



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: P-005

Product Name: **PLUMBAGIN**
(5-Hydroxy-2-methyl-1,4-naphthoquinone)

Cas Number: [481-42-5]

Lot Number: 1504581

Chemical Formula: $C_{11}H_8O_3$

Molecular Weight: 188.18

Melting Point: 75-78°C

Appearance: Orange-yellow powder

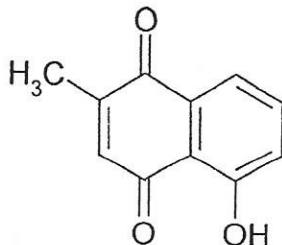
Solubility: Soluble in chloroform

TLC: Hexane:Ethyl acetate (8:2)

NMR Spectrum: Enclosed (conforms to the structure)

Storage: Store in a cool, dry place. Protect from light.

Purity(HPLC): 99.11%





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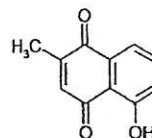
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HPLC ANALYSIS

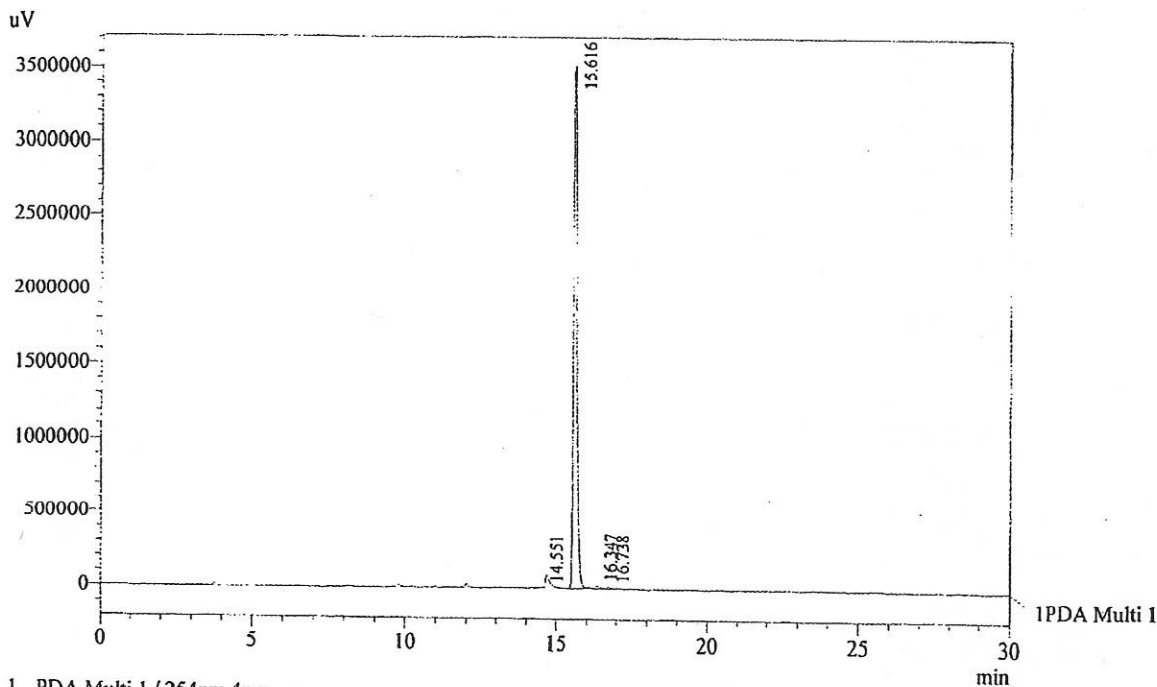
Acquired by : Admin
Sample Name : Plumbagin
Sample ID : 500gm
Injection Volume : 20 uL
Data Filename : I90115G.lcd
Method Filename : Linear Gradient.M.lcm

Catalog No.: P-005
Product Name: Plumbagin
Lot No.: 1504581



Column : Gemini-C18 (250mm x4.6mm 5.0μ)
Flow : 1.000 mL/min.
Mobile Phase : A(0.05% TFA in water) B(Acetonitrile)
0.01 90 10
12.0 10 90
20.0 10 90
23.0 90 10
30.0 90 10
Diluent : Acetonitrile

