

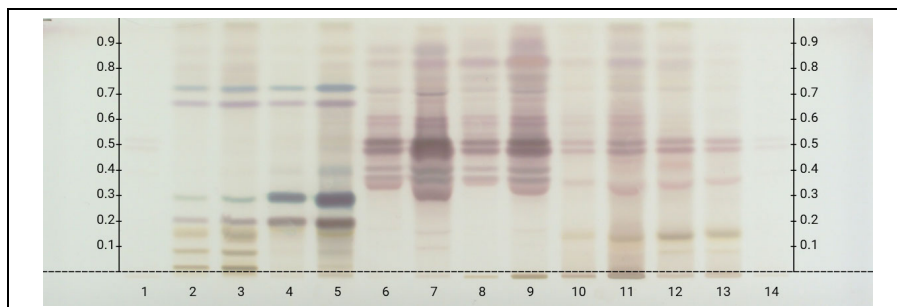
Certificate Issued To:  
Lost Empire Herbs  
8301 NW 101st Ter.  
Kansas City, MO 64153-2321  
United States



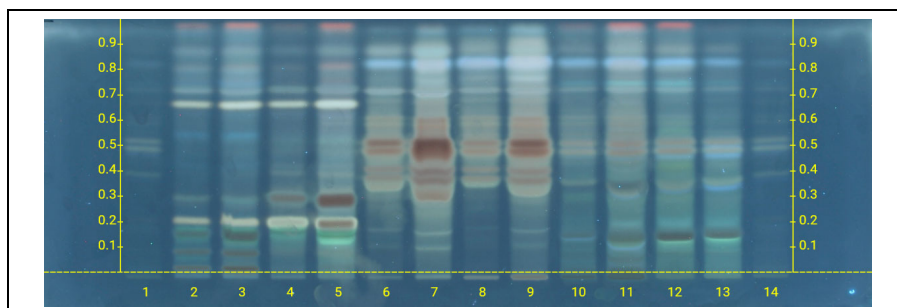
Work performed at:  
**Alkemist Labs**  
12661 Hoover Street  
Garden Grove, CA 92841  
714-754-HERB (4372)  
714-668-9972 (FAX)  
Sales@Alkemist.com  
www.Alkemist.com

**Certificate of Analysis: Bacopa (BBACO27MAR24)**  
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



<b>Company Name:</b>	Lost Empire Herbs	<b>Sample Received:</b>	04/08/24
<b>Title:</b>	Bacopa	<b>Form of Botanical:</b>	powdered extract
<b>Plant Part:</b>	leaf	<b>Lot Number:</b>	(BBACO27MAR24) →Lanes 10(0.5µl), 11 (2µl)
<b>Appearance:</b>	Fine pale olive powder	<b>Sample:</b>	24099NYM_1
<b>Sample Packaging:</b>	Clear Reclosable Plastic Bag		

**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 12(2µl) (UL21010CRB), Lane 13(2µl) (UL26609PB) Bacopa monnieri (herb); held at Alkemist Labs, Garden Grove, CA. 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 227828  
**Analyst:**  
**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 14(3µl) Powdered Bacopa Extract (F0J416, USP), Methanol (23G1961051, VWR)  
**Reference Source:** HPTLC ASSOCIATION  
IDT-SOP-72-01

**Comments & Conclusions:** Lanes 10, 11 are the test sample Bacopa (BBACO27MAR24). Lanes 2, 3, 12, 13, are the reference samples used for comparison. This test sample, Bacopa (BBACO27MAR24) is consistent with the chromatographic profile of the reference samples of *Bacopa monnieri*, used above. **This test sample Bacopa (BBACO27MAR24) has characteristics of Bacopa monnieri 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: Nam Hoang, HPTLC, R&D Lead Chemist, Alkemist Labs

Report Date: 05/01/24



Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to BBACO27MAR24.  
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