



INDOFINE Chemical Company, Inc.

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

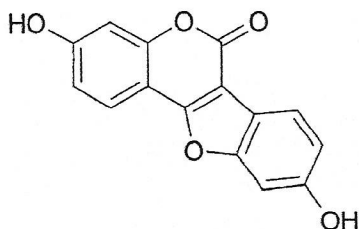
Phone: (908) 359-6778 • FAX: (908) 359-1179

website: www.indofinechemical.com

e-mail: chemical@indofinechemical.com

CERTIFICATE OF ANALYSIS

<u>Catalog number:</u>	020535
<u>Product name:</u>	COUMESTROL
<u>Cas Number:</u>	[479-13-0]
<u>Lot Number:</u>	1402418
<u>Chemical Formula:</u>	$C_{15}H_8O_5$
<u>Molecular Weight:</u>	268.22
<u>Appearance:</u>	Cream color powder
<u>Solubility:</u>	Soluble in DMSO
<u>TLC:</u>	Hexane:Ethyl acetate (6:4)
<u>Moisture content:</u>	0.36%
<u>NMR Spectrum:</u>	Enclosed (Confirms to the structure)
<u>Mass Spec:</u>	Enclosed (Complies)
<u>Storage:</u>	Store in a cool dry place
<u>Purity (HPLC):</u>	99.15%





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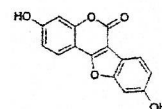
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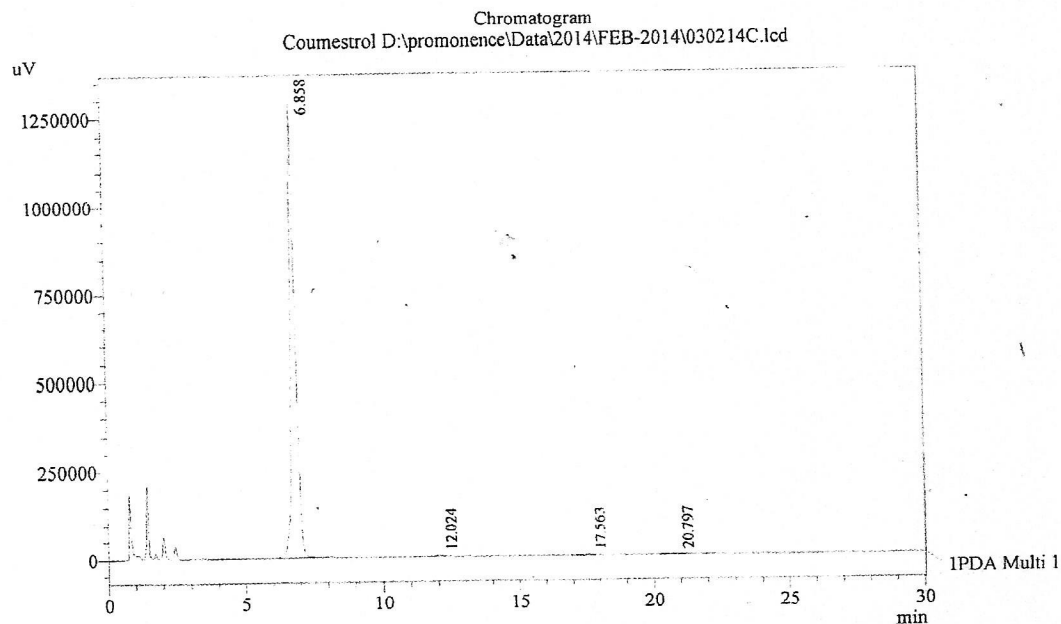
HPLC ANALYSIS

Acquired by : Sanjeev
Sample Name : Coumestrol
Sample ID : 10 gms Lot
Injection Volume : 20 uL
Data Filename : 030214C.lcd
Method Filename : Coumestrol.lcm

Catalog No.: 020535
Product Name: Coumestrol
Lot No.: 1402418



Column : Inertsil ODS-3V, (150mm x 4.6mm 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

