



INDOFINE Chemical Company, Inc.

121 Stryker Lane, Bldg. 30, Suite 1 • Hillsborough, NJ 08844 • U.S.A.

Phone: (908) 359-6778 • FAX: (908) 359-1179

website: www.indofinechemical.com

e-mail: chemical@indofinechemical.com

CERTIFICATE OF ANALYSIS

Catalog number: 020535

Product name: **COUMESTROL**

Cas Number: [479-13-0]

Lot Number: 1401416

Chemical Formula: C₁₅H₈O₅

Molecular Weight: 268.22

Appearance: Cream color powder

Solubility: Soluble in DMSO

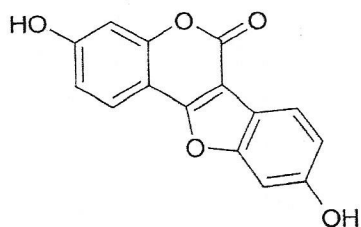
TLC: Hexane:Ethyl acetate (6:4)

Moisture content: 0.4%

NMR Spectrum: Enclosed (Confirms to the structure)

Storage: Store in a cool dry place

Purity (HPLC): 99.07%





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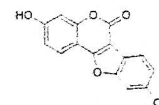
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HPLC ANALYSIS

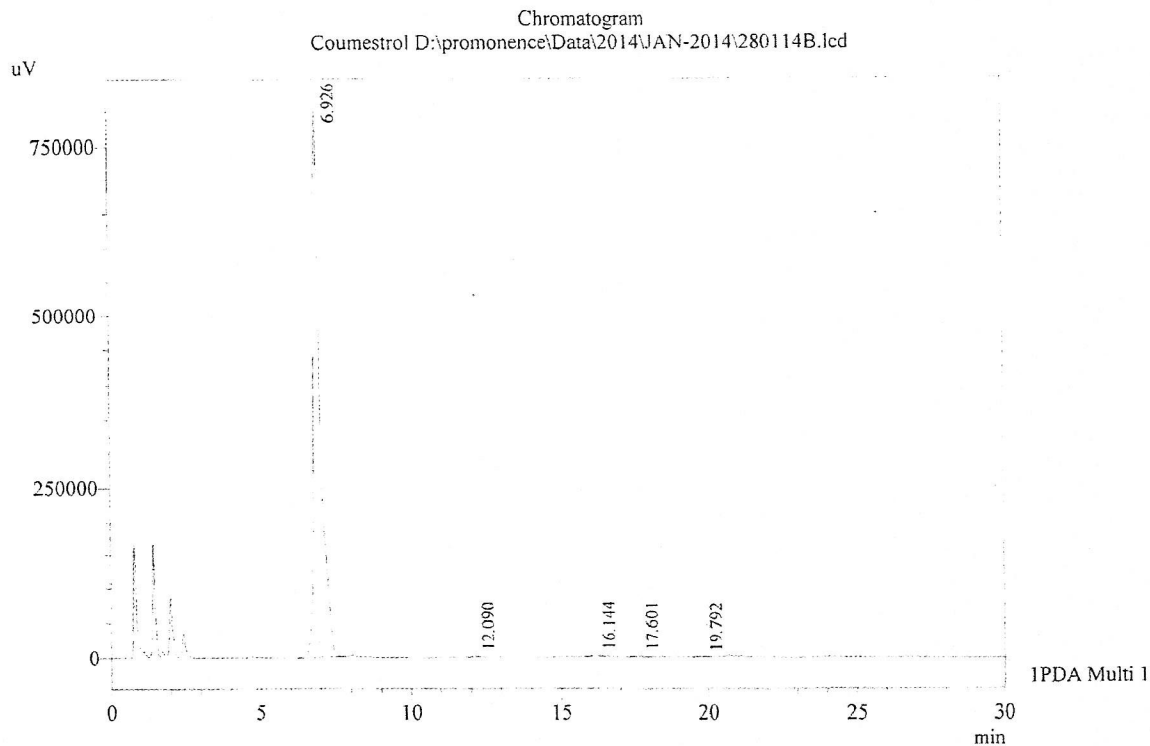
Acquired by : Sanjeev
Sample Name : Coumestrol
Sample ID : 1.75 gms Lot
Injection Volume : 20 uL
Data Filename : 280114B.lcd
Method Filename : Coumestrol.lcm

