

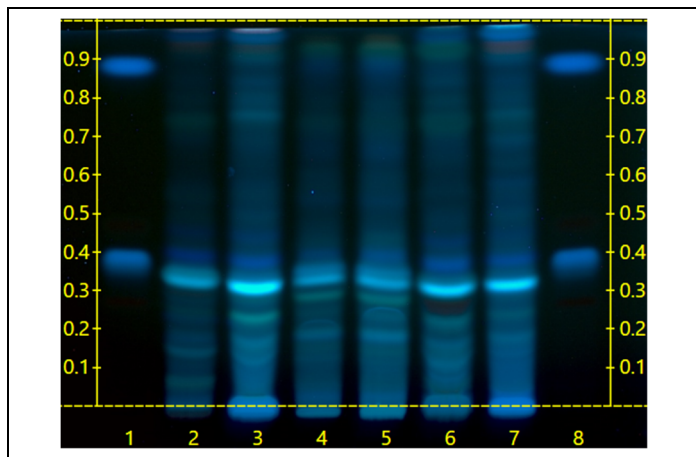
Certificate Issued To:
Lost Empire Herbs
8301 NW 101st Ter.
Kansas City, MO 64153-2321
United States



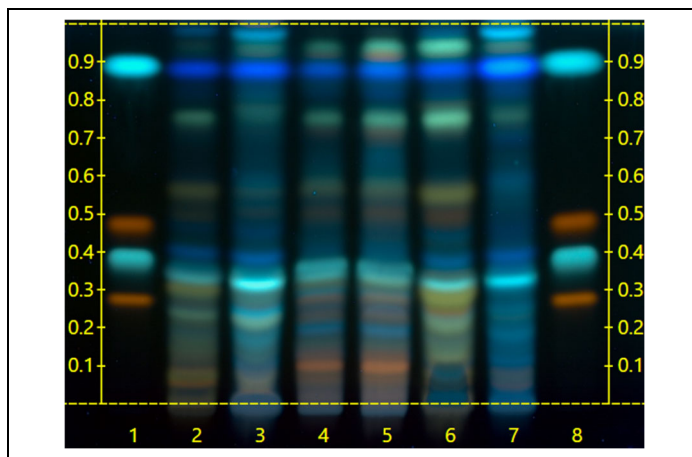
Work performed at:
Alkemist Labs
12661 Hoover Street
Garden Grove, CA 92841
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
www.Alkemist.com

Certificate of Analysis: Sea Buckthorn Berry (BSEAB17MAR22)
High Performance Thin-Layer Chromatography with Photo-Documentation

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Company Name: Lost Empire Herbs
Title: Sea Buckthorn Berry
Plant Part: fruit
Sample Received: 03/23/22
Sample Packaging: Clear Reclosable Plastic Bag
Form of Botanical: powdered extract
Appearance: Fine light-yellow orange powder
Lot Number: (BSEAB17MAR22) → Lanes 4(4µl), 5(8µl)
Sample: 22082RCL_1
Latin Name: *Hippophae rhamnoides* L. [Elaeagnaceae]
Reference Sample: Lane 2(5µl) (APD19515AHP1), Lane 3(5µl) (APD35515MRH1), Lane 6(5µl) (19329LHH), Lane 7(5µl) (APD23411SW1)
Hippophae rhamnoides (fruit); held at Alkemist Labs, Garden Grove, CA.
Analyst: A.Ung, J.Mares, K.Chopra, K.Montoya, K.Tran, M.Levine, N.Carson, N.Hoang, N.Afendikova, P.Hoang, S.Kabbaj, S.Sudberg, T.Louis 173620
Sample Preparation: 1g+10mL water, sonicate/heat at 50°C for 30 min. SPE condition with 5mL Methanol, equilibrate with 5mL water, load, dry, elute with 1mL Methanol(2x)
Stationary Phase: Silica gel 60, HPTLC plates
Mobile Phase: ethyl acetate: Acetic acid: Formic Acid: Water [10/1.1/1.1/2.6]
Detection: (1) UV 366 nm
(2) Natural Product + Polyethylene Glycol, 366nm (Reich, E., 2007)
Reference Standard: Lanes 1(2µl) and 8(2µl) Rutin (00018440-002694, CHR), Hyperoside (113083026, SigA), Chlorogenic Acid (00003450-550, CHR), Caffeic acid (00003024-DQB, CHR), Methanol (0000277265, VWRR)
Reference Source: BTM-715-0581
IDT-SOP-72-01

Comments & Conclusions: Lanes 4, 5 are the test sample Sea Buckthorn Berry (BSEAB17MAR22) Lanes 2, 3, 6, 7 are the reference samples used for comparison. This test sample, Sea Buckthorn Berry (BSEAB17MAR22) is consistent with the chromatographic profile of the reference samples of *Hippophae* sp., used above. **This test sample Sea Buckthorn Berry (BSEAB17MAR22) has characteristics of *Hippophae* sp., fruit.**

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: 03/30/22

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 BSEAB17MAR22. 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. © 2022 Alkemist Labs, Inc. All Rights Reserved