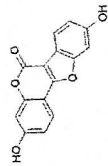
PDA Ch1 220nm 4nm

Peak#	Name	Ret. Time	Area	Area %	Relative Retention Time
1	Coumestrol	6.858	17332299	99.15	1.00
2	RT:12.024	12.024	54132	0.31	1.75
3	RT:17.563	17.563	37579	0.21	2.56
4	RT:20.797	20.797	57149	0.33	3.03
Total			17481159	100.00	



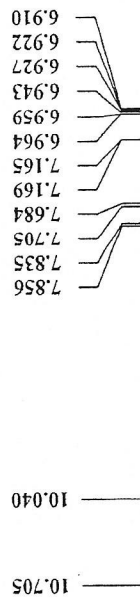
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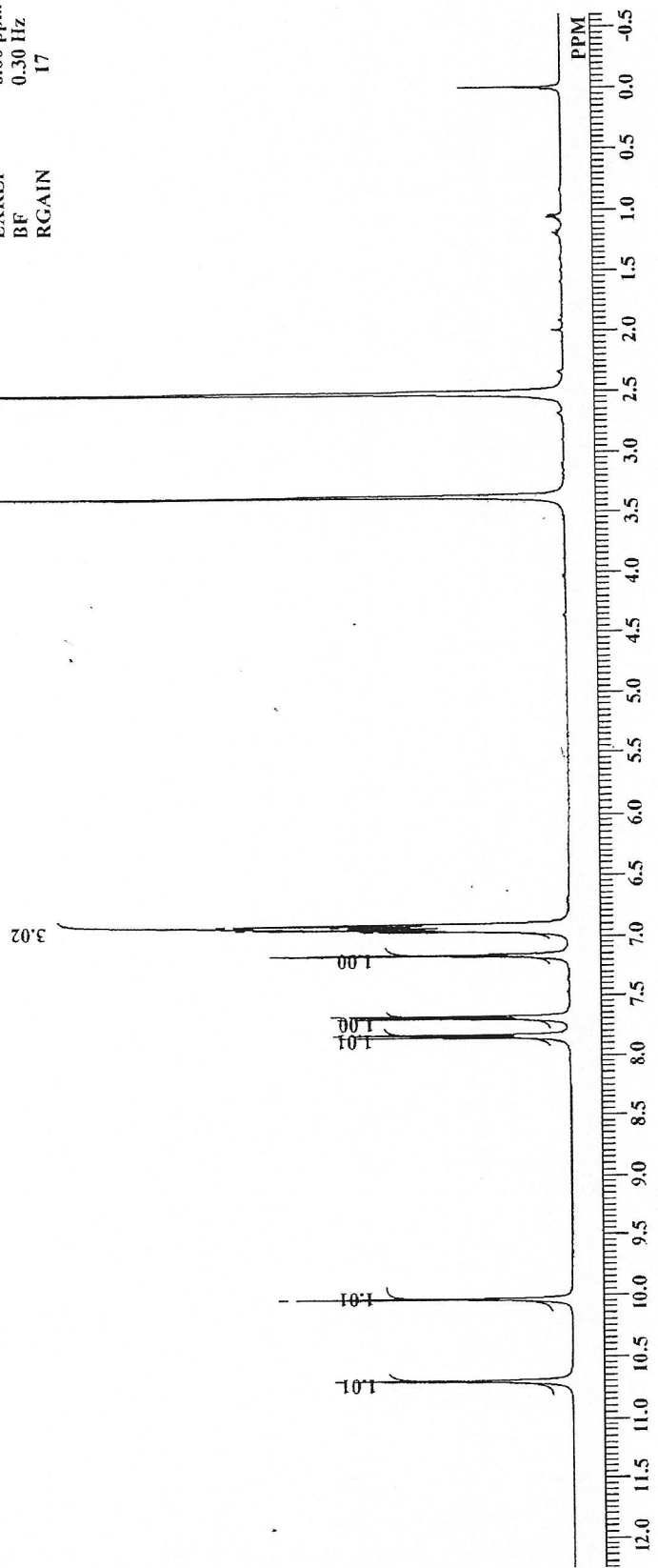


