

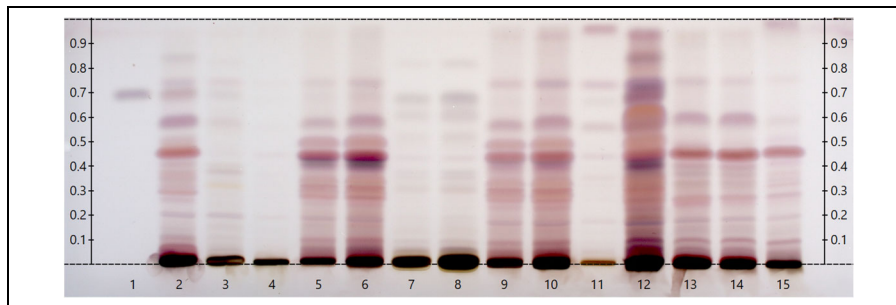
Certificate Issued To:
Lost Empire Herbs
8301 NW 101st Ter.
Kansas City, MO 64153-2321
United States



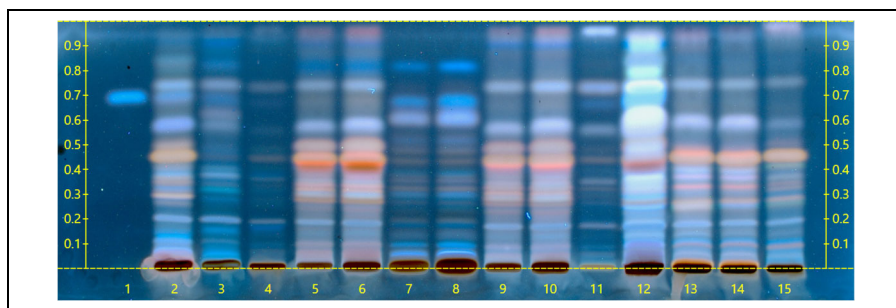
Work performed at:
Alkemist Labs
12661 Hoover Street
Garden Grove, CA 92841
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714-668-9972 (FAX)
Sales@Alkemist.com
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Certificate of Analysis: Ashwagandha ST (A230G)
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name: Lost Empire Herbs
Title: Ashwagandha ST
Plant Part: root & leaf
Appearance: Liquid [tincture bottle]
Sample Packaging: Light Sensitive Glass Bottle or Jar

Sample Received: 08/14/23
Form of Botanical: liquid extract
Lot Number: (A230G) → Lanes 7(4µl), 8(8µl)
Sample: 23226MIU_1

Latin Name: *Withania somnifera* (L.) Dunal [Solanaceae]
Reference Sample: Lane 2(8µl) (J12903PI), Lane 3(8µl) (J04505PB), Lane 4(8µl) (J15916NRPL1) *Withania somnifera* (root); Lane 13(5µl) (J02218NRPL2), Lane 14(5µl) (J02218NRPL2), Lane 15(5µl) (J02218NRPL2) *Withania somnifera* (aerial part); held at Alkemist Labs, Garden Grove, CA.

Analyst: A.Foults, D.Robinson, J.Mares, K.Chopra, K.Montoya, K.Tran, L.Tang, M.Fox, N.Alvarez, N.Hoang, N.Afendikova, N.Waldstreicher, P.Hoang, S.Kabbaj, S.Sudberg 206908

Sample Preparation: Spray directly onto plate
Stationary Phase: Silica gel 60, HPTLC plates
Mobile Phase: Dichloromethane: Methanol [9/1]
Detection: (1) 10% Sulfuric, 100°C, 2min, Vis (Reich, E., 2007)
(2) 10% Sulfuric, 100°C, 2min, 366nm (Reich, E., 2007)
Reference Standard: Lane 1(1µl) Withanolide A (R143A0, USP), Methanol (23B1461028, VWR)
Reference Source: Method developed by Alkemist Labs
IDT-SOP-72-01

Comments & Conclusions: Lanes 7, 8 are the test sample Ashwagandha ST (A230G) Lanes 2, 3, 4, 13, 14, 15 are the reference samples used for comparison. This test sample, Ashwagandha ST (A230G), has characteristics of the chromatographic profile of *Withania somnifera* reference samples used above. **This test sample Ashwagandha ST (A230G) indicates the presence of *Withania somnifera* 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: Khanh N Tran, HPTLC, R&D Supervisor, Alkemist Labs

Report Date: 08/17/23



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to A230G. 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. © 2023 Alkemist Labs, Inc. All Rights Reserved