

Certificate Issued To:



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

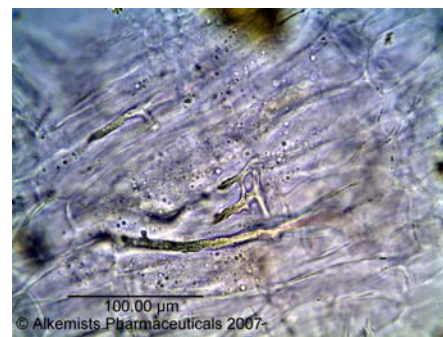
Certificate of Analysis: *Taraxacum officinalis* root ()

Macroscopy & Microscopy with Digital Photo-Documentation

1

2

3



Company Name: Taraxacum officinalis
Title: root
Plant Part: root
Sample Received: 4/4/2007
Sample Description: ~4g in a zip locked bag
Form of Botanical: whole/dry
Appearance: (1) ~1 inch brown fragments of root
Lot #:
Sample #:
Latin Name: Taraxacum officinalis rt Weber ex F.H. Wigg. [Asteraceae]
Reference Sample #: NA10699AHP Taraxacum officinalis rt Weber ex F.H. Wigg. [Asteraceae] authenticated by macroscopic, microscopic &/or TLC studies according to the reference source cited below held at Alkemists Pharmaceuticals, Costa Mesa, CA.

Examiner: EMS
Magnification: (2) 400X
Chemical Reagents: (2) acidified chloral hydrate glycerol solution
Sample Findings: (2) collapsed trichome from the crown of the root
Magnification: (2) 400X
Chemical Reagents: (3) acidified chloral hydrate glycerol solution
Sample Findings: (3) anastomosing laticiferous vessels
Reference Source: Powdered Vegetable Drugs, Jackson, B., 1968;
American Herbal Pharmacopoeia & Therapeutic Compendium
USP-PF, Vol. 27(2) [Mar.-Apr. 2001]; Official Methods of Analysis of AOAC, 16th Ed.

Comments & Conclusions:

This sample is representative of *Taraxacum officinalis* root based on an authenticated reference samples and the consistent characteristic cellular structure of a root as well as the references cited above. The characteristic cellular structures identified in this sample are the collapsed trichome from the crown of the root seen in micrograph (2) above. In micrograph (3) we see the anastomosing laticiferous vessels. **This test sample, *Taraxacum officinalis* (), is consistent with the microscopic characteristics of the reference samples of *Taraxacum officinalis* used above & is characteristic of *Taraxacum officinalis* root.**

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

Report Date: 4/17/2007

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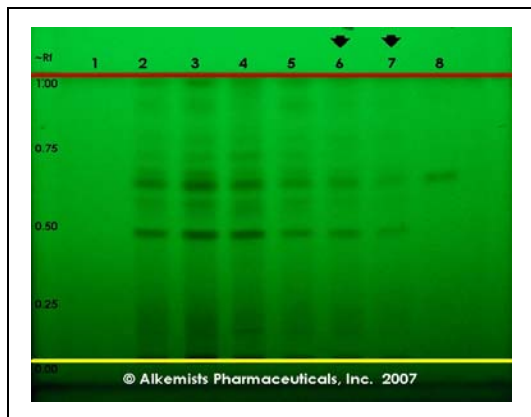
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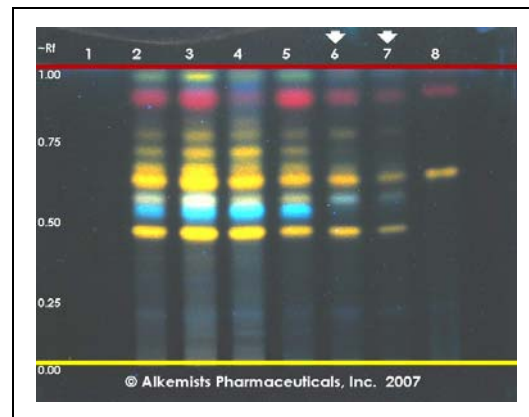
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Certificate of Analysis 1 of 2: St John's Wort () High Performance Thin-Layer Chromatography with Photo-Documentation

