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) sales@alkemist.com

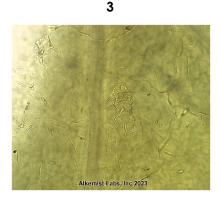
Certificate of Analysis: Gynostemma (BGYNO18SEP23)

Microscopy with Digital Photo-Documentation



1





Report Date: 10/5/2023

Company Name: Lost Empire Herbs Title: Gynostemma

Plant Part: Leaf Sample Received: 10/2/2023

Sample Description: Clear Reclosable Plastic Bag

Form of Botanical: cut and sifted Appearance: (1) green cuts Lot: BGYNO18SEP23 Sample: 23275XYW_1

Latin Name: Gynostemma pentaphyllum (Thumb.) Makino [Cucurbitaceae]

Reference Sample: FK14902SWH; FK09113AP1 Gynostemma pentaphyllum (Thumb.) Makino [Cucurbitaceae] authenticated by

macroscopic, microscopic &/or TLC studies according to the reference sources cited below; held at Alkemist Labs,

Garden Grove, CA.

Analyst: E. Sudberg, I. French, P. Hoang

Magnification: (2) 400X

Chemical Reagents: (2) acidified chloral hydrate glycerol solution Sample Findings: (2) non-glandular hair with linear striations

Magnification: (3) 400X

Chemical Reagents: (3) acidified chloral hydrate glycerol solution

Sample Findings: (3) glandular hair with 4-celled elliptical head and 1 to 2-celled stalk

Reference Source: Hong Kong Chinese Materia Medica Standards (HKCMMS); Chinese Medicinal Identification An Illustrated

Approach, Zhao and Chen, 2014; Internal Reference Sample MIC-SOP-54-04, MIC-SOP-54-05, MIC-SOP-54-06, MIC-SOP-510-07

<u>Comments & Conclusions:</u> This sample has characteristics of Gynostemma pentaphyllum (Thumb.) Makino [Cucurbitaceae] aerial parts based on comparison with authenticated reference samples and the characteristics described in the references cited above. The characteristic cellular structures identified in this sample are the non-glandular hair with linear striations seen in micrograph (2) above. In micrograph (3) we see the glandular hair with 4-celled elliptical head and 1 to 2-celled stalk. This test sample, Gynostemma (BGYNO18SEP23), has characteristics of Gynostemma pentaphyllum (Thumb.) Makino [Cucurbitaceae] aerial parts.

NOTE: The presence of soluble excipients and other plant species material was not detected in this test sample.

Analyzed by: Iris French

Examined, Reviewed & Authorized by: Élan M Sudberg, CEO



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