

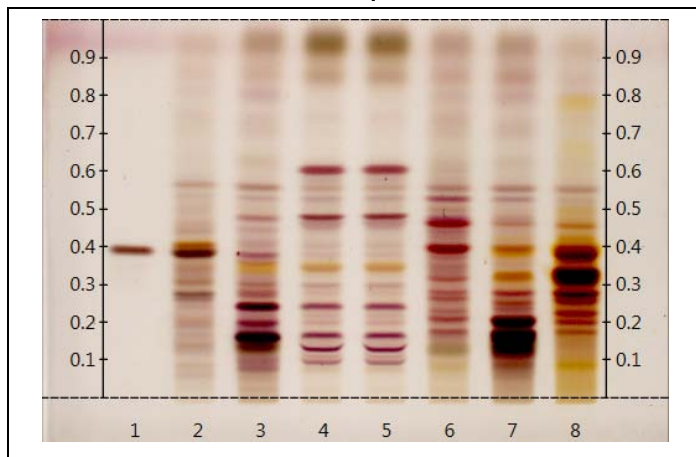
Certificate Issued To:
Lost Empire Herbs
2825 S. Rodeo Gulch Rd #12
Soquel, CA 95073



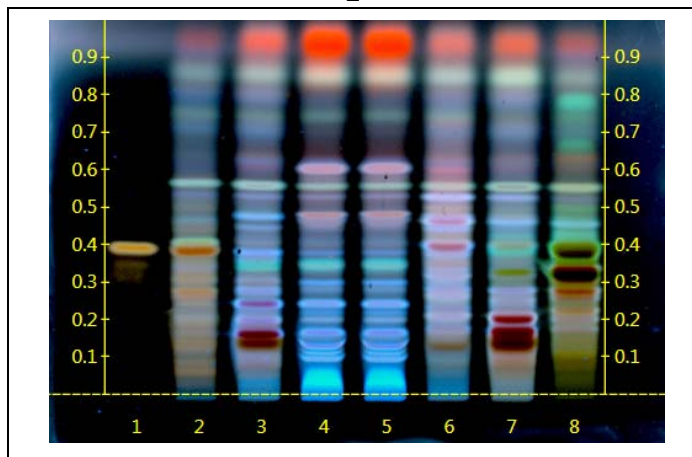
Work performed at:
Alkemist Labs
1260 Logan Ave B2
Costa Mesa, CA 92626
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
www.Alkemist.com

Certificate of Analysis: Gynostemma (GYN21)
High Performance Thin-Layer Chromatography with Photo-Documentation

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2



Company Name: Lost Empire Herbs
Title: Gynostemma
Plant Part: leaf
Sample Received: 02/22/17
Sample Packaging: Clear Reclosable Plastic Bag
Form of Botanical: whole/dry
Appearance: dark green whole/dry
Lot Number: (GYN21) → Lanes 4(3µl), 5(3µl)
Sample: FK05317SUP1_1
Latin Name: *Gynostemma pentaphyllum* (Thumb.) Makino [Cucurbitaceae]
Reference Sample: Lane 2(3µl) (FK14902SWH), Lane 3(3µl) (FK36105AP1) *Gynostemma pentaphyllum* (herb (leaf, stem)); Lane 6(3µl) (FK09113AP1), Lane 8(3µl) (FK35000JHP5) *Gynostemma pentaphyllum* (herb); Lane 7(3µl) (FK08514THAI1) *Gynostemma pentaphyllum* (aerial part); held at Alkemist Labs, Costa Mesa, CA.
Analyst: J. Kim, N. Hoang, P. Fast, N. Afendikova, K. Tran, S. Kabbaj, E. Garcia 81639
Sample Preparation: 0.3g+3mL Methanol, sonicate/heat at 50°C for 30 min.
Stationary Phase: Silica gel 60, HPTLC plates
Mobile Phase: Chloroform: ethyl acetate: Methanol: Water [3/8/4.4/1.8]
Detection: (1) 10% Ethanolic Sulfuric acid Reagent, heat at 100°C for 2min, Visible light
(2) 10% Ethanolic Sulfuric acid Reagent, heat at 100°C for 2min, UV 366 nm
Reference Standard: Lane 1(2µl) Ginsenoside F11 (00007270-210, CHR), Methanol (121715D, BDH)
Reference Source: Adapted from Camag Application Notes
IDT-SOP-72-01

Comments & Conclusions: Lanes 4, 5 are the test sample *Gynostemma* (GYN21) Lanes 2, 3, 6, 7, 8 are the reference samples used for comparison. This test sample, *Gynostemma* (GYN21) is consistent with the chromatographic profile of the reference samples of *Gynostemma* sp., used above. **This test sample *Gynostemma* (GYN21) has characteristics of *Gynostemma* sp., leaf.**

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 S Sudberg, M.T., ASCP Senior Data Analyst, Alkemist Labs

Report Date: 02/28/17



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to GYN21. 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