

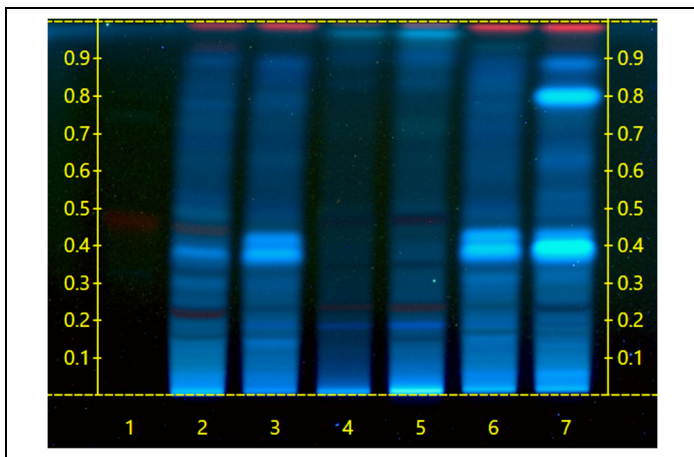
Certificate Issued To:
Lost Empire Herbs
8301 NW 101st Ter.
Kansas City, MO 64153-2321
United States



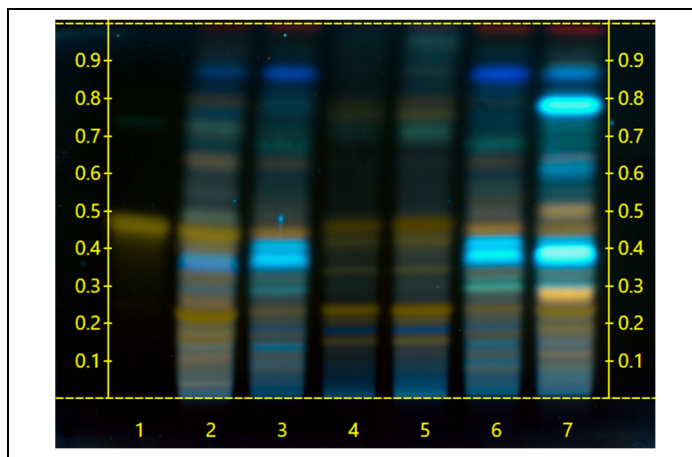
Work performed at:
Alkemist Labs
12661 Hoover Street
Garden Grove, CA 92841
714-754-HERB (4372)
714-668-9972 (FAX)
Sales@Alkemist.com
www.Alkemist.com

Certificate of Analysis: Horny Goat Weed (BHW12OCT23)
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name: Lost Empire Herbs
Title: Horny Goat Weed
Plant Part: leaf
Sample Received: 10/26/23
Sample Packaging: Clear Reclosable Plastic Bag
Form of Botanical: powdered extract
Appearance: Fine brown powder
Lot Number: (BHW12OCT23) → Lanes 4(1µl), 5(3µl)
Sample: 23299ESB_1
Latin Name: *Epimedium* sp.
Reference Sample: Lane 2(3µl) (FS05405MAYA) *Epimedium sagittatum* (leaf); Lane 3(3µl) (CI34010BIN) *Epimedium grandiflorum* (leaf); Lane 6(3µl) (OY18911SWH1) *Epimedium brevicornum* (herb); Lane 7(3µl) (IAD25611MRH1) *Epimedium* sp. (leaf); 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 213604
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: formic acid: Acetic acid: water [10/0.9/0.9/2]
Detection: (1) UV 366 nm
(2) Natural Product + Polyethylene Glycol, 366nm (Reich, E., 2007)
Reference Standard: Lane 1(3µl) Icariin (00009033-612, CHR), Methanol (22090169, VWR)
Reference Source: Method Developed by Alkemist Labs
IDT-SOP-72-01

Comments & Conclusions: Lanes 4, 5 are the test sample Horny Goat Weed (BHW12OCT23) Lanes 2, 3, 6, 7 are the reference samples used for comparison. This test sample, Horny Goat Weed (BHW12OCT23), has characteristics of the chromatographic profile of *Epimedium* sp. reference samples used above. **This test sample Horny Goat Weed (BHW12OCT23) indicates the presence of *Epimedium* sp. leaf.**

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: 11/01/23

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 BHW12OCT23. 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