

Certificate Issued To:
Superman Herbs
2800 S. Rodeo Gulch Dr Unit G
Soquel, CA 95073
USA

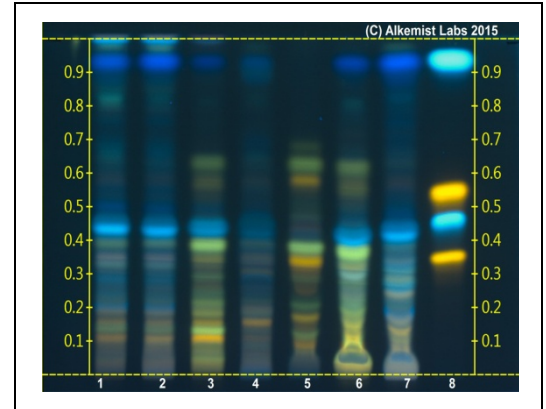
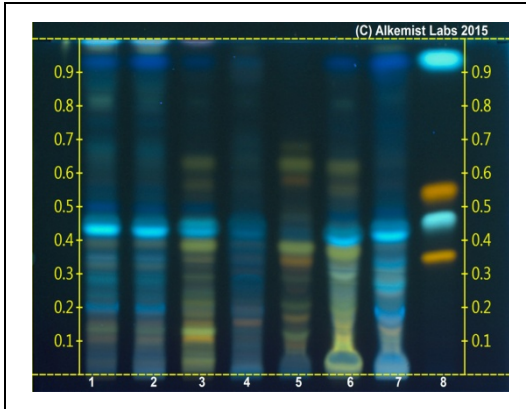


Work performed at:
Alkemist Labs
1260 Logan Ave B2
Costa Mesa, CA 92626
714-754-HERB (4372)
714-668-9972 (FAX)
E-mail: sales@alkemist.com
Web Site: www.alkemist.com

Certificate of Analysis: Sea Buckthorn/Beroy (SB02)
High Performance Thin-Layer Chromatography with Photo-Documentation

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Company Name: Superman Herbs
Title: Sea Buckthorn/Beroy
Plant Part: fruit
Sample Received: 11/19/2015
Sample Description: Clear Reclosable Plastic Bag
Form of Botanical: crude plant powder
Appearance: light brown fine powder
Lot : (SB02) → Lane 4(4µl)
Sample : APD32315SUP1_1
Latin Name: Hippophae rhamnoides L. [Elaeagnaceae]
Reference Sample : Lane 1(4µl) (APD23411SW2) Hippophae rhamnoides (fruit); Lane 2(4µl) (APD23411SW1) Hippophae rhamnoides (fruit); Lane 3(4µl) (APD19515AHP1) Hippophae rhamnoides (fruit); Lane 6(4µl) (APD19515AHP1) Hippophae rhamnoides (fruit); Lane 7(4µl) (APD23411SW2) Hippophae rhamnoides (fruit); held at Alkemist Labs, Costa Mesa, CA.
Analyst: N. Hoang, L. Scott, P. Fast, T. Collins 63175
Sample Prep: 0.3g+3mL CH₃OH sonicate/heat @ -50° C ~ 1/2 hr.
Stationary Phase: Silica gel 60, F₂₅₄, HPTLC plates
Mobile Phase: ethyl acetate: Acetic acid: HCOOH: H₂O [10/1.1/1.1/2.6]
Detection: (1) Natural Product Reagent → UV 365 nm
(2) Natural Product Reagent + PEG → UV 365 nm
Reference Std: Lane 8(3µl) Chlorogenic Acid (00003450-YRB, CHR), Rutin (00018440-184, CHR), Hyperoside (1008067, Indo), Caffeic acid (00003024-DQB, CHR), Methanol (52166, EMD) ~0.1%
Reference Source: Method Developed by Alkemist Labs
IDT-SOP-72-01

Comments & Conclusions: Lane 4 is the test sample Sea Buckthorn/Beroy (SB02). Lanes 1, 2, 3, 6, 7 are the reference samples used for comparison. This test sample, Sea Buckthorn/Beroy (SB02), is consistent with the chromatographic profile of the reference samples of Hippophae rhamnoides L. [Elaeagnaceae] used above. **This test sample, Sea Buckthorn/Beroy (SB02) has characteristics of Hippophae rhamnoides L. [Elaeagnaceae] 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: Sidney Sudberg, CSO, Alkemist Labs

Report Date: 11/30/2015

Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to SB02.
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