

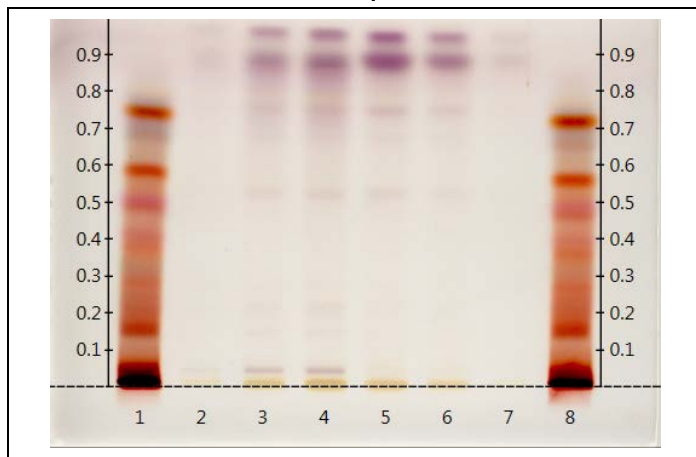
Certificate Issued To:
Lost Empire Herbs
130 S Pepper St
Orange, CA 92868
USA



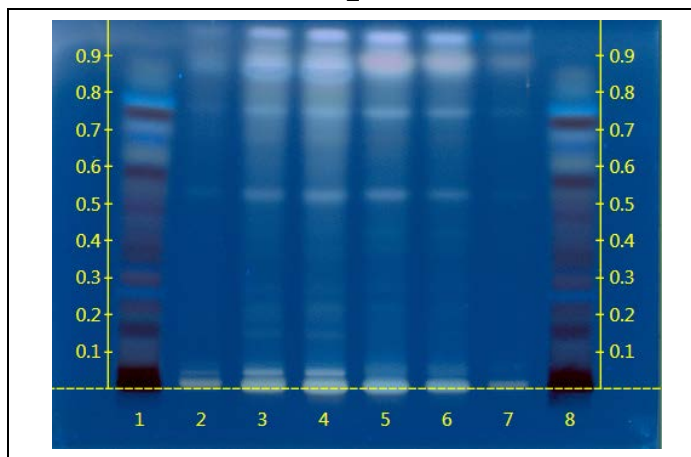
Work performed at:
Alkemist Labs
12661 Hoover Street
Garden Grove, CA 92841
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
www.Alkemist.com

Certificate of Analysis: Pine Pollen (PP071918)
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name: Lost Empire Herbs
Title: Pine Pollen
Plant Part: Pollen
Sample Received: 07/30/18
Sample Packaging: Clear Reclosable Plastic Bag
Form of Botanical: powder
Appearance: fine golden yellow powder
Lot Number: (PP071918) → Lanes 2(0.5µl), 3(3µl), 4(5µl)
Sample: KIR21118SUP1_1
Latin Name: *Pinus sp.*
Reference Sample: Lanes 5(5µl), 6(3µl), 7(0.5µl) *Pinus sp.* (KIR00917SUP1, PP1016 vendor supplied reference sample)(pollen); held at Alkemist Labs, Garden Grove, CA.
Analyst: A. Davis, N. Hoang, P. Fast, N. Afendikova, K. Tran, S. Kabbaj, E. Garcia, M. Lababidi, J. Nguyen 106135
Sample Preparation: 0.3g+3mL Methanol, sonicate/heat at 50°C for 30 min.
Stationary Phase: Silica gel 60, HPTLC plates
Mobile Phase: ethyl acetate: formic acid: water [10/1/0.6]
Detection: (1) Vanillin/Sulfuric, 110°C, 2min, vis (Reich, E., 2007)
(2) Vanillin/Sulfuric, 110°C, 2min, 366nm (Reich, E., 2007)
Reference Standard: Lanes 1(3µl) and 8(3µl) Maritime Pine Extract (F0K092, USP), Methanol (57012, EMD)
Reference Source: Method Developed by Alkemist Labs
IDT-SOP-72-01

Comments & Conclusions: Lanes 2, 3, 4 are the test sample Pine Pollen (PP071918) Lanes 5, 6, 7 are the reference samples used for comparison. This test sample, Pine Pollen (PP071918), is consistent with the chromatographic profile of the reference samples used above. **This test sample Pine Pollen (PP071918), has characteristics of vendor supplied reference samples *Pinus sp.* pollen.**

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: 08/02/18



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to PP071918. 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. © 2018 Alkemist Labs, Inc. All Rights Reserved