

Certificate Issued To:

Private Company

USA



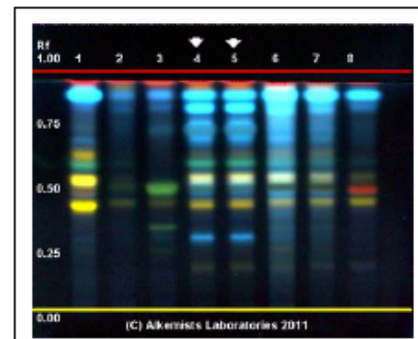
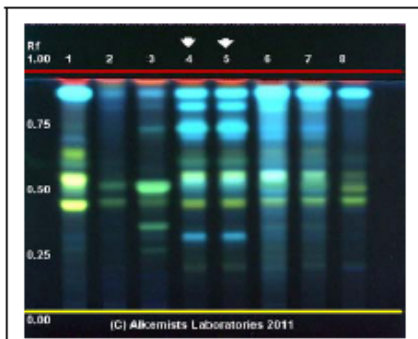
Work performed at:

Alkemists Laboratories
1260 Logan Ave B2
Costa Mesa, CA 92626
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714-668-9972 (FAX)
E-mail: info@alkemist.com
Web Site: www.alkemist.com

Certificate of Analysis: *Mentha haplocalyx* (081410B3MH)
High Performance Thin-Layer Chromatography with Photo-Documentation

1

2



Company Name: _____
 Title: *Mentha haplocalyx*
 Plant Part: aerial part
 Sample Received: 7/29/2011
 Sample Description: ~200g in a metallic bag
 Form of Botanical: crude plant powder
 Appearance: green powder
 Source/Location: na/na
 Lot #: (081410B3MH) → Lanes 4(3µl), 5(3µl)
 Sample #: IR21011A8G1
 Latin Name: *Mentha canadensis* / *Mentha haplocalyx* Bria. [Lamiaceae]
 Reference Sample #: Lane 2(5µl) (IR26103SWH) *Mentha canadensis* / *Mentha haplocalyx* (herb); Lane 3(5µl) (IR25803MTG) *Mentha canadensis* / *Mentha haplocalyx* (leaf); Lane 6(3µl) (AOO3490TLF) *Mentha gracilis* (leaf); Lane 7(3µl) (AOO36110TLF) *Mentha gracilis* (leaf); Lane ...
 authenticated by macroscopic, microscopic &/or TLC studies according to the reference source cited below, held at Alkemists Laboratories, Costa Mesa, CA.

Analyst: M. Lababidi & SS Sudberg 20990
 Sample Prep: 0.3g+3mL CH₃OH sonicate/heat @~50° C ~ 1/2 hr.
 Stationary Phase: Silica gel 60, F54, 10 x 10 cm HPTLC plates
 Mobile Phase: ethyl acetate: Acetic acid: HCOOH: H₂O [10/1.1/1.1/2]
 Detection: (1) Natural Product Reagent → UV 365 nm
 (2) Natural Product Reagent + PEG → UV 365 nm
 Reference Std: ~0.1% in CH₃OH
 Reference Source: Method Developed by Alkemists Laboratories
 SOP-700-0001-R3

Comments & Conclusions: Yellow line = sample origin @ 10mm, red line = solvent front @ 70mm. Lanes 4, 5 are the test sample *Mentha haplocalyx* (081410B3MH). Lanes 2, 3, 6, 7, 1, 8 are the authenticated reference samples used for comparison. **This test sample, *Mentha haplocalyx* (081410B3MH), is consistent with the chromatographic profile of the reference samples of *Mentha* spp. used above. This test sample, *Mentha haplocalyx* (081410B3MH) is characteristic of *Mentha* spp. aerial part.**

Examined, Reviewed & Authorized by: Sidney Sudberg, Director, Alkemists Labs

Note: Any unidentified lanes in the above chromatograms are confidential and may represent internal studies or other test samples not related to 081410B3MH.

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 Alkemists Laboratories, 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. © 2011 Alkemists Laboratories, Inc. All Rights Reserved

Digitally signed by Sidney Sudberg
DN: cn = Sidney Sudberg, c = US, o =
Alkemists Laboratories
Location: Costa Mesa, CA
Date: 2011.08.10 12:27:10 -0700

Report Date: 8/10/2011