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
714-754-HERB (4372)
714-668-9972 (FAX)
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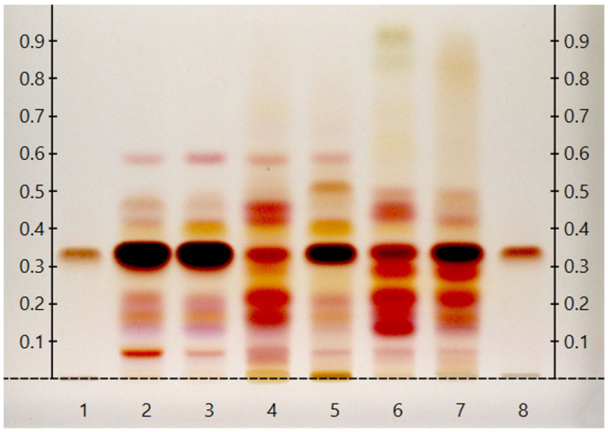
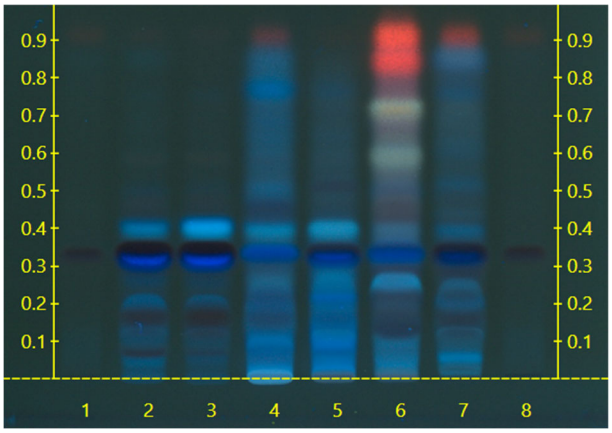
Certificate of Analysis: Mucuna (BIMUC14JUN22)

High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name:	Lost Empire Herbs
Title:	Mucuna
Plant Part:	seed
Sample Received:	06/24/22
Sample Packaging:	Clear Reclosable Plastic Bag
Form of Botanical:	powdered extract
Appearance:	Fine beige powder
Lot Number:	(BIMUC14JUN22) →Lane 4(6µl)
Sample:	22175KKC_1
Latin Name:	*Mucuna pruriens* (L.) DC. [Fabaceae]
Reference Sample:	Lane 2(6µl) (21256FHS), Lane 3(6µl) (XK20106AP) Mucuna pruriens (seed); Lane 6(6µl) (XK22306AP1) Mucuna pruriens (herb (leaf, stem)); Lane 7(6µl) (XK25018NRPL2) Mucuna pruriens (root); held at Alkemist Labs, Garden Grove, CA.
Analyst:	J.Mares, K.Chopra, K.Montoya, K.Tran, M.Levine, N.Carson, N.Hoang, N.Afendikova, P.Hoang, S. Kabbaj, S.Sudberg, T.Louis, D.Robinson 179450
Sample Preparation:	0.3g+3mL 70% grain Ethanol, sonicate/heat at 50° C for 30 min.
Stationary Phase:	Silica gel 60, HPTLC plates
Mobile Phase:	n-butanol: Acetic acid: water [8/2/2]
Detection:	(1) Ninhydrin, 120°C, 5min, vis (Reich, E., 2007) (2) Ninhydrin, 120°C, 5min, 366nm (Reich, E., 2007)
Reference Standard:	Lanes 1(3µl) and 8(3µl) dopa (SLCB0627, SigAl)
Reference Source:	BTM-715-0508 IDT-SOP-72-01

Comments & Conclusions: Lane 4 is the test sample Mucuna (BIMUC14JUN22). Lanes 2, 3, 6, 7, are the reference samples used for comparison. This test sample, Mucuna (BIMUC14JUN22) is consistent with the chromatographic profile of the reference samples of *Mucuna pruriens,* used above. **This test sample Mucuna (BIMUC14JUN22) has characteristics of *Mucuna pruriens* seed.**

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.

Khanh Tran
HPTLC, R&D Technical Supervisor

Digitally signed by Khanh Tran
DN: cn=Khanh Tran, o=Alkemist Laboratories, ou, email=Khanh@alkemist.com, c=US
Date: 2022.07.01 15:43:38 -07'00'

Examined, Reviewed & Authorized by: Khanh N Tran, HPTLC, R&D Supervisor, Alkemist Labs

Report Date: 07/01/22

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 BIMUC14JUN22.

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