1



2



Company Name:

Title: St John's Wort

Plant Part: leaf/stem

Sample Received: 5/10/2007

Sample Description: ~20.5g in a zip lock bag

Form of Botanical: cut and sifted

Appearance: brown and beige fragments of leaf

Lot #: () → Lanes 6(4μl), 7(2μl)

Sample #:

Latin Name: Hypericum perforatum L. [Clusiaceae]

Reference Sample #: Lane 4(3μl) (LF20105BMX2) (Vouchered specimen) (herb); Lane 5(3μl) (LF15399AP) (flower)
Hypericum perforatum authenticated by macroscopic, microscopic &/or TLC studies according to the reference source cited below, held at Alkemists Pharmaceuticals, Costa Mesa, CA.

Examiner: SSS 4194

Sample Prep: 0.3 g + 3ml 70% grain EtOH sonicated + heated in a dry block incubator @ 65° C ~ 1 hr.; dilute 1:5

Stationary Phase: Silica gel 60, F₂₅₄, 10 x 10 cm HPTLC plates

Mobile Phase: ethyl acetate: AcCOOH: HCOOH: H₂O [10/1.1/1.1/2]

Detection: (1) UV 254 nm

(2) Natural Product Reagent + PEG → UV 365 nm

Reference Std: Lane 1(10μl) Hyperforin (FN101204-01, Chromadex); Lane 8(5μl) Hypericin (010200, Sigma-Aldrich), Hyperoside (08916-418, Chromadex) ~0.1% in CH₃OH

Reference Source: Plant Drug Analysis, Wagner, H., 1996

Comments & Conclusions: Yellow line = sample origin @ 10mm, red line = solvent front @ 70mm. Lanes 6, 7 are the test sample St John's Wort (). Lanes 4, 5 are the authenticated reference samples used for comparison. **This test sample, St John's Wort (), is consistent with the chromatographic profile of the reference samples of Hypericum perforatum used above & is characteristic of Hypericum perforatum leaf/stem.**

Authorized by: Sidney Sudberg, Director, Alkemists Pharmaceuticals

Report Date: 5/21/2007

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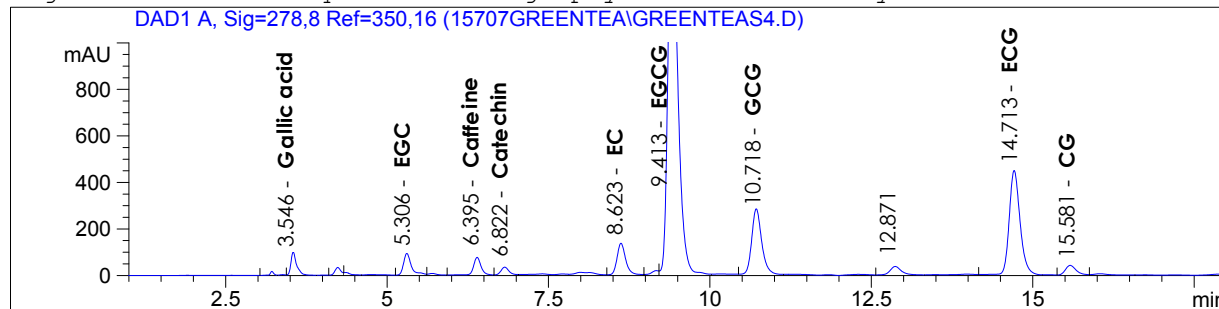


"CERTIFICATE OF ANALYSIS"

