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

Work performed at:
Alkemist Labs
12661 Hoover Street
Garden Grove, CA 92841
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714-668-9972 (FAX)
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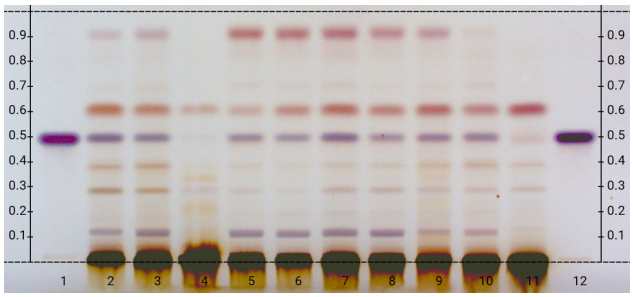
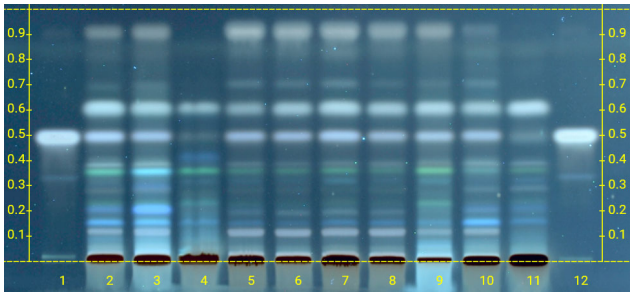
Certificate of Analysis: Maca (BMACA26MAR24)

High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name:	Lost Empire Herbs	**Sample Received:**	04/01/24
Title:	Maca	**Form of Botanical:**	crude plant powder
Plant Part:	root	**Lot Number:**	(BMACA26MAR24) →Lane 8(6µl)
Appearance:	Fine tan powder	**Sample:**	24092XCB_1
Sample Packaging:	Clear Reclosable Plastic Bag		

Latin Name: *Lepidium meyenii* Walp. [Brassicaceae]
Reference Sample: Lane 2(6µl) (GC10817AP1), Lane 3(6µl) (GC23809CRB) Lepidium meyenii (root); Lane 10(6µl) (GC07317AHP1), Lane 11(6µl) (19193EQO) Lepidium meyenii (tuber); held at Alkemist Labs, Garden Grove, CA.
Analyst: N.Afendikova, N.Alvarez, K.Chopra, J.Congjuico, A.Foults, A.Hernandez, N.Hoang, R.Islam, S.Kabbaj, J.Mares, M.Nguyen, S.Sudberg, L.Tang, K.Tran 225608
Sample Preparation: 0.3g+3mL Methanol, sonicate/heat at 50°C for 30 min.
Stationary Phase: Silica gel 60, HPTLC plates
Mobile Phase: Toluene: Ethyl Acetate: Acetic acid [7/3.3/0.3]
Detection: (1) 10% Sulfuric, 100°C, 2min, Vis (Reich, E., 2007)
(2) 10% Sulfuric, 100°C, 2min, 366nm (Reich, E., 2007)
Reference Standard: Lanes 1(3µl) and 12(3µl) β-Sitosterol (1LK0992, VWR), Methanol (23J0361009, VWR)
Reference Source: Method developed by Alkemist Labs
IDT-SOP-72-01

Comments & Conclusions: Lane 8 is the test sample Maca (BMACA26MAR24). Lanes 2, 3, 10, 11, are the reference samples used for comparison. This test sample, Maca (BMACA26MAR24) is consistent with the chromatographic profile of the reference samples of *Lepidium meyenii,* used above. **This test sample Maca (BMACA26MAR24) has characteristics of *Lepidium meyenii* 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: Khanh N Tran, HPTLC, R&D Supervisor, Alkemist Labs

Khanh Tran
HPTLC, R&D Technical Supervisor
Digitally signed by Khanh Tran
Date: 2024.04.10 16:12:36 -07'00'

Report Date: 04/05/24

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 BMACA26MAR24.