

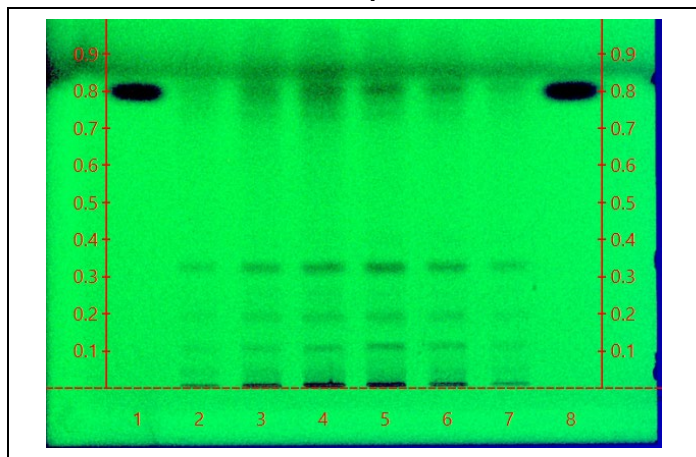
Certificate Issued To:  
**Lost Empire Herbs**  
195 Aviation Way Suite 102  
Watsonville, LA 95076  
USA



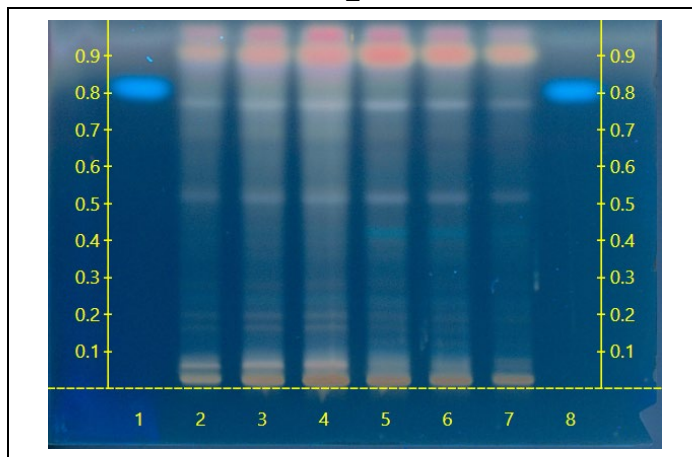
Work performed at:  
**Alkemist Labs**  
12661 Hoover Street  
Garden Grove, CA 92841  
714-754-HERB (4372)  
714-668-9972 (FAX)  
Sales@Alkemist.com  
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**Certificate of Analysis: Pine Pollen (PP110618)**  
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name: Lost Empire Herbs  
Title: Pine Pollen  
Plant Part: Pollen  
Sample Received: 11/13/18  
Sample Packaging: Clear Reclosable Plastic Bag  
Form of Botanical: powder  
Appearance: light yellow powder  
Lot Number: (PP110618) → Lanes 2(2µl), 3(4µl), 4(6µl)  
Sample: KIR31718SUP1\_1  
Latin Name: *Pinus sp.*  
Reference Sample: Lanes 5(6µl), 6(4µl), 7(2µl) *Pinus sp.* (KIR00917SUP1, PP1016 vendor supplied reference sample, pollen powder); held at Alkemist Labs, Garden Grove, CA.  
Analyst: A. Davis, N. Afendikova, M. Edwards, S. Rodriguez, S. Kabbaj, K. Johnston, D. Jimenez, M. Lababidi, J. Nguyen, N. Hoang, K. Tran 111219  
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) UV 254 nm  
(2) Vanillin/Sulfuric, 110°C, 2min, 366nm (Reich, E., 2007)  
Reference Standard: Lanes 1(3µl) and 8(3µl) Ferulic Acid (6005-001, CHR)  
Reference Source: Method Developed by Alkemist Labs  
IDT-SOP-72-01

**Comments & Conclusions:** Lanes 2, 3, 4 are the test sample Pine Pollen (PP110618) Lanes 5, 6, 7 are the reference samples used for comparison. This test sample, Pine Pollen (PP110618), is consistent with the chromatographic profile of the reference samples used above. **This test sample Pine Pollen (PP110618), 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: 11/16/18

ISO/IEC 17025



**ACCREDITED**  
CERTIFICATE #3851.01

Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to PP110618. 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