COU-FINAL 1H NMR DMSO-d6

Analysed By : TJR



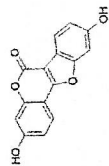
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COMNT COU-FINAL 1H NMR DMSO-d6
DATIM Thu Feb 06 18:43:51 2014
OBNUC 1H
EXMOD NON
OBFRQ 399.65 MHz
OBSET 124.00 KHz
OBFIN 10500.00 Hz
POINT 65536
FREQU 7992.01 Hz
SCANS 16
ACQTM 8.2002 sec
PD 3.0000 sec
PW1 5.80 usec
IRNUC 1H
CTEMP 21.8 c
SLVNT DMSO
EXREF 0.00 ppm
BF 0.30 Hz
RGAIN 17





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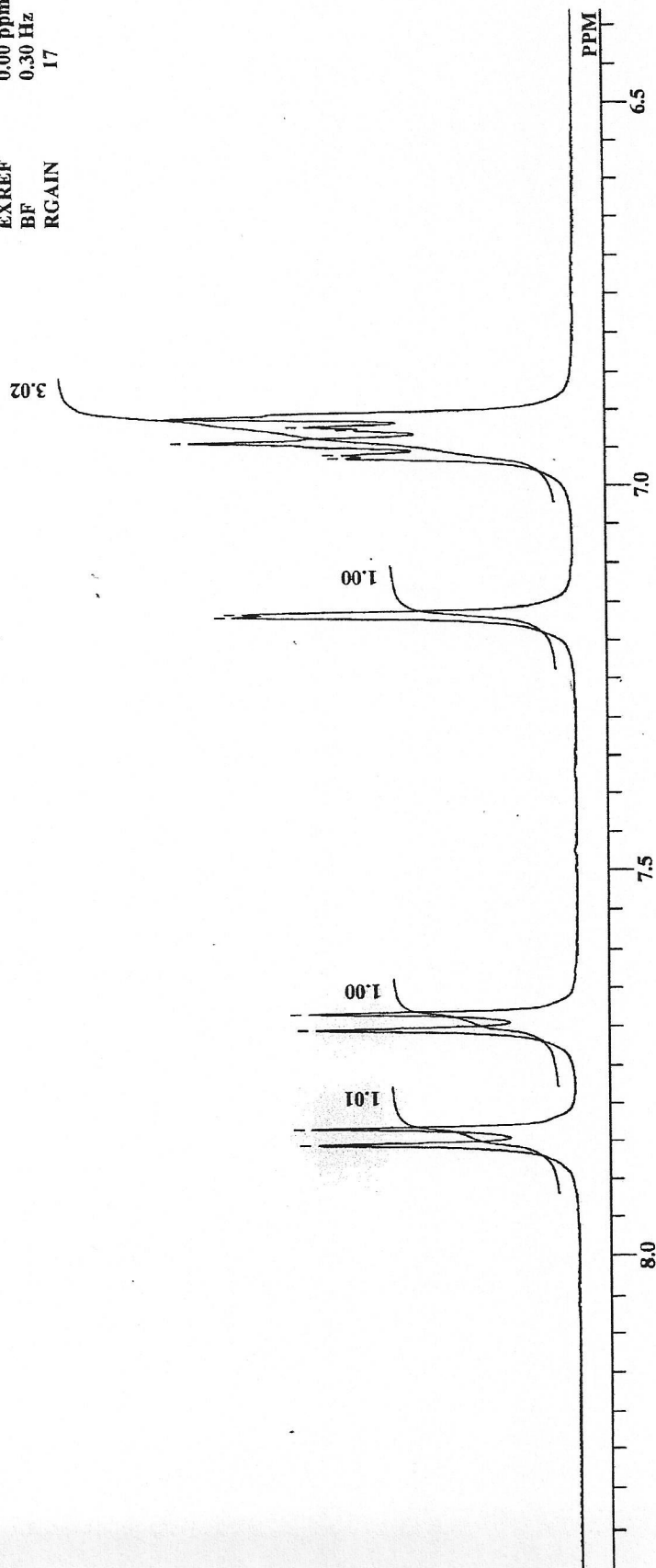