Catalog No.: 020535
Product Name: Coumestrol
Lot No.: 1401416



Column : Inertsil ODS-3V, (150mm x4.6mm 5.0µ)
Flow : 2.000 mL/min.
Mobile Phase : A(0.01M OPA in water) B(Acetonitrile)
0.01 70 30
20.0 50 50
25.0 50 50
30.0 70 30

Diluent : Ethanol: Acetonitrile: Water (4:1:5)



1 PDA Multi 1 / 220nm 4nm

PeakTable

| Peak# | Name | Ret. Time | Area | Area % | Relative Retention Time |
|-------|------------|-----------|----------|--------|-------------------------|
| 1 | Coumestrol | 6.926 | 12888392 | 99.07 | 1.00 |
| 2 | RT:12.090 | 12.090 | 27833 | 0.21 | 1.75 |
| 3 | RT:16.144 | 16.144 | 40939 | 0.31 | 2.33 |
| 4 | RT:17.601 | 17.601 | 38750 | 0.30 | 2.54 |
| 5 | RT:19.792 | 19.792 | 13796 | 0.11 | 2.86 |
| Total | | | 13009711 | 100.00 | |



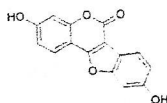
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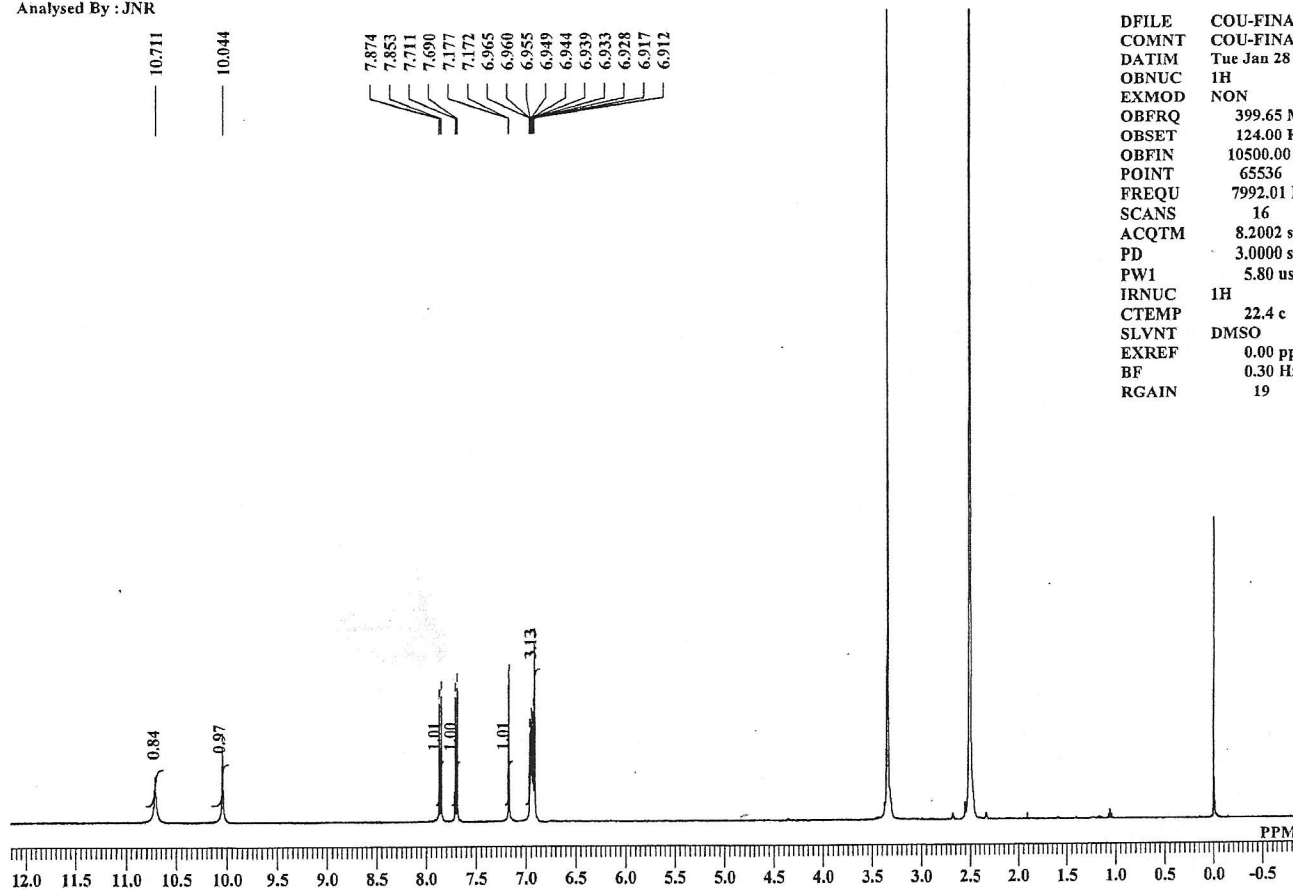
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Catalog No.: 020535
Product Name: Coumestrol
Lot No.: 1401416