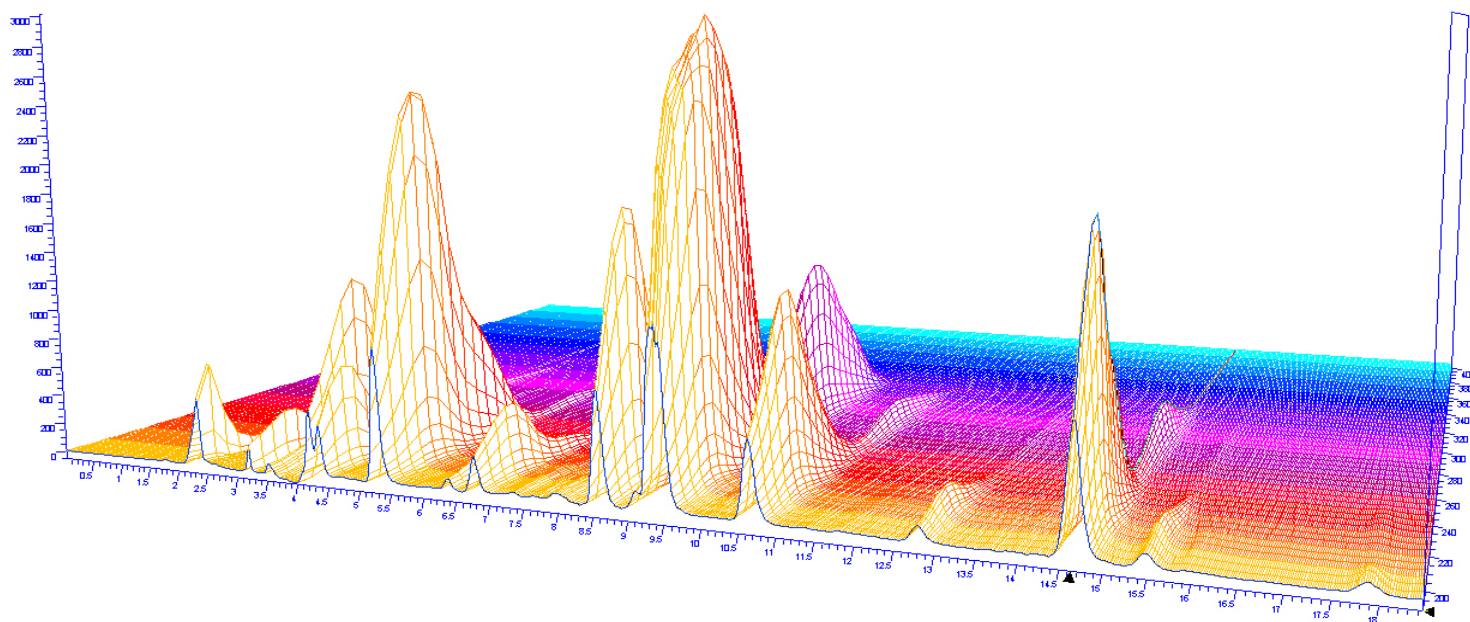
Determination of Catechins in Green Tea Extract by HPLC

High Performance Liquid Chromatography with Diode Array Detection

DAD1 A, Sig=278,8 Ref=350,16 (15707GREENTEA\GREENTEA.S4.D)



Test Sample: Green Tea capsules (275mg) - Powder Extract 80% - AP #IM143 -



Chromatographic Conditions:

Column : Gemini C18 150 X 4.6mm
 Column Temp : 25° C
 Flow Rate : 0.7 mL/min
 Injection : 20 µL
 UV Detection: 278nm
 Method : GreenTea.M
 Sequence : 15107GreenTea.S

Mobile Phase C: 0.01% TFA/H2O
 Mobile Phase B: ACN
 Gradient

Time	%C	%B
t=0min	85	15
t=18.5min	73	27

Sample Preparation: Empty a 20 capsule composite and mix powder well. Weigh 40mg, add 20ml of diluent (0.01% TFA in water) and sonicate for 1h at 55°C. Bring total

Conclusion: This test sample of Green Tea PE contains 56.5% by weight of catechins. With an average fill weight of 275mg, each capsule contains 155mg of total catechins.

(Label claim / expected level: 220 mg/capsule)

Analysis Date: 6/7/2007

Analyzed by C.Ventre, PhD

Authorized by S.Sudberg, Director

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