

Certificate Issued To:
Davis Biotech Research Labs
1310 Dawsonville Hwy Suite D
Gainesville, GA 30501
USA



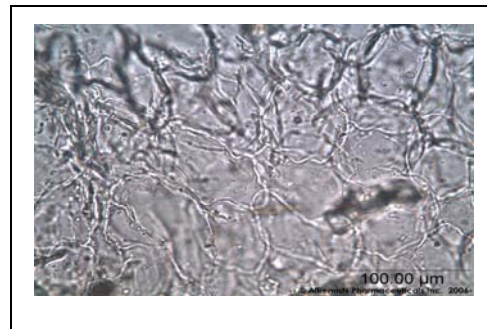
Work performed at:
Alkemists Pharmaceuticals Inc.
1260 Logan Ave B3
Costa Mesa, CA 92626
714-754-HERB (4372)
714-668-9972 (FAX)
E-mail: phytolab@alkemist.com
Web Site: www.alkemist.com

Certificate of Analysis: Hoodia (21902EXP1207)
Macroscopy & Microscopy with Digital Photo-Documentation

1

2

3



Company Name:	Davis Biotech Research Labs
Title:	Hoodia
Plant Part:	aerial part
Sample Received:	1/9/2006
Sample Description:	60 capsules in a black plastic jar
Form of Botanical:	crude plant powder
Appearance:	(1) beige capsules
Lot #:	21902EXP1207
Sample #:	AU00906DBL
Latin Name:	Hoodia gordonii
Reference Sample #:	Voucher Specimen AU20604AP, AU19004PHX, AU11004CHR Hoodia gordonii authenticated by macroscopic, microscopic &/or TLC studies according to the reference sources cited below held at Alkemists Pharmaceuticals, Costa Mesa, CA.
Examiner:	EMS
Sample Findings:	(1) Front and back of sealed bottle submitted
Magnification:	(2) 400X
Chemical Reagents:	(2) acidified chloral hydrate glycerol solution
Sample Findings:	(2) long fibers showing whirled striations
Sample Prep:	(3) 400X
Chemical Reagents:	(3) acidified chloral hydrate glycerol solution
Sample Findings:	(3) large thin walled parenchyma showing wrinkled cell walls
Reference Source:	Method Developed by Alkemists Pharmaceuticals USP-PF, Vol. 27(2) [Mar.-Apr. 2001]; Official Methods of Analysis of AOAC, 16 th Ed.

Comments & Conclusions:

This sample is representative of Hoodia gordonii aerial part based on authenticated reference samples and the consistent characteristic cellular structure of an aerial part as well as the reference cited above. The characteristic cellular structures identified in this sample are the long fibers showing whirled striations seen in micrograph (2) above. In micrograph (3) we see the large thin walled parenchyma showing wrinkled cell walls. **These characteristic cellular structures confirm the identity of Hoodia (21902EXP1207).**

Analyzed by: Élan M Sudberg
Authorized by: Sidney Sudberg, Director, Alkemists Pharmaceuticals

Report Date: 1/17/2006

This report applies to the sample investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public and this laboratory, this report is submitted and accepted for the exclusive use of the client whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from this laboratory.
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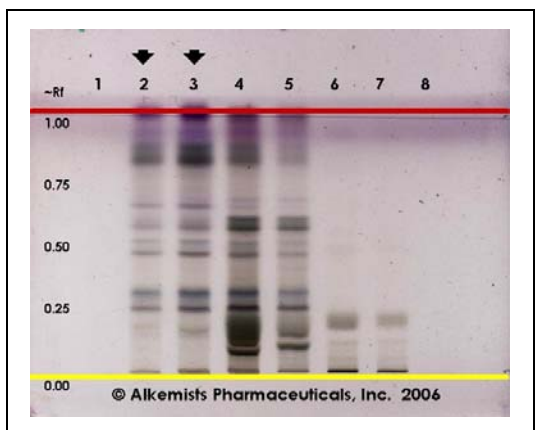
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1310 Dawsonville Hwy Suite D
Gainesville, GA 30501
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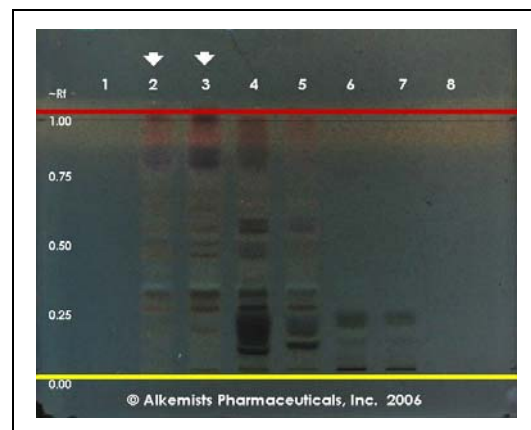
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E-mail: info@alkemist.com
Web Site: www.alkemist.com

Certificate of Analysis: Hoodia (21902EXP1207)
High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name: Davis Biotech Research Labs
Title: Hoodia
Plant Part: aerial part
Sample Received: 1/9/2006
Sample Description: 60 capsules in a black plastic jar
Form of Botanical: crude plant powder
Appearance: beige capsules
Lot #: (21902EXP1207) → Lanes 2(2µl), 3(4µl)
Sample #: AU00906DBL
Latin Name: Hoodia gordonii
Reference Sample #: Lane 4(3µl) (AU36504FMG) (aerial part); Lane 5(3µl) (AU11805MHS1) (aerial part) Hoodia gordonii authenticated by macroscopic, microscopic &/or TLC studies according to the reference source cited below, and matching the voucher specimen (AU20604AP) held at Alkemists Pharmaceuticals, Costa Mesa, CA.

