



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)

Source: Plumbago Indica

Cas Number: [481-42-5]

Lot Number: 2504158

Chemical Formula: C₁₁H₈O₃

Molecular Weight: 188.18

Appearance: Orange crystalline powder

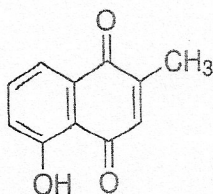
Solubility: Soluble in methanol and chloroform

TLC: Hexane:Ethyl acetate (8:2)

NMR Spectrum: Enclosed (conforms to the structure)

Storage: Store at -20°C

Purity(GC): 99.91%



Prepared by:
Ramesh Mandadi
Ramesh Mandadi
Director of Operations

Reviewed and Approved by:
Sujata Moton
Sujata Moton
VP



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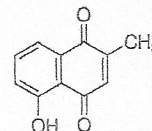
website: www.indofinechemical.com

e-mail: chemical@indofinechemical.com

HPLC ANALYSIS

Sample Name : Plumbagin
Sample ID :
Data Filename : 10042025083.lcd
Method Filename : General Method.lcm
Vial # : 1-4
Injection Volume : 20 µL

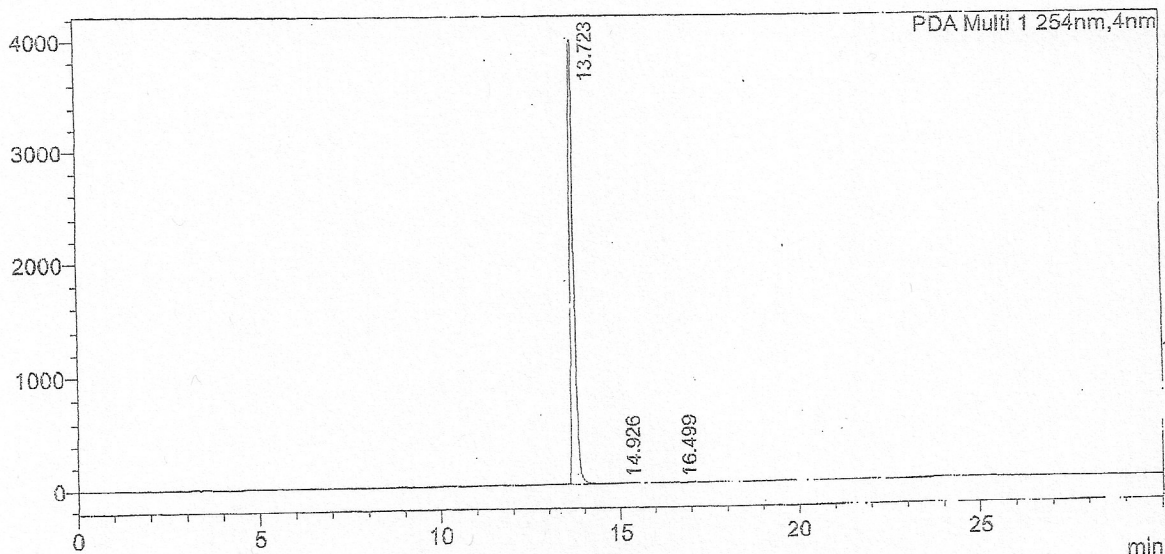
Catalog No.: P-005
Product Name: Plumbagin
Lot No.: 2504158



Column: Inersil ODS-3V: 250mm x 4.6mm, 5 µm
Flow: 1.0ml/min
MP: 0.1% TFA in Water: Acetonitrile
Gradient: 0.01/10, 12/90, 20/90, 23/10, 30/10 (% of B Conc)
Diluent: ACN (10mg/25ml in diluent)
Acquired by: Sanjeev

<Chromatogram>

mAU



<Peak Table>

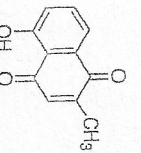
PDA Ch1 254nm					
Peak#	Name	Ret. Time	Area	Area%	Relative Retention Time
1		13.723	31631057	99.919	1.000
2		14.926	22225	0.070	1.088
3		16.499	3282	0.010	1.202
Total			31656564	100.000	

Prepared by:
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Director of Operations

Reviewed and Approved by:
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VP



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Catalog No.: P-005
Product Name: Plumbagin
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11.980

