

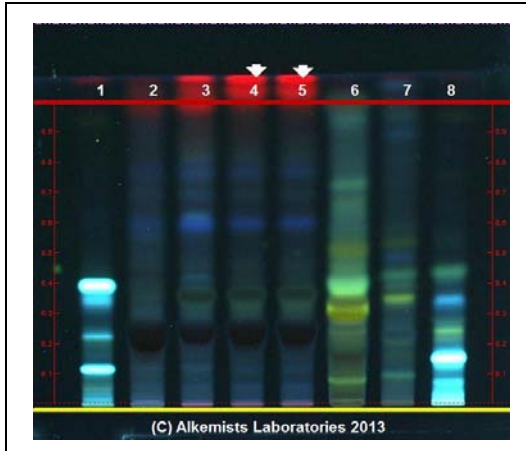
Certificate Issued To:
Trout Lake Farm
180 Airport St NE
Ephrata, WA 98823



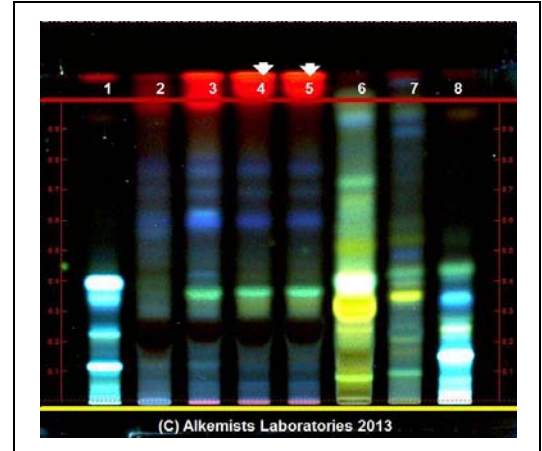
Work performed at:
Alkemists Laboratories
1260 Logan Ave B2
Costa Mesa, CA 92626
714-754-HERB (4372)
714-668-9972 (FAX)
E-mail: info@alkemist.com
Web Site: www.alkemist.com

Certificate of Analysis: Skullcap (SKU-D2, N4, S2)
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name: Trout Lake Farm
Title: Skullcap
Plant Part: leaf
Sample Received: 11/01/13
Sample Description: clear Whirl-Pak
Form of Botanical: cut and sifted
Appearance: green dried pieces
Lot : (SKU-D2, N4, S2) → Lanes 4(3µl), 5(3µl)
Sample : LE30513TLF1_1
Latin Name: Scutellaria lateriflora L. [Lamiaceae]
Reference Sample : Lane 2(3µl) (LE17103PB) Scutellaria lateriflora (herb); Lane 3(3µl) (LE34809BH) Scutellaria lateriflora (herb); Lane 6(3µl) (NE01808TLF) Scutellaria baicalensis (aerial part); Lane 7(3µl) (NE15311AF1) Scutellaria baicalensis (herb); Lane 8(1µl) (JN17502TOM) Teucrium chamaedrys L. Lamiaceae (herb); Lane 1(1µl) (KN17502TOM) Teucrium canadense (herb); authenticated by macroscopic, microscopic &/or TLC studies according to the reference source cited below, held at Alkemists Pharmaceuticals, Costa Mesa, CA.
Analyst: JN, ML, JK, HT 39737
Sample Prep: 0.3g+3mL 70% grain EtOH sonicate/heat @-50° C ~ 1/2 hr
Stationary Phase: Silica gel 60, F₂₅₄, 10 x 10 cm HPTLC plates
Mobile Phase: ethyl acetate: formic acid: glacial acetic acid: water [15/1/1/2]
Detection: (1) UV 365 nm
(2) Natural Product Reagent + PEG → UV 365 nm
Reference Source: Method Developed by Alkemists Laboratories
SOP-700-0001-R3

Comments & Conclusions: Yellow line = sample origin @ 10mm, red line = solvent front @ 70mm. Lanes 4, 5 are the test sample Skullcap (SKU-D2, N4, S2). Lanes 2, 3, 6, 7, 8, 1 are the authenticated reference samples used for comparison. **This test sample, Skullcap (SKU-D2, N4, S2), is consistent with the chromatographic profile of the reference samples of Scutellaria lateriflora L. [Lamiaceae], used above. This test sample, Skullcap (SKU-D2, N4, S2) has characteristics of Scutellaria lateriflora L. [Lamiaceae] leaf.**

NOTE: The above conclusion may be a function of the natural variance found in botanicals. The growing and drying conditions, age, seasonal variations, etc. all play a role in the phytochemical fingerprint of botanicals and variations are expected.

Examined, Reviewed & Authorized by: Sandy Sudberg, Administrative Supervisor, Alkemists Labs

Report Date: 11/08/13

Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to SKU-D2, N4, S2.

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