

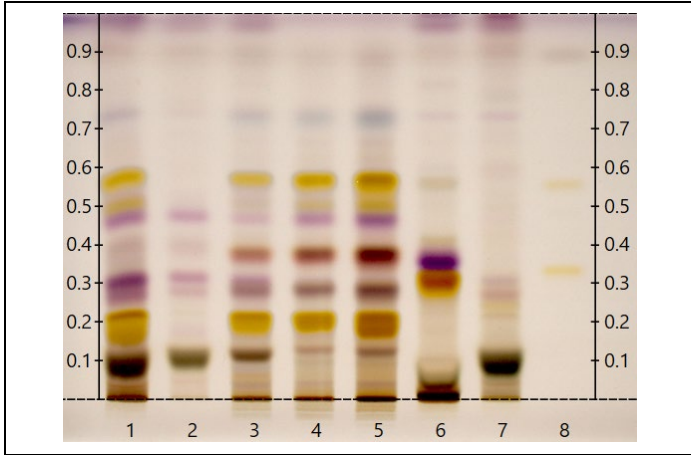
Certificate Issued To:
Lost Empire Herbs
195 Aviation Way Suite 102
Watsonville, LA 95076
USA



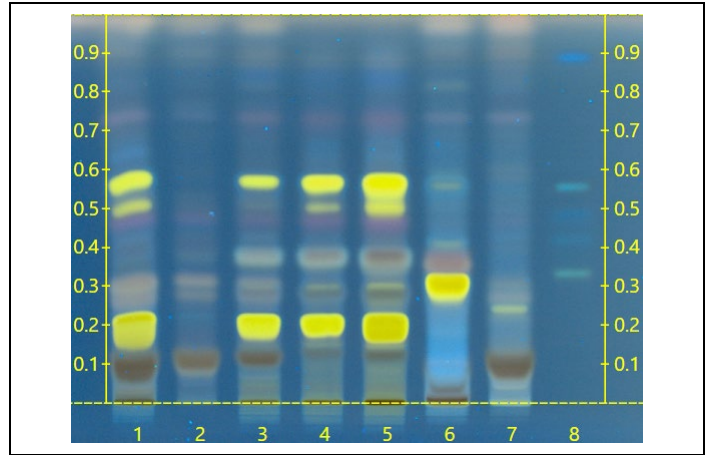
Work performed at:
Alkemist Labs
12661 Hoover Street
Garden Grove, CA 92841
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
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Certificate of Analysis: Cistache (CT2180820)
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name: Lost Empire Herbs
Title: Cistache
Plant Part: stem
Sample Received: 08/31/20
Sample Packaging: Clear Reclosable Plastic Bag
Form of Botanical: powdered extract
Appearance: Fine Dark Brown Powder
Lot Number: (CT2180820) → Lanes 4(0.5µl), 5(1µl)
Sample: 20244NNE_1
Latin Name: *Cistanche tubulosa* (Schenk) Wight
Reference Sample: Lane 1(3µl) (SN25608NYS) *Cistanche deserticola* (stem); Lane 2(3µl) (20041RPH), Lane 3(3µl) (KAH15217PUCL1) *Cistanche tubulosa* (stem); Lane 6(3µl) (AFN01411BIN) *Cistanche salsa* (stem); Lane 7(3µl) (LFA35215AHP1) *Cistanche* sp. (stem); held at Alkemist Labs, Garden Grove, CA.
Analyst: A. Davis, N. Afendikova, M. Edwards, S. Kabbaj, N. Hoang, K. Tran, J. Lopez, J. Mares 141869
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: Methyl Ethyl Ketone: Formic Acid: Water [5/3/1/1]
Detection: (1) Vanillin/Sulfuric, 110°C, 2min, vis (Reich, E., 2007)
(2) Vanillin/Sulfuric, 110°C, 2min, 366nm (Reich, E., 2007)
Reference Standard: Lane 8(2µl) Rutin (A0348926, ACR), Hyperoside (28 0702/0, XSYN), Chlorogenic Acid (89629608, SigAl), Caffeic acid (03, XSYN), Methanol (0000255740, VWR)
Reference Source: Method Developed by Alkemist Labs
IDT-SOP-72-01

Comments & Conclusions: Lanes 4, 5 are the test sample Cistache (CT2180820) Lanes 1, 2, 3, 6, 7 are the reference samples used for comparison. This test sample, Cistache (CT2180820) is consistent with the chromatographic profile of the reference samples of *Cistanche* sp., used above. **This test sample Cistache (CT2180820) has characteristics of *Cistanche* sp., stem.**

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: Khanh N Tran, HPTLC, R&D Supervisor, Alkemist Labs

Report Date: 09/03/20



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to CT2180820. 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. © 2020 Alkemist Labs, Inc. All Rights Reserved