



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

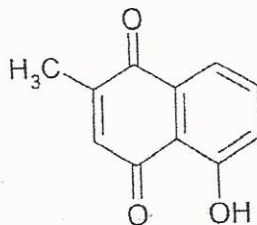
website: www.indofinechemical.com

e-mail: chemical@indofinechemical.com

CERTIFICATE OF ANALYSIS

Cat No.: P-005

<u>Product:</u>	PLUMBAGIN (5-Hydroxy-2-methyl-1,4-naphthoquinone)
<u>Cas Number:</u>	[481-42-5]
<u>Lot Number:</u>	0403070
<u>Chemical Formula:</u>	$C_{11}H_8O_3$
<u>Molecular Weight:</u>	188.18
<u>Melting Point:</u>	76-77°C
<u>Appearance:</u>	Orange crystalline powder
<u>Solubility:</u>	Soluble in chloroform
<u>TLC:</u>	Hexane:Ethyl acetate (8:2)
<u>NMR Spectrum:</u>	Enclosed
<u>Storage:</u>	Cool dry place
<u>Purity(HPLC):</u>	99.80%





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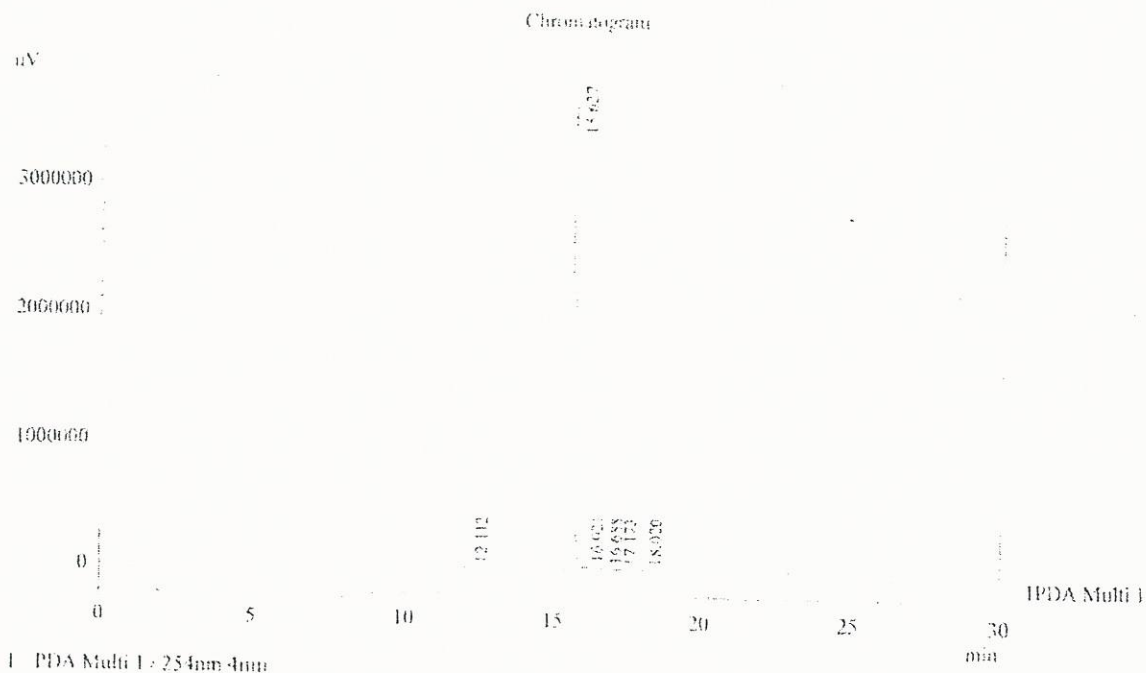
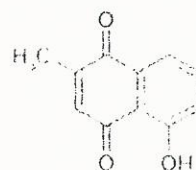
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HPLC ANALYSIS

