



# 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](http://www.indofinechemical.com)

e-mail: [chemical@indofinechemical.com](mailto:chemical@indofinechemical.com)

## CERTIFICATE OF ANALYSIS

Catalog number: 020535

Product name: **COUMESTROL**

Cas Number: [479-13-0]

Lot Number: 1308371

Chemical Formula: C<sub>15</sub>H<sub>8</sub>O<sub>5</sub>

Molecular Weight: 268.22

Appearance: Dark cream powder

Solubility: Soluble in DMSO

TLC: Hexane:Ethyl acetate (6:4)

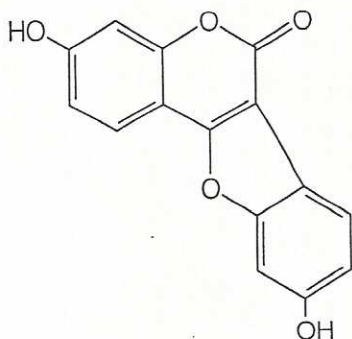
Moisture content: 0.3%

NMR Spectrum: Enclosed (Confirms to the structure)

Mass Spec: Complies (M<sup>-1</sup>=267.2)

Storage: Store in a cool dry place

Purity.(HPLC): 99.04%





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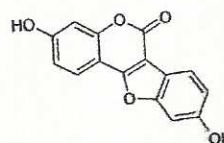
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## HPLC ANALYSIS

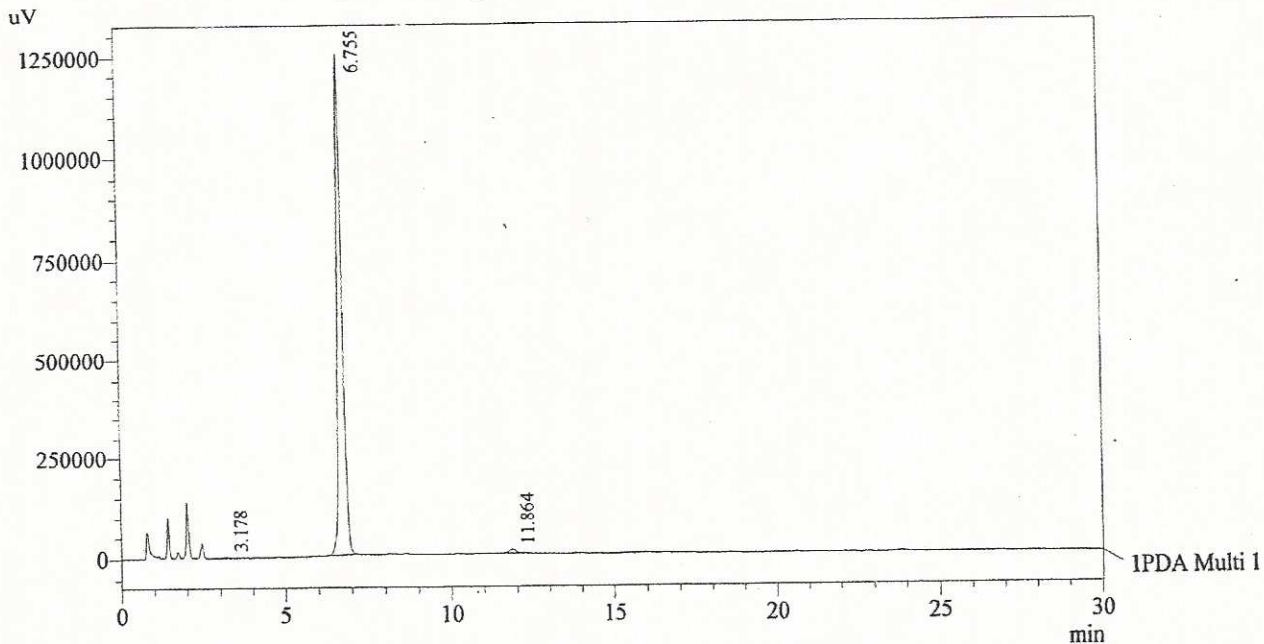
Acquired by : Sanjeev  
Sample Name : Coumestrol  
Sample ID : 6.5 gms Lot  
Injection Volume : 20 uL  
Data Filename : 120813B.lcd  
Method Filename : Coumestrol.lcm

Catalog No.: 020535  
Product Name: Coumestrol  
Lot No.: 1308371



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)