Chromatogram



1 PDA Multi 1 / 254nm 4nm

PeakTable

Peak#	Name	Ret. Time	Area	Area %	Relative Retention Time
1	RT:14.551	14.551	13626	0.05	0.93
2	Plumbagin	15.616	27477464	99.11	1.00
3	RT:16.347	16.347	157875	0.57	1.05
4	RT:16.738	16.738	75876	0.27	1.07
Total			27724841	100.00	



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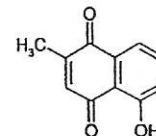
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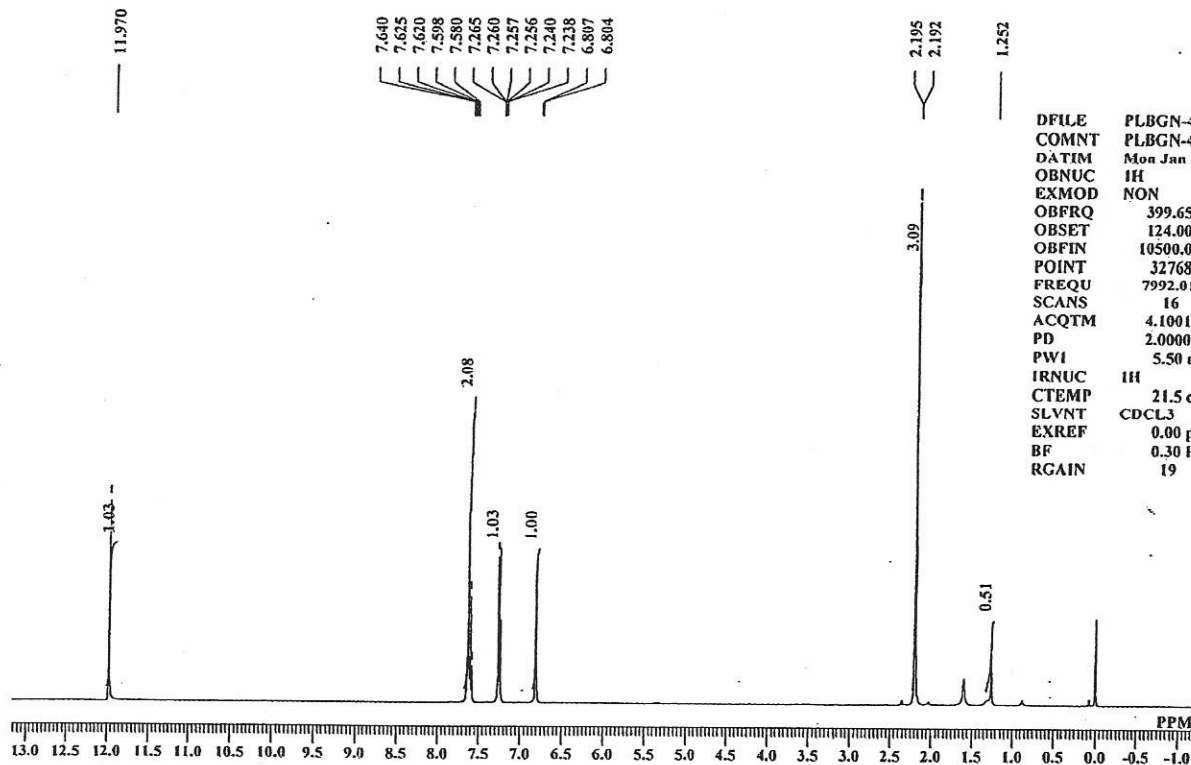
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Catalog No.: P-005
Product Name: Plumbagin
Lot No.: 1504581