Examiner: SSS
Sample Prep: 0.3 g + 3 ml CH₃OH sonicated + heated in a dry block incubator @ 65° C ~ 1 hr.
Stationary Phase: Silica gel 60, F₂₅₄, 10 x 10 cm HPTLC plates
Mobile Phase: ethyl acetate: methanol: water [7.7/1.7/1]
Detection: (1) Vanillin/H₂SO₄ Reagent → 110° C 5 min → visible light
(2) Vanillin/H₂SO₄ Reagent → 110° C 5 min → UV 365 nm
Reference Std: Lanes 1(5µl) and 8(10µl) Aescin (93H1029, Sigma-Aldrich) ~0.1% in CH₃OH
Reference Source: Method Developed by Alkemists Pharmaceuticals

Comments & Conclusions: Yellow line = sample origin @ 10mm, red line = solvent front @ 60mm. Lanes 2, 3 are the test sample Hoodia (21902EXP1207). Lanes 4, 5 are the authenticated reference samples used for comparison. As per the reference cited above & the reference samples used for comparison, this test sample is characteristic of Hoodia gordonii. **The chromatographic profile demonstrated above confirms the identity of Hoodia (21902EXP1207).**

Authorized by: Sidney Sudberg, Director, Alkemists Pharmaceuticals

Report Date: 1/16/2006

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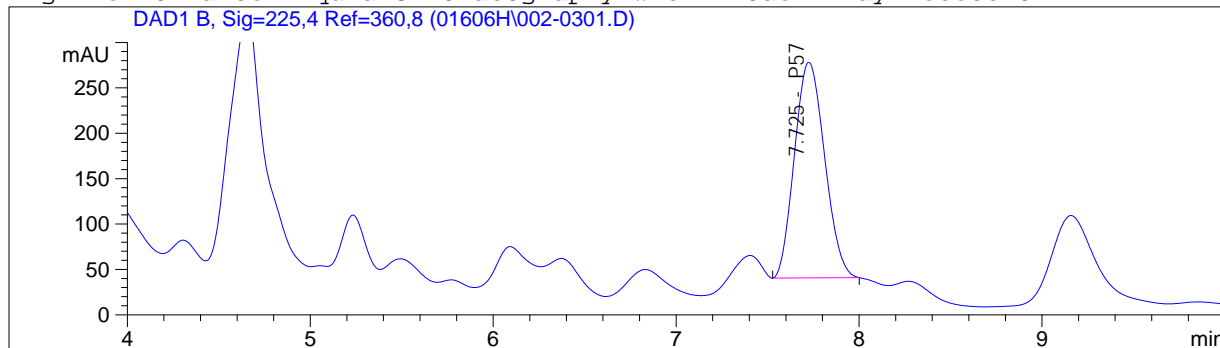
****Certificate of Analysis****

Assay for:

Hoodia gordonii Qualitative Analysis for Identity & Purity;
Semi-Quantitative Analysis of P57

Hoodia gordonii: (Lot# 21902EXP1207)

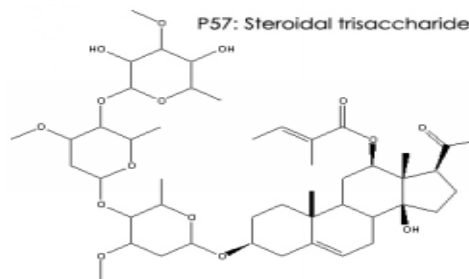
High Performance Liquid Chromatography with Diode Array Detection



Sample : Hoodia gordonii herb

Sample #: AU00906DBL

Ret. Time	Compound Name	Weight %
7.725	P57	0.43



HPLC column : Gemini 5 μ C18 250 X 4.6mm

Mobile Phase A: Water

Mobile Phase B: ACN

Isocratic: 30% A 70% B

Flow rate : 1.0 mL/min

UV detection : 225nm

Injection : 25 μ L

Column Temperature: 30° C

Sample Preparation: 0.5 g sample in 5 mL MeOH, sonicated 20 min, heated 20 min at 65° C, filtered into HPLC vial.

Reference standard: P57, Lot # 16001-1247; Chromadex, Santa Ana, CA.

References: US Patent # US6,376,657 B1 Van Heerden et al.

Comments & Conclusions: The chromatographic profile demonstrated above is characteristic of Hoodia gordonii & confirms the identity of this test sample (21902EXP1207) based upon the fingerprint of an authentic reference specimen of Hoodia gordonii deposited in the herbarium at Alkemists Pharmaceuticals, Inc. and the presence of P57.

Analysis Date: 1/16/2006

Analyzed by: SS/JT

Authorized by: Sidney Sudberg, Director

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