

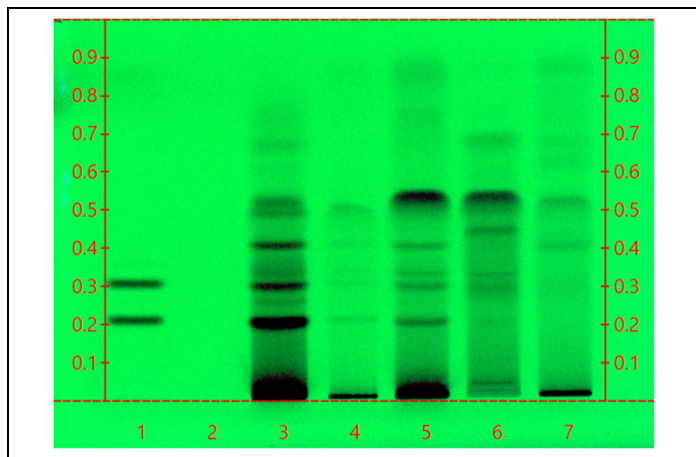
Certificate Issued To:
Lost Empire Herbs
8301 NW 101st Ter.
Kansas City, MO 64153-2321
United States



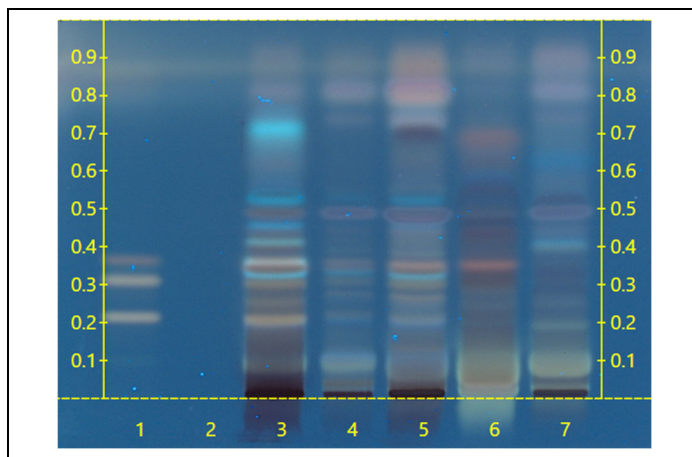
Work performed at:
Alkemist Labs
12661 Hoover Street
Garden Grove, CA 92841
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
www.Alkemist.com

Certificate of Analysis: Rhodiola (BNRHOD19DEC22)
High Performance Thin-Layer Chromatography with Photo-Documentation

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2



Company Name: Lost Empire Herbs
Title: Rhodiola
Plant Part: root
Sample Received: 01/06/23
Sample Packaging: Clear Reclosable Plastic Bag
Form of Botanical: powdered extract
Appearance: dark brown fine powder
Lot Number: (BNRHOD19DEC22) → Lanes 4(0.5µl), 5(3µl)
Sample: 23006XVW_1
Latin Name: *Rhodiola rosea* L. [Crassulaceae]
Reference Sample: Lane 3(3µl) (PO13909SYN) *Rhodiola rosea* (root); Lane 6(3µl) (AVQ09811SWH1), Lane 7(3µl) (AVQ10111MYWY1) *Rhodiola crenulata* (root); 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 191832
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: Methanol: water [7.7/1.3/1]
Detection: (1) UV 254 nm
(2) Vanillin/Sulfuric, 110°C, 2min, 366nm (Reich, E., 2007)
Reference Standard: Lane 1(3µl) Rosavin (00018365-102, CHR), Rosarin (00018366-219, CHR), Salidroside (00019550-101, CHR)
Reference Source: BTM-715-0166
IDT-SOP-72-01

Comments & Conclusions: Lanes 4, 5 are the test sample Rhodiola (BNRHOD19DEC22) Lanes 3, 6, 7 are the reference samples used for comparison. This test sample, Rhodiola (BNRHOD19DEC22), is consistent with the chromatographic profile of the reference samples of *Rhodiola rosea* used above. **This test sample Rhodiola (BNRHOD19DEC22) has characteristics of a customized extract derived from *Rhodiola rosea* 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: Nam Hoang, HPTLC, R&D Lead Chemist, Alkemist Labs

Report Date: 01/11/23

ISO/IEC 17025



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to BNRHOD19DEC22. 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