Acquired by : Sanjeev
Sample Name : Plumbagin
Sample ID : Lot No-0403070
Injection Volume : 20 µL
Data Filename : 170812B1.ed
Method Filename : Linear Gradient.M1.km

Catalog no.: P-005
Product name: Plumbagin
Lot No.: 0403070

Column : LUNA C-18(2), (250mm x 4.6mm 5.0µ)
Flow : 1.000 mL/min.
Mobile Phase : A(0.05% TFA in water) B(Acetonitrile)
0.01 90 10
12.6 10 90
20.0 10 90
25.0 90 10
30.0 90 10



PDA Ch1 254nm 4nm

Peak Table

Peak #	Name	Ret. Time	Area	Area %	Relative Retention Time
1	RT:12.112	12.112	3107	0.01	0.78
2	Plumbagin	15.627	30041790	99.80	1.00
3	RT:16.021	16.021	44117	0.15	1.03
4	RT:16.688	16.688	7786	0.03	1.07
5	RT:17.173	17.173	1787	0.01	1.10
6	RT:18.020	18.020	2913	0.01	1.15
Total			30101770	100.00	



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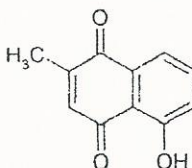
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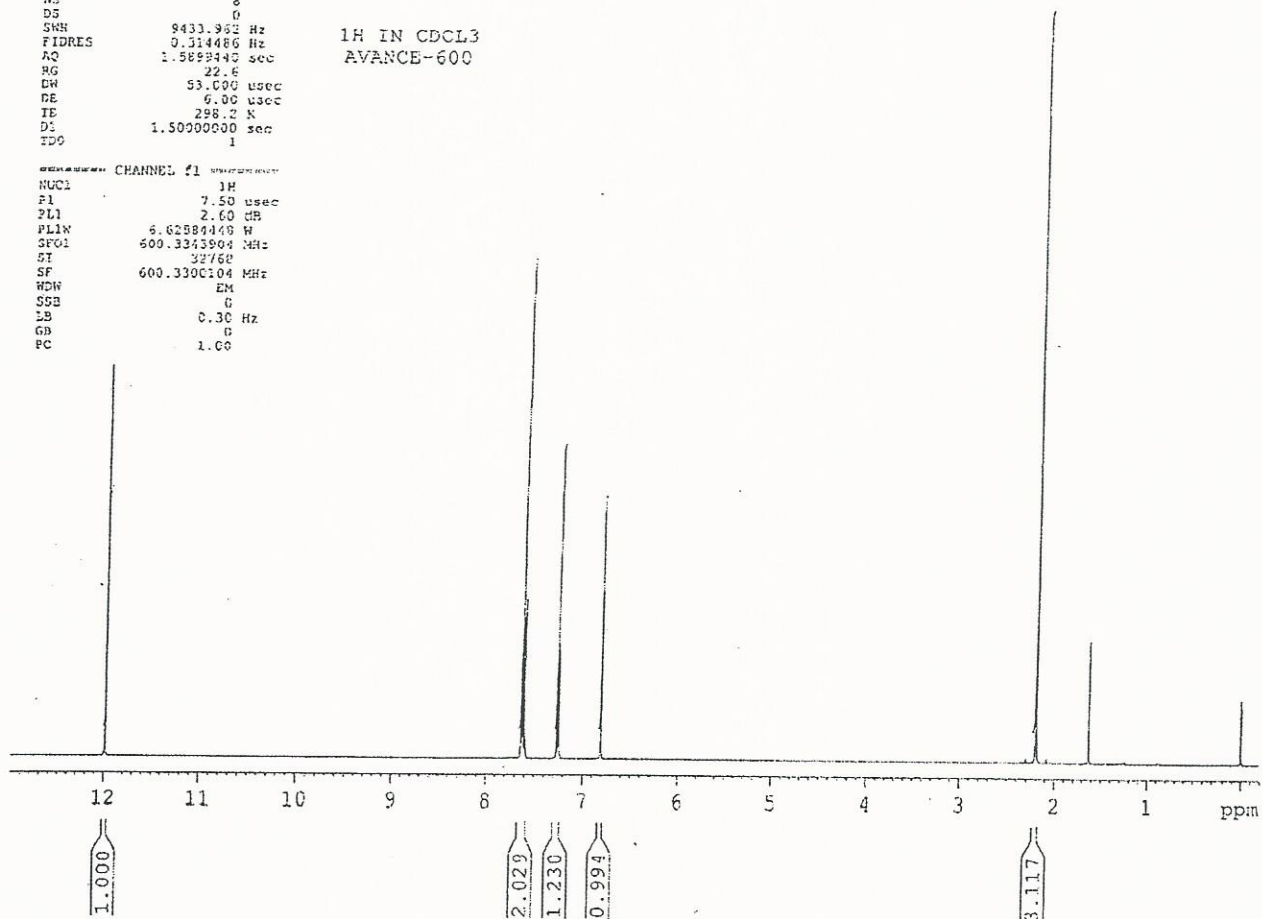
Catalog no.: P-005
Product name: Plumbagin
Lot No.: 0403070