COU-FINAL 1H NMR DMSO-d6

Analysed By: TJR



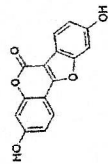
DFILE COU-FINAL-1H.a1s
COMNT COU-FINAL 1H NMR DMSO-d
DATIM Thu Feb 06 18:43:51 2014
OBNUC 1H
EXMOD NON
OBFRQ 399.65 MHz
OBSET 124.00 KHz
OBFIN 10500.00 Hz
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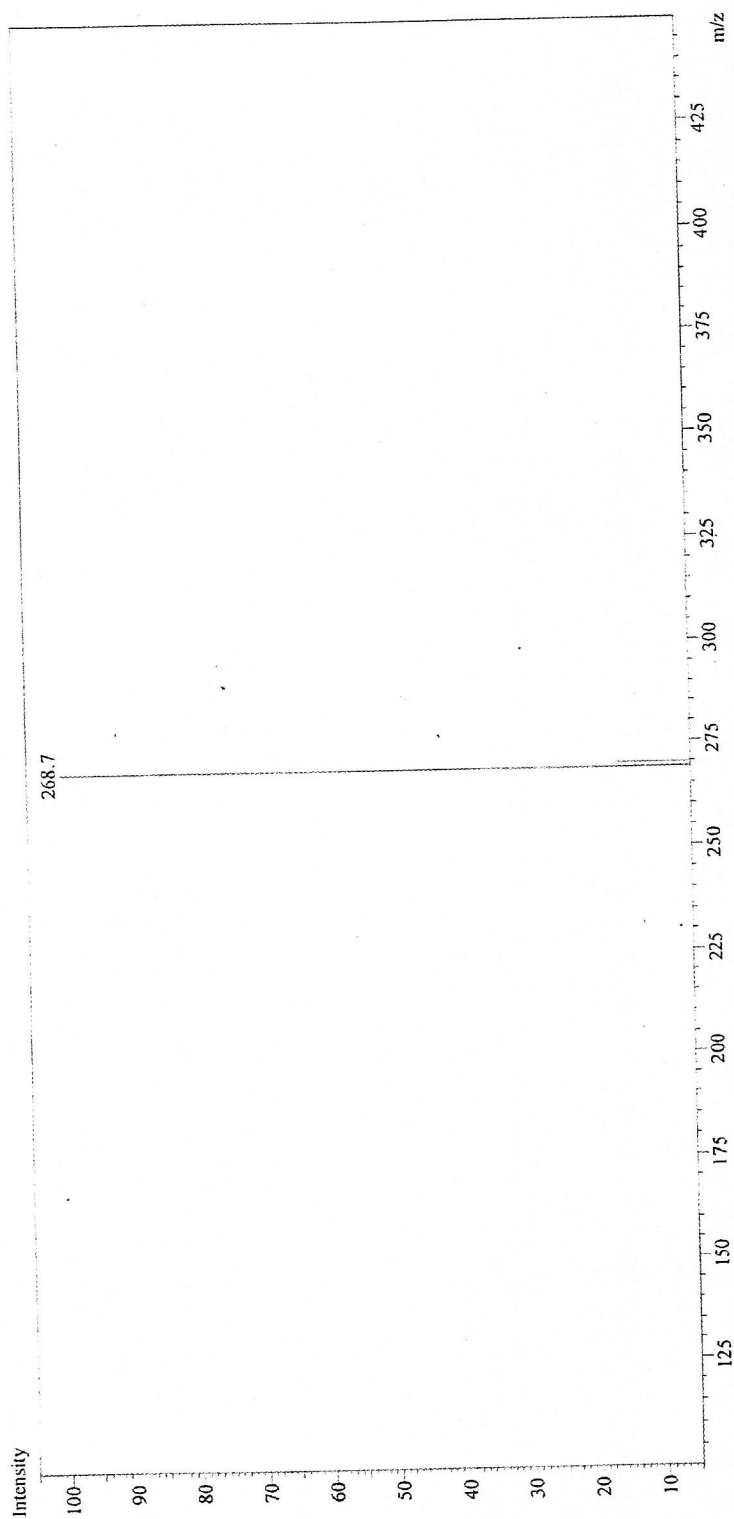
Catalog No.: 020535
Product Name: Coumestrol
Lot No.: 1402418



Sample Information
Sample Name : COU-FINAL
Batch No : -
Data File : COU-FINAL-01.fcd
Method File : Test1(ESI).lcm
Acquired by : KKtran

MS Spectrum Graph

Probe : ESI
Polarity: Pos





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