Chromatogram  
Coumestrol D:\promonence\Data\2013\AUG-2013\120813B.lcd

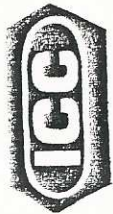


1 PDA Multi 1 / 220nm 4nm

PeakTable

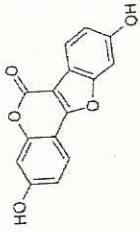
PDA Ch1 220nm 4nm

Peak#	Name	Ret. Time	Area	Area %	Relative Retention Time
1	RT:3.178	3.178	21092	0.16	0.47
2	Coumestrol	6.755	13154461	99.04	1.00
3	RT:11.864	11.864	105905	0.80	1.76
Total			13281458	100.00	

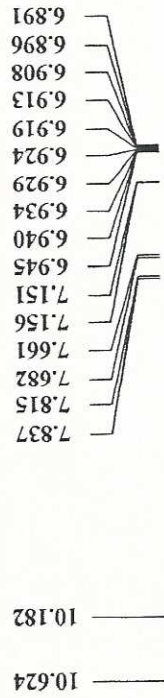


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 HILLSBOROUGH, NJ 08844

Catalog No.: 020535  
 Product Name: Coumestrol  
 Lot No.: 1308371

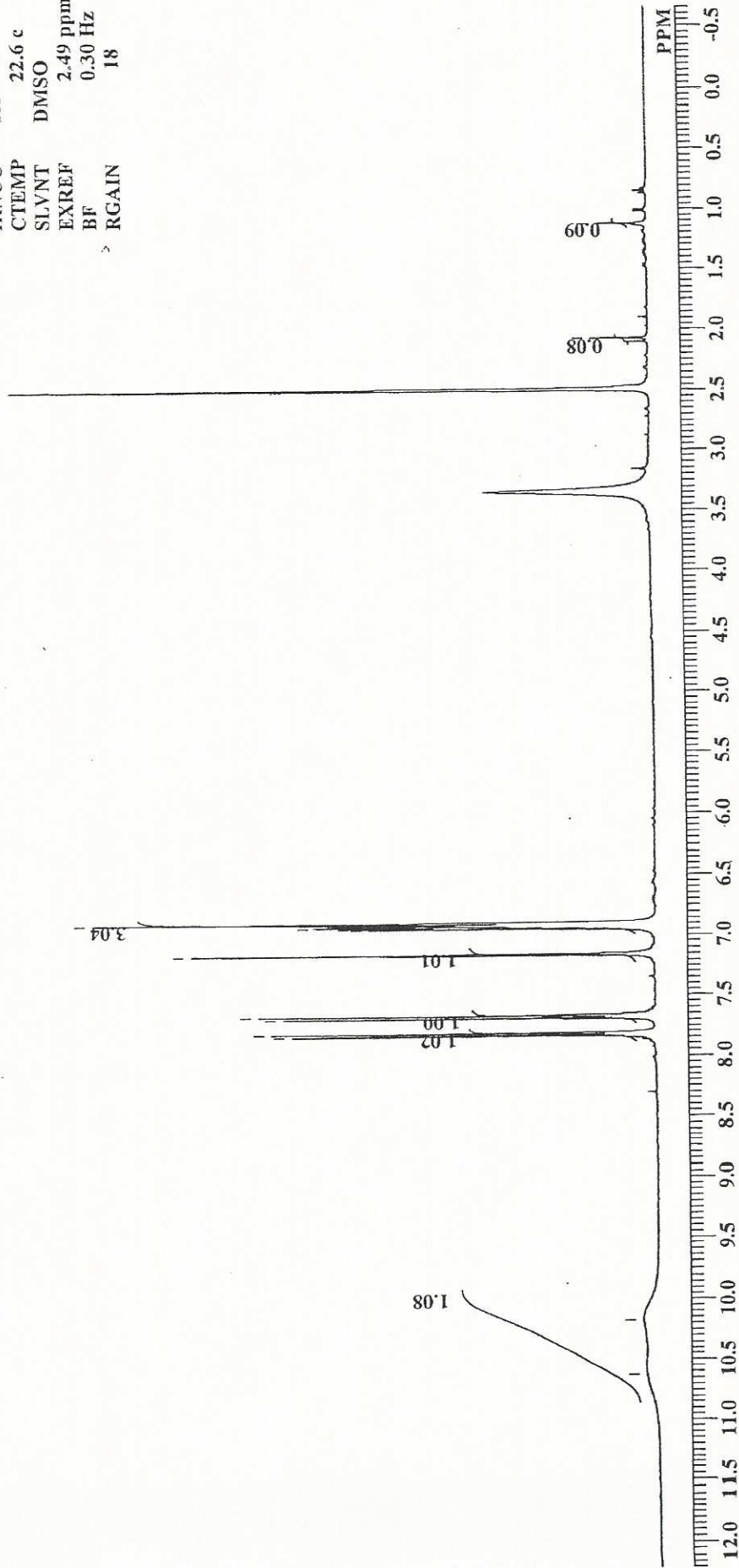


