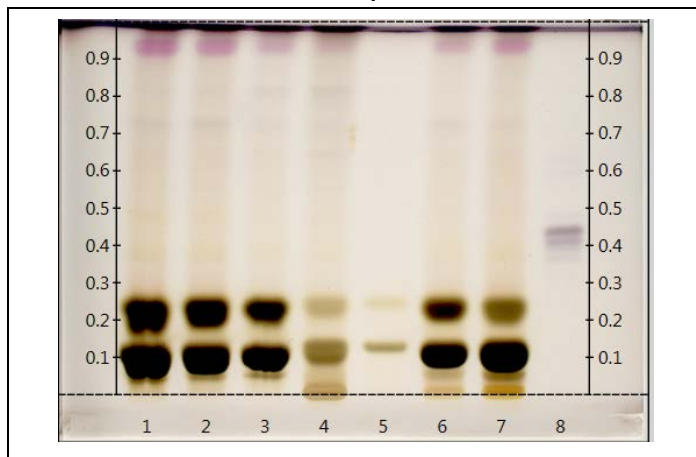
Certificate Issued To:  
Lost Empire Herbs  
2825 S. Rodeo Gulch Rd #12  
Soquel, CA 95073



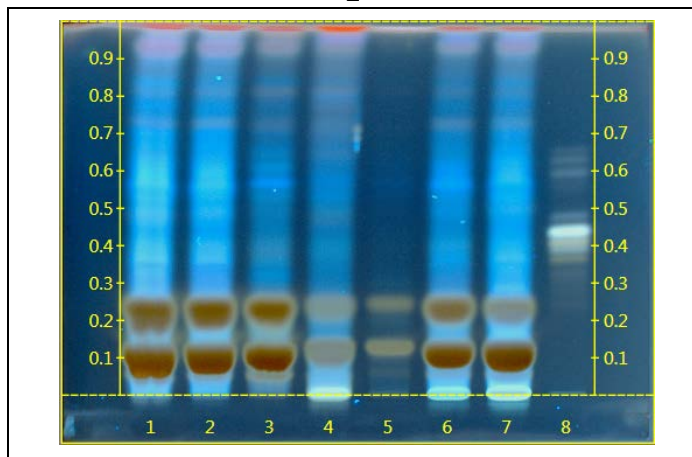
Work performed at:  
**Alkemist Labs**  
1260 Logan Ave B2  
Costa Mesa, CA 92626  
714-754-HERB (4372)  
714-668-9972 (FAX)  
Sales@Alkemist.com  
www.Alkemist.com

**Certificate of Analysis: Gelatinized Maca (MACA1612)**  
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name: Lost Empire Herbs  
Title: Gelatinized Maca  
Plant Part: root  
Sample Received: 01/10/17  
Sample Packaging: Clear Reclosable Plastic Bag  
Form of Botanical: powder  
Appearance: Fine tan powder  
Lot Number: (MACA1612) → Lane 3(6µl)  
Sample: GC01017SUP1\_1  
Latin Name: *Lepidium meyenii* Walp. [Brassicaceae]  
Reference Sample: Lane 1(6µl) (GC24509MRH), Lane 2(6µl) (GC23809CRB), Lane 6(6µl) (GC23809CRB), Lane 7(6µl) (GC07005CHR)  
*Lepidium meyenii* (root); held at Alkemist Labs, Costa Mesa, CA.  
Analyst: J. Kim, N. Hoang, P. Fast, N. Afendikova, K. Tran, S. Kabbaj, E. Garcia 79543  
Sample Preparation: 0.3g+3mL Methanol, sonicate/heat at 50°C for 30 min.  
Stationary Phase: Silica gel 60, HPTLC plates  
Mobile Phase: chloroform: glacial acetic acid: methanol: water [6/3.2/1.2/0.8]  
Detection: (1) Vanillin/Sulfuric Acid Reagent, heat at 100°C for 2 min, Visible light  
(2) Vanillin/Sulfuric Acid Reagent, heat at 100°C for 2 min, UV 366 nm  
Reference Standard: Lane 8(3µl) Escin (SLBC6907V, SigAl), Methanol (56126, EMD)  
Reference Source: Method Developed by Alkemist Labs; BTM 715-0066  
IDT-SOP-72-01

**Comments & Conclusions:** Lane 3 is the test sample Gelatinized Maca (MACA1612). Lanes 1, 2, 6, 7, are the reference samples used for comparison. This test sample, Gelatinized Maca (MACA1612) is consistent with the chromatographic profile of the reference samples of *Lepidium meyenii*, used above. **This test sample Gelatinized Maca (MACA1612) has characteristics of *Lepidium meyenii* 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: 01/17/17



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to MACA1612. 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