SOLVENT CDC13
NS 8
DS 0
SWH 9433.963 Hz
FIDRES 0.314486 Hz
AQ 1.5889440 sec
RG 22.6
CW 53.000 usec
DE 6.00 usec
TE 298.2 K
DI 1.50000000 sec
TD0 1

1H IN CDCL3
AVANCE-600

CHANNEL f1
NUC1 1H
P1 7.50 usec
PL1 2.60 dB
PL1W 6.62584440 W
SFO1 500.3343904 MHz
ST 32768
SF 600.3300104 MHz
WDW EM
SSB G
LB 0.30 Hz
GB G
PC 1.00





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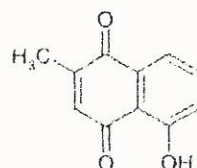
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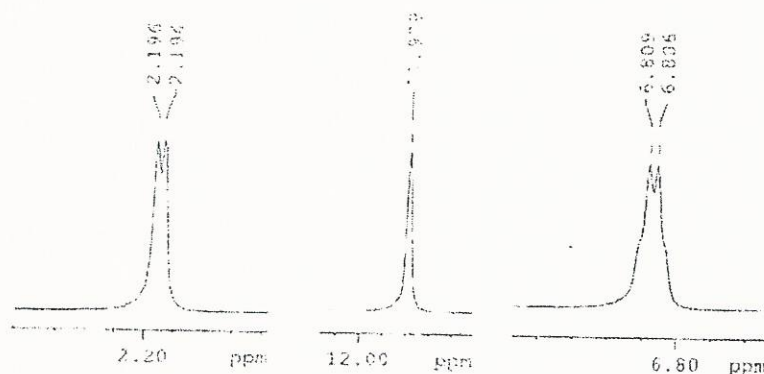
Catalog no: P-005
Product name: Plumbagin
Lot No: 0403070



NAME: CHL 13
MS: 6
DE: 0
WGT: 9433.902 g2
PDRD: 6.314448 g2
NO: 1.5879430 sec
FO: 22.6
PR: 57.000 g2sec
DE: 6.00 g2sec
TD: 255.2 K
CI: 1.50000000 sec
TDC: 1

CHANNEL 11
PUL1: 1H
F1: 7.50 MHz
P11: 7.60 dB
P11W: 6.62504448 W
SF01: 600.3343904 MHz
SI: 32758
ST: 600.3300164 MHz
RGW: 100
SOL: 0
IP: 0.10 Hz
LB: 0
PC: 1.00

1H IN CDCl3
AVANCE-600



7.638
7.636
7.626
7.624
7.615
7.603
7.590

7.271
7.259
7.256
7.245
7.242