CMTL-Final 1H NMR DMSO-d6  
 Analysed By: TJR



2.070

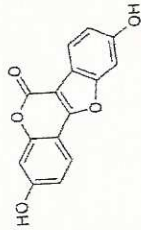
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 COMNT CMTL-Final 1H NMR DM  
 DATIM Mon Aug 12 20:24:10 2013  
 NUC 1H  
 EXMOD NON  
 OBFRQ 399.65 MHz  
 OBSET 124.00 KHz  
 OBFIN 10500.00 Hz  
 POINT 65536  
 FREQU 7992.01 Hz  
 SCANS 32  
 ACQTM 8.2002 sec  
 PD 3.0000 sec  
 PW1 5.80 usec  
 IRNUC 1H  
 CTEMP 22.6 c  
 SLVNT DMSO  
 EXREF 2.49 ppm  
 BF 0.30 Hz  
 RGAIN 18





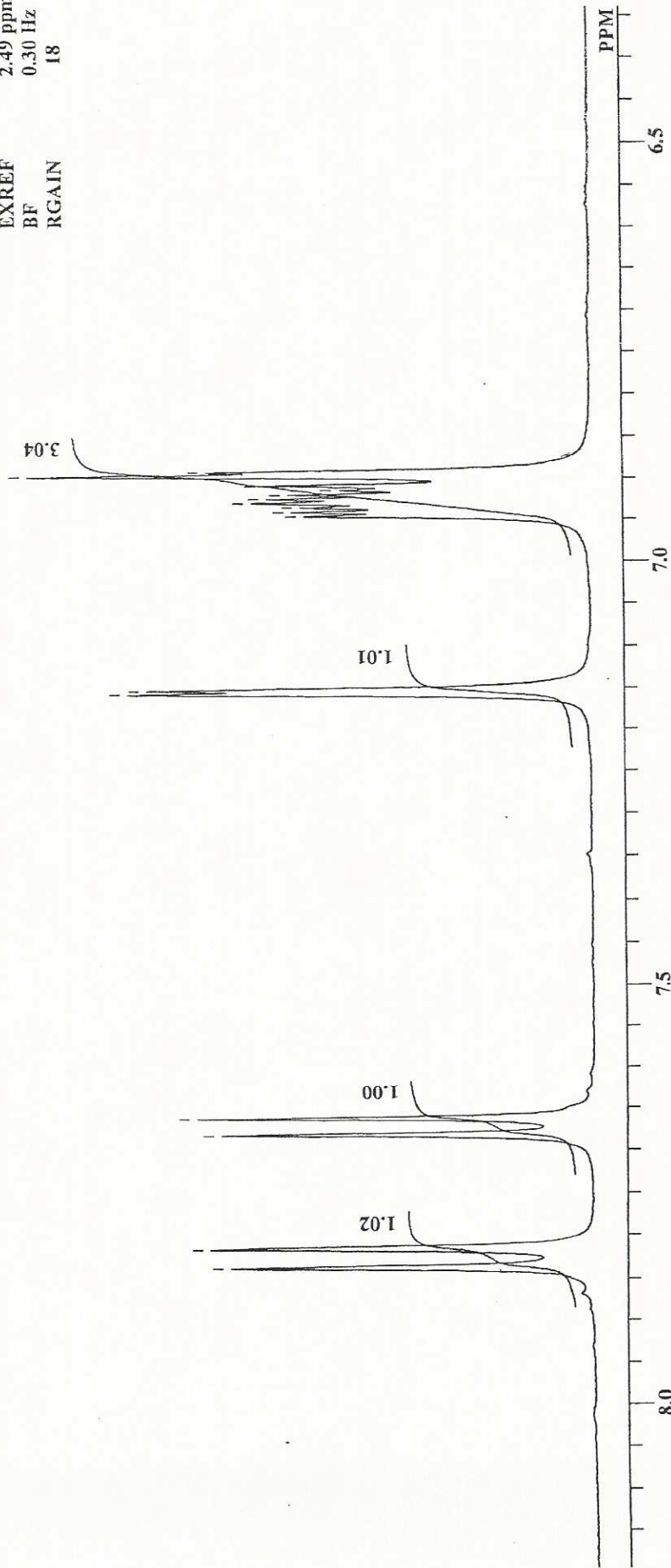
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Catalog No.: 020535  
 Product Name: Coumestrol  
 Lot No.: 1308371