7.649
7.646
7.634
7.631
7.621
7.605
7.590
7.248
7.246
6.812
6.809

2.199
2.194

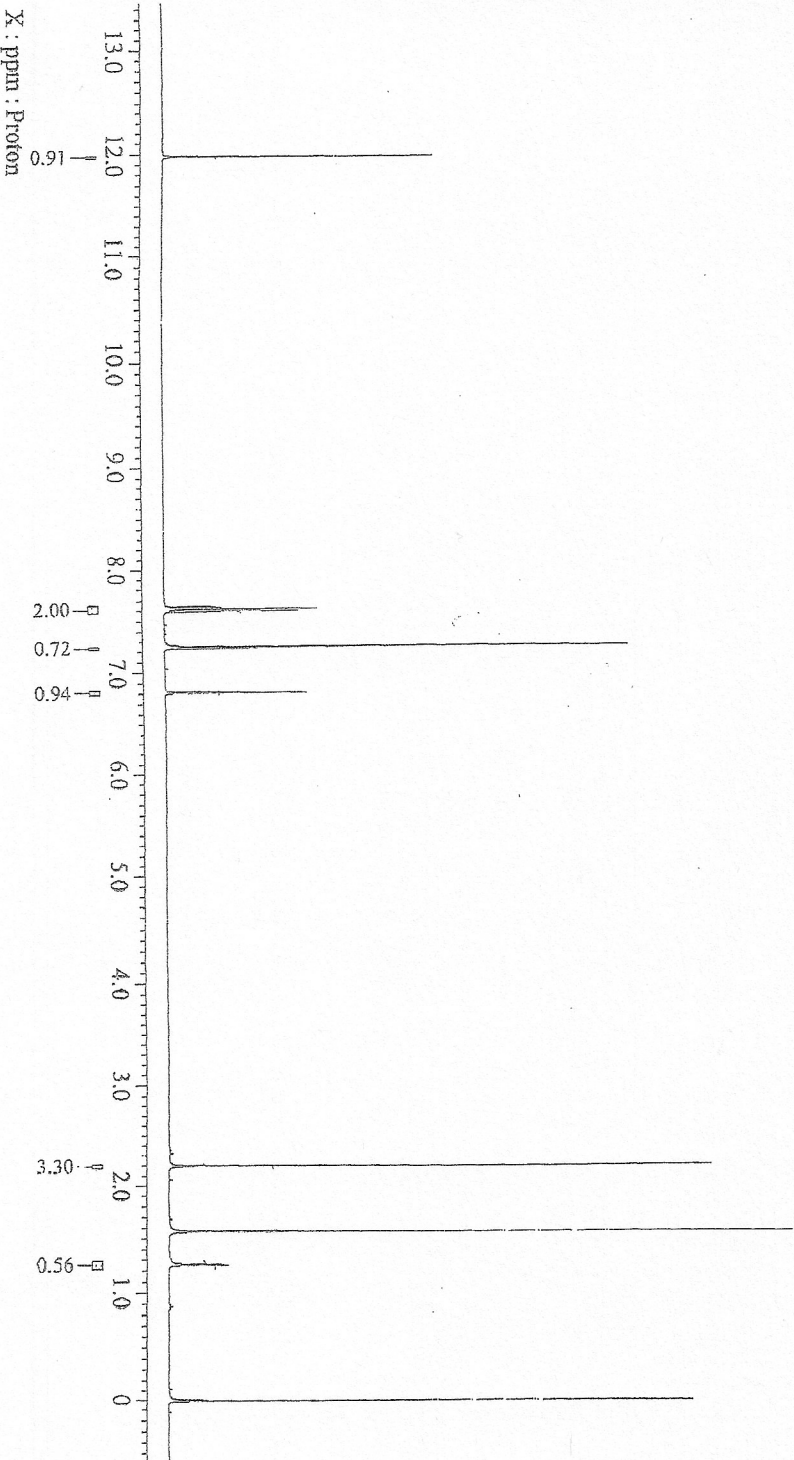
1.252

----- PROCESSING PARAMETERS -----
sexp (0.2 [Hz], 0.0 [s])
trapzoid (0 [s], 0 [s], 80 [s], 100 [s])
zerofill (1)
fft (1, TRUE, TRUE)
machephase
ppm

Derived from: PLUMBAGIN_proton-2-1.jdf

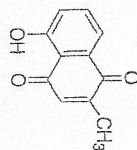
Filename = PLUMBAGIN_proton-2-2.jdf
Instrument = NMR-500MHz (JEOL)
Instrument Id = NMR-02
Author = 1609
Reviewed by = Rangith
Solvent = CHLOROFORM-D
Spectrometer = JNM-EC2500R/SI
Experiment = proton.jxp

Acquisition Parameter
X_Domain = Proton
X_Offset = 7 [ppm]
X_Sweep = 11.2813845 [kHz]
Scans = 16
Relaxation_Delay = 2 [s]