PLBGN-485 1H NMR CDCl3

Analysed By: TJR



DFILE PLBGN-485 1H.als
COMNT PLBGN-485 1H NMR CDCl3
DATIM Mon Jan 19 18:57:36 2015
OBNUC 1H
EXMOD NON
OBFRQ 399.65 MHz
OBSET 124.00 KHz
OBFIN 10500.00 Hz
POINT 32768
FREQU 7992.01 Hz
SCANS 16
ACQTM 4.1001 sec
PD 2.0000 sec
PWI 5.50 usec
IRNUC 1H
CTEMP 21.5 c
SLVNT CDCl3
EXREF 0.00 ppm
BF 0.30 Hz
RGAIN 19



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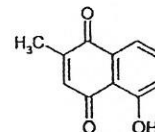
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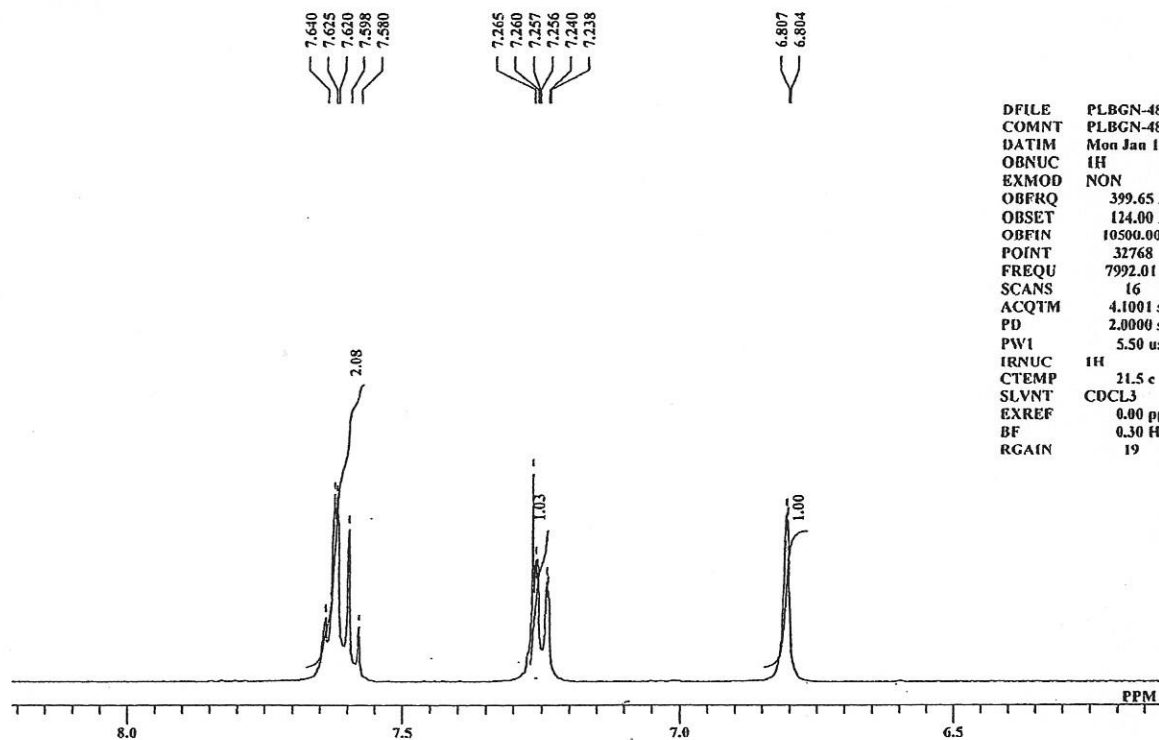
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Catalog No.: P-005
Product Name: Plumbagin
Lot No.: 1504581



PLBGN-485 1H NMR CDCl3

Analysed By : TJR



DFILE	PLBGN-485 1H.n1s
COMNT	PLBGN-485 1H NMR CDCl3
DATIM	Mon Jan 19 18:57:36 2015
OBNUC	1H
EXMOD	NON
OBFRQ	399.65 MHz
OBSET	124.00 KHz
OBFIN	10500.00 Hz
POINT	32768
FREQU	7992.01 Hz
SCANS	16
ACQTM	4.1001 sec
PD	2.0000 sec
PW1	5.50 usec
IRNUC	1H
CTEMP	21.5 c
SLVNT	CDCl3
EXREF	0.00 ppm
BF	0.30 Hz
RGAIN	19