CMTL-Final 1H NMR DMSO-d6  
 Analysed By : TJR

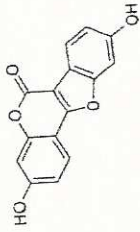
DFILE	CMTL-Final 1H.als
COMNT	CMTL-Final 1H NMR DMS
DATIM	Mon Aug 12 20:24:10 2013
OBNUC	1H
EXMOD	NON
OBFRQ	399.65 MHz
OBSET	124.00 KHz
OBFIN	10500.00 Hz
POINT	65536
FREQU	7992.01 Hz
SCANS	32
ACQIM	8.2002 sec
PD	3.0000 sec
PW1	5.80 usec
IRNUC	1H
CTEMP	22.6 c
SLVNT	DMSO
EXREF	2.49 ppm
BF	0.30 Hz
RGAIN	18





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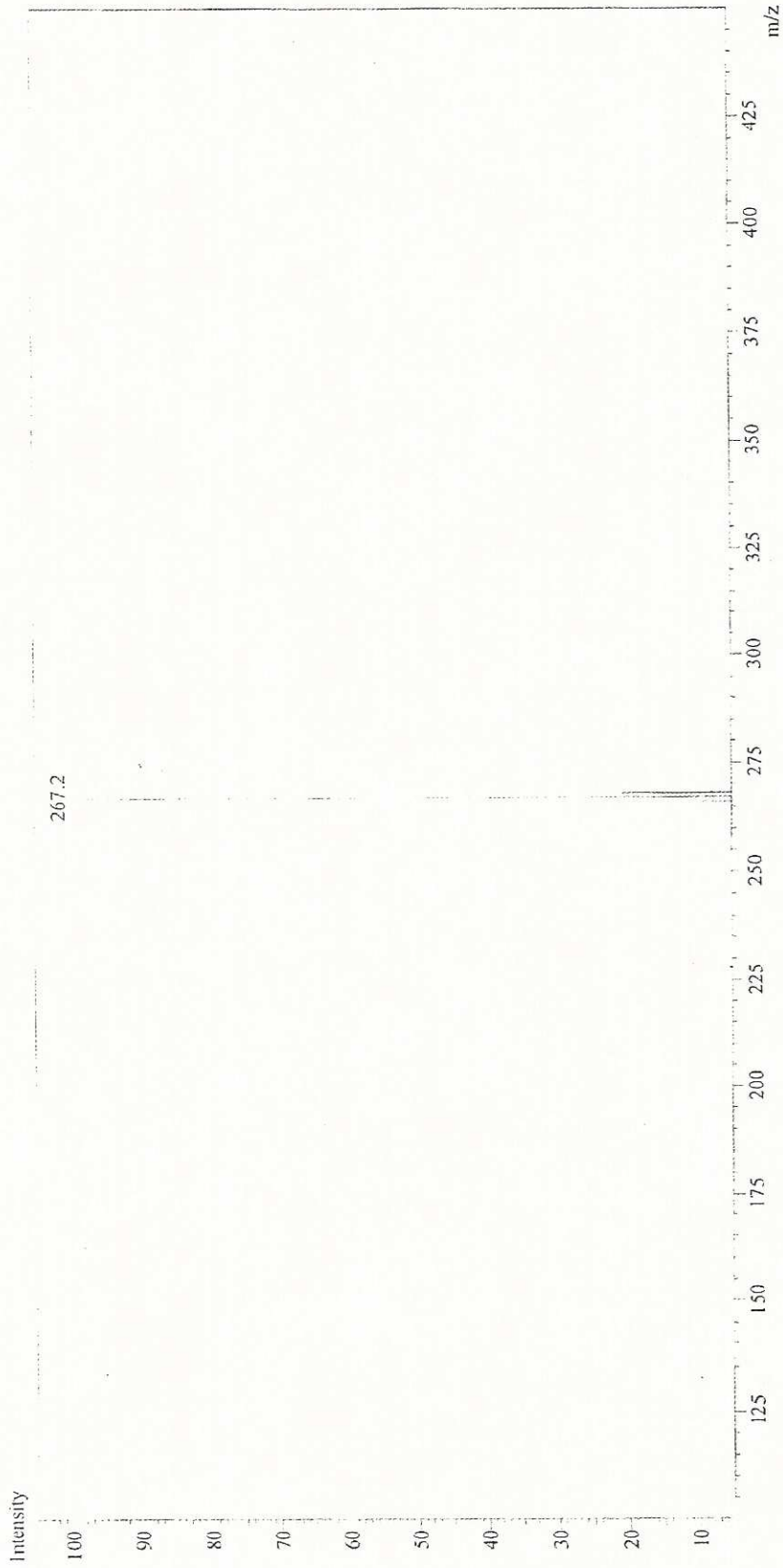
Catalog No.: 020535  
Product Name: Coumestrol  
Lot No.: 1308371



