

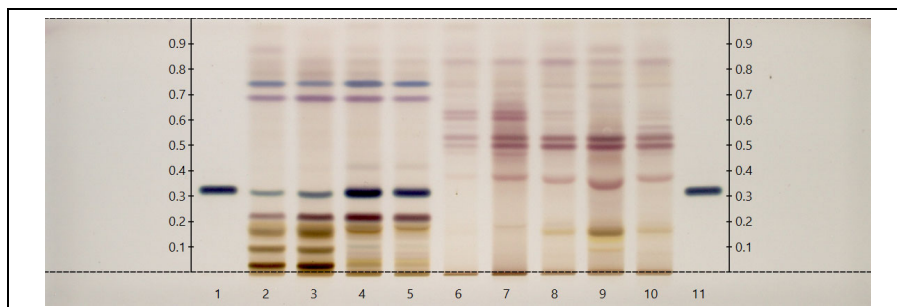
Certificate Issued To:  
Lost Empire Herbs  
8301 NW 101st Ter.  
Kansas City, MO 64153-2321  
United States



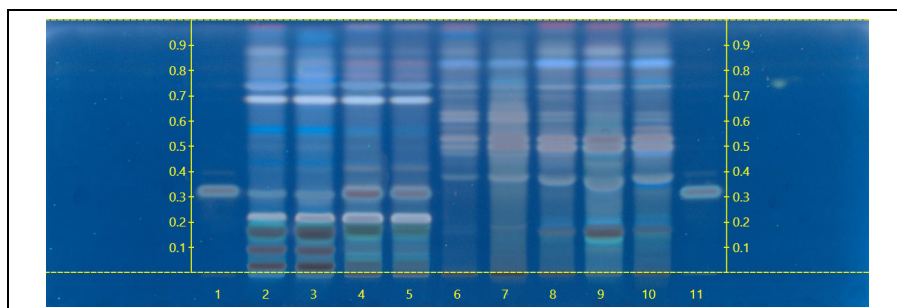
Work performed at:  
**Alkemist Labs**  
12661 Hoover Street  
Garden Grove, CA 92841  
714-754-HERB (4372)  
714-668-9972 (FAX)  
Sales@Alkemist.com  
www.Alkemist.com

**Certificate of Analysis: Bacopa (BBACO31OCT23)**  
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



**Company Name:** Lost Empire Herbs  
**Title:** Bacopa  
**Plant Part:** entire  
**Appearance:** brown powder  
**Sample Packaging:** Clear Reclosable Plastic Bag

**Sample Received:** 12/08/23  
**Form of Botanical:** powdered extract  
**Lot Number:** (BBACO31OCT23) → Lane 6(0.5µl)  
**Sample:** 23342YYN\_1

**Latin Name:** *Bacopa monnieri* (L.) Pennell [Scrophulariaceae]  
**Reference Sample:** Lane 2(2µl) (DA20909MRH) *Centella asiatica* (herb); Lane 3(2µl) (DA20109CRB) *Centella asiatica* (aerial part); Lane 9(2µl) (UL26609PB), Lane 10(2µl) (UL21107AHP) *Bacopa monnieri* (herb); held at Alkemist Labs, Garden Grove, CA.  
**Analyst:** N.Afendikova, N.Alvarez, K.Chopra, A.Foults, M.Fox, N.Hoang, P.Hoang, R.Islam, S.Kabbaj, J.Mares, K.Montoya, S.Sudberg, L.Tang, K.Tran, N.Waldstreicher 217123  
**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:** Dichloromethane: Methanol: Water [7/3/0.5]  
**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 11(3µl) Asiaticoside (00011030-131, CHR), Methanol (224277, FSC)  
**Reference Source:** HPTLC ASSOCIATION  
IDT-SOP-72-01

**Comments & Conclusions:** Lane 6 is the test sample Bacopa (BBACO31OCT23) Lanes 2, 3, 9, 10 are the reference samples used for comparison. This test sample, Bacopa (BBACO31OCT23), is consistent with the chromatographic profile of the reference samples of *Bacopa monnieri* used above. **This test sample Bacopa (BBACO31OCT23) has characteristics of a customized extract derived from *Bacopa monnieri* herb.**

**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: Nam Hoang, HPTLC, R&D Lead Chemist, Alkemist Labs

Report Date: 12/14/23



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to BBACO31OCT23.  
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