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2.199
2.194

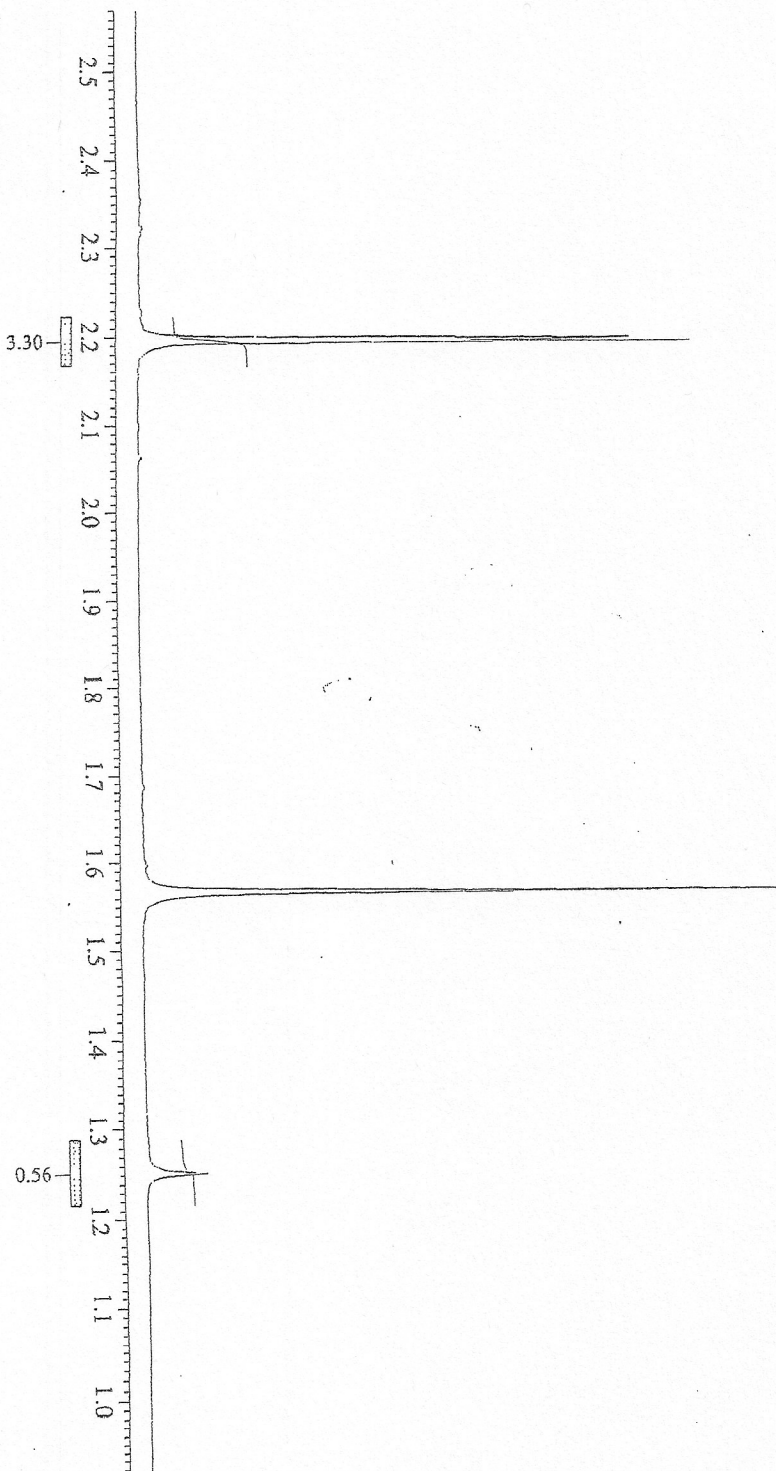
1.252

----- PROCESSING PARAMETERS -----
sexp (0.2 [Hz], 0.0 [s])
trepzold (0 [s], 0 [s], 80 [s], 100 [s])
zero (1, TRUE, TRUE)
fft (1, TRUE, TRUE)
machephase
ppm

Derived from: PLUMBAGIN_proton-2-1.jdf

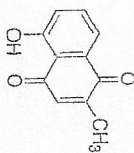
Filename = PLUMBAGIN_proton-2-2.jdf
Instrument = NMR-500MHz (JBOC)
Instrument Id = NMR-02
Author = 1609
Reviewed by = Ranjith
Solvent = CHLOROFORM-D
Spectrometer = JNM-ECZ500R/S1
Experiment = proton.jxp
Acquisition Parameter
X_Domain = Proton
X_Offset = 7 [ppm]
X_Sweep = 11.2815845 [Hz]
Scans = 16
Relaxation_Delay = 2 [s]

X : ppm : Proton





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7.649
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7.631
7.621
7.605
7.590