COU-FINAL 1H NMR DMSO-d6
Analysed By : JNR



| | |
|-------|--------------------------|
| DFILE | COU-FINAL 1H.als |
| COMNT | COU-FINAL 1H NMR DMSO-d6 |
| DATIM | Tue Jan 28 08:25:01 2014 |
| OBNUC | 1H |
| EXMOD | NON |
| OBFRQ | 399.65 MHz |
| OBSET | 124.00 KHz |
| OBFIN | 10500.00 Hz |
| POINT | 65536 |
| FREQU | 7992.01 Hz |
| SCANS | 16 |
| ACQTM | 8.2002 sec |
| PD | 3.0000 sec |
| PWI | 5.80 usec |
| IRNUC | 1H |
| CTEMP | 22.4 c |
| SLVNT | DMSO |
| EXREF | 0.00 ppm |
| BF | 0.30 Hz |
| RGAIN | 19 |

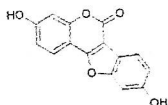
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Catalog No.: 020535
Product Name: Coumestrol
Lot No.: 1401416

COU-FINAL 1H NMR DMSO-d6
Analysed By: JNR

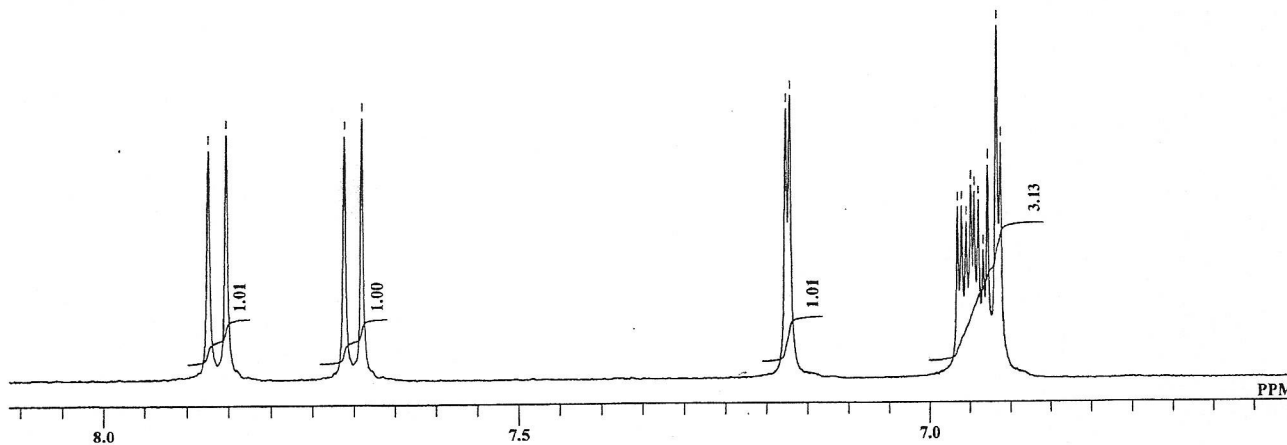
7.874
7.853

7.711
7.690

7.177
7.172

6.965
6.960
6.955
6.949
6.944
6.939
6.933
6.928
6.917
6.912

| | |
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| ACQTM | 8.2002 sec |
| PD | 3.0000 sec |
| PW1 | 5.80 usec |
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| CTEMP | 22.4 c |
| SLVNT | DMSO |
| EXREF | 0.00 ppm |
| BF | 0.30 Hz |
| RGAIN | 19 |



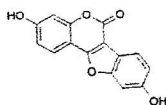
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Product Name: Coumestrol
Lot No.: 1401416

Sample Information
Sample Name : COU-FINAL
Batch No : -
Data File : COU-FINAL.lcd
Method File : Test1(ESI).lcm
Acquired by : KKiran
Date Acquired : 1/28/2014 11:08:28

MS Spectrum Graph