Sample Information  
Sample Name : CMTL-FINAL  
B.No : -  
Data File : CMTL-FINAL.tcd  
Method File : Test1(APCI).lcm  
Acquired by : KK:iran  
Date Acquired : 8/13/2013 15:49:39

MS Spectrum Graph

Probe : APCI  
Polarity: Neg





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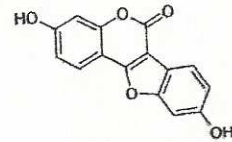
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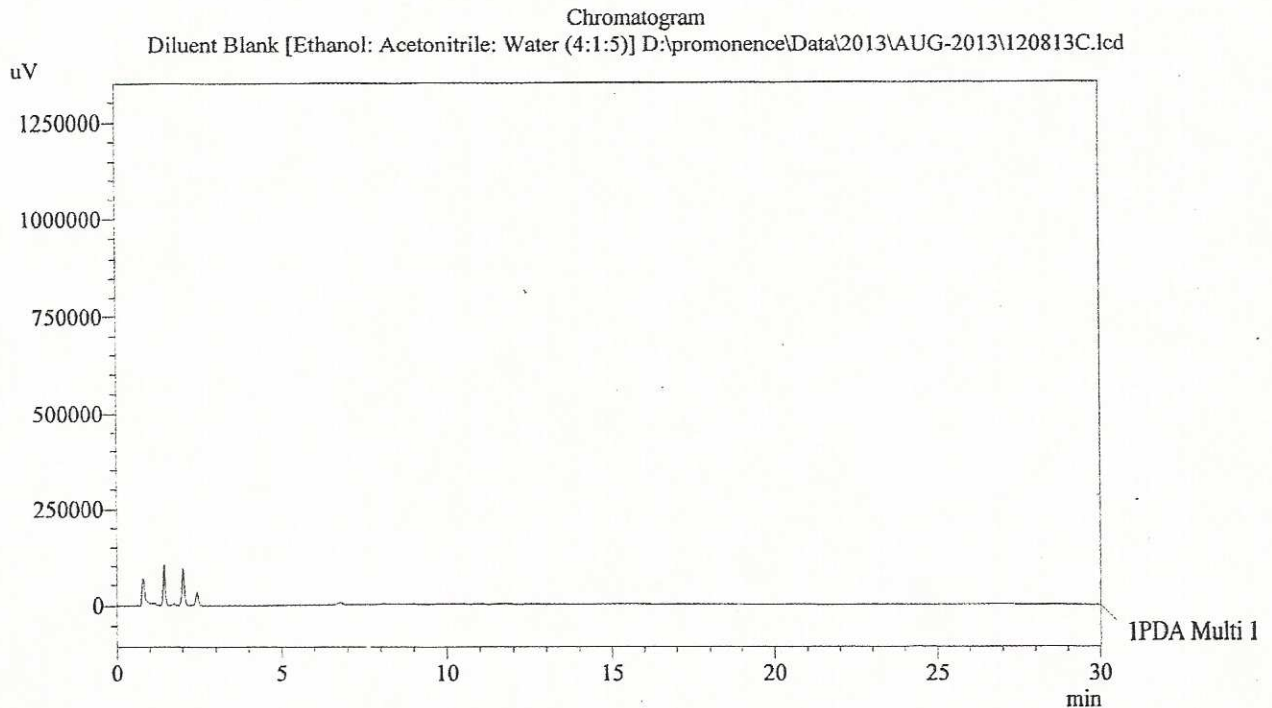
e-mail: [chemical@indofinechemical.com](mailto:chemical@indofinechemical.com)

Acquired by : Sanjeev  
Sample Name : Diluent Blank [Ethanol: Acetonitrile: Water (4:1:5)]  
Sample ID :  
Injection Volume : 20 uL  
Data Filename : 120813C.lcd  
Method Filename : Coumestrol.lcm

Catalog No.: 020535  
Product Name: Coumestrol  
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Diluent : Ethanol: Acetonitrile: Water (4:1:5)



PDA Ch1 220nm 4nm

PeakTable