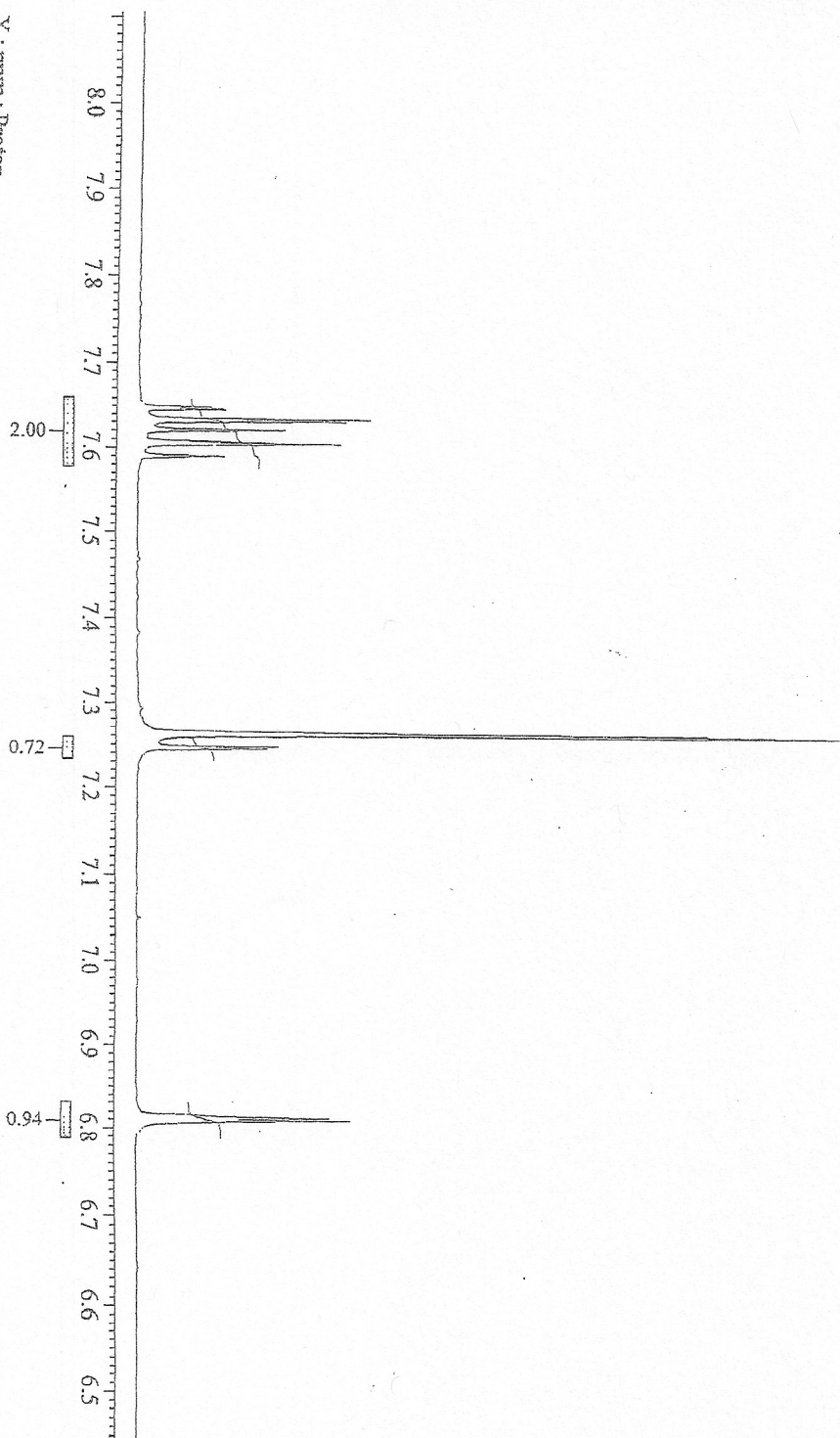
7.248
7.246

6.812
6.809

----- PROCESSING PARAMETERS -----
smp(0.2[Hz], 0.0[s], 80[°], 100[°])
trapzoid(0[°], 0[°], 80[°], 100[°])
zerofill(1)
fft(1, TRUE, TRUE)
machinephase
ppm

Derived from: PLUMBAGIN_proton-2-1.jdf

Filename = PLUMBAGIN_proton-2-1.jdf
Instrument = NMR-500MHz (JEOL)
Instrument Id = NMR-02
Author = 1609
Reviewed by = RaoJih
Solvent = CHLOROFORM-D
Spectrometer = JNM-ECZ500R/S1
Experiment = proton.jxp
Acquisition Parameter
X_Domain = Proton
X_Offset = 7[ppm]
X_Sweep = 11.48158845[kHz]
Scans = 16
Relaxation_Delay = 2[s]



X : ppm : Proton

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