



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.: 19-335

Product: **BERGAMOTTIN**
(5-Geranyloxypsoralen)

CAS Number: [7380-40-7]

Lot Number: 1210248

Chemical Formula: $C_{21}H_{22}O_4$

Molecular Weight: 338.40

Melting Point: 54-56°C

Appearance: White powder

Water Content: 0.22%

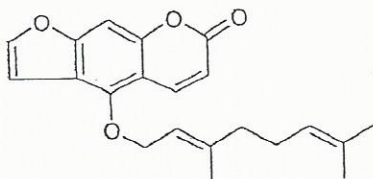
Solubility: Soluble in Chloroform

TLC: Hexane:Ethyl acetate (8:2)

NMR Spectrum: Enclosed

Storage: Store at 2-8°C

Purity(HPLC): 99.66%





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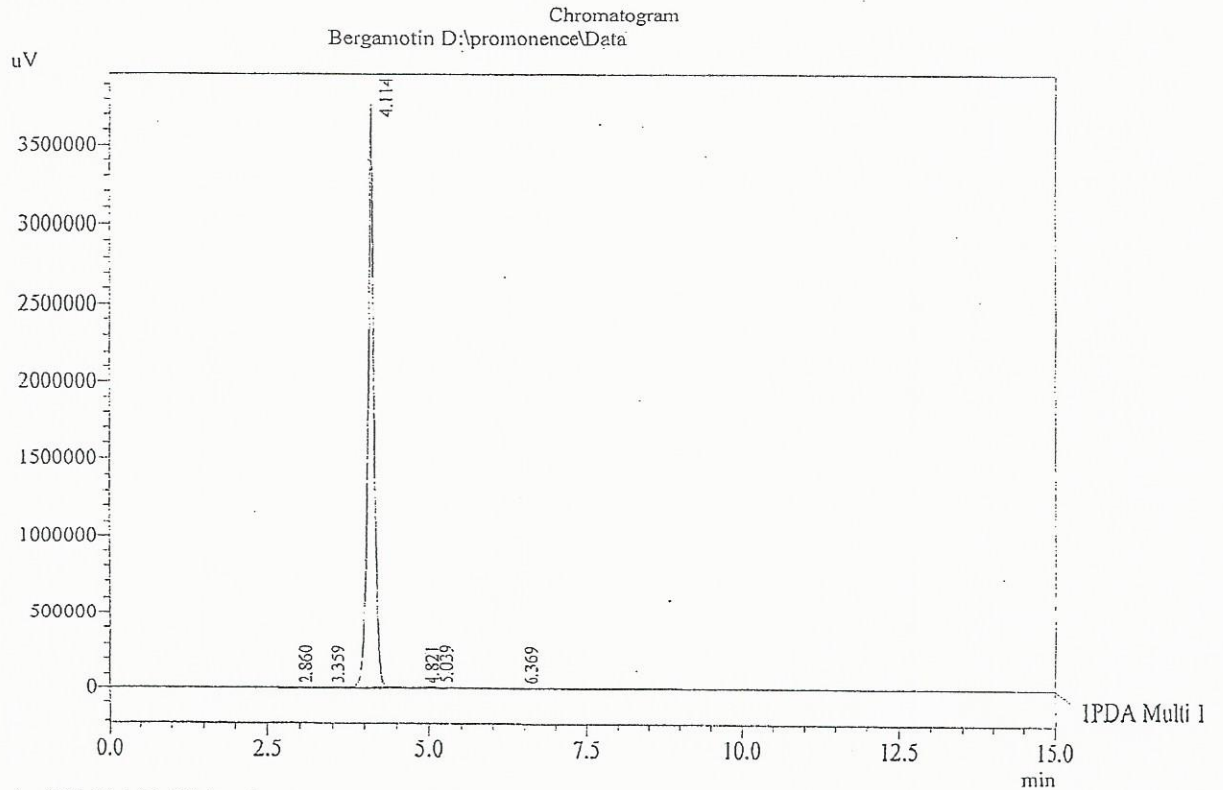
e-mail: chemical@indofinechemical.com

HPLC ANALYSIS

Acquired by : Sanjeev
Sample Name : Bergamotin
Sample ID : 275 gms (Uniform Lot)
Injection Volume : 20 uL
Data Filename : 280912B.lcd
Method Filename : Linear Isocratic.M.lcm

Catalog no.: 19-335
Product name: Bergamottin
Lot No.: 1210248

Column : Inertsil ODS-3V, (150mm x4.6mm 5.0µ)
Flow : 1.200 mL/min.
Mobile Phase : A(10% of water) B(90% of Acetonitrile)



1 PDA Multi 1 / 254nm 4nm

PeakTable

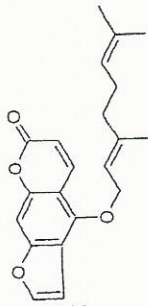
PDA Ch1 254nm 4nm

Peak#	Name	Ret. Time	Area	Area %	Relative Retention Time
1	RT:2.860	2.860	2217	0.01	0.70
2	RT:3.359	3.359	4221	0.02	0.82
3	Bergamotin	4.114	24903348	99.66	1.00
4	RT:4.821	4.821	2251	0.01	1.17
5	RT:5.039	5.039	73075	0.29	1.22
6	RT:6.369	6.369	4145	0.02	1.55
Total			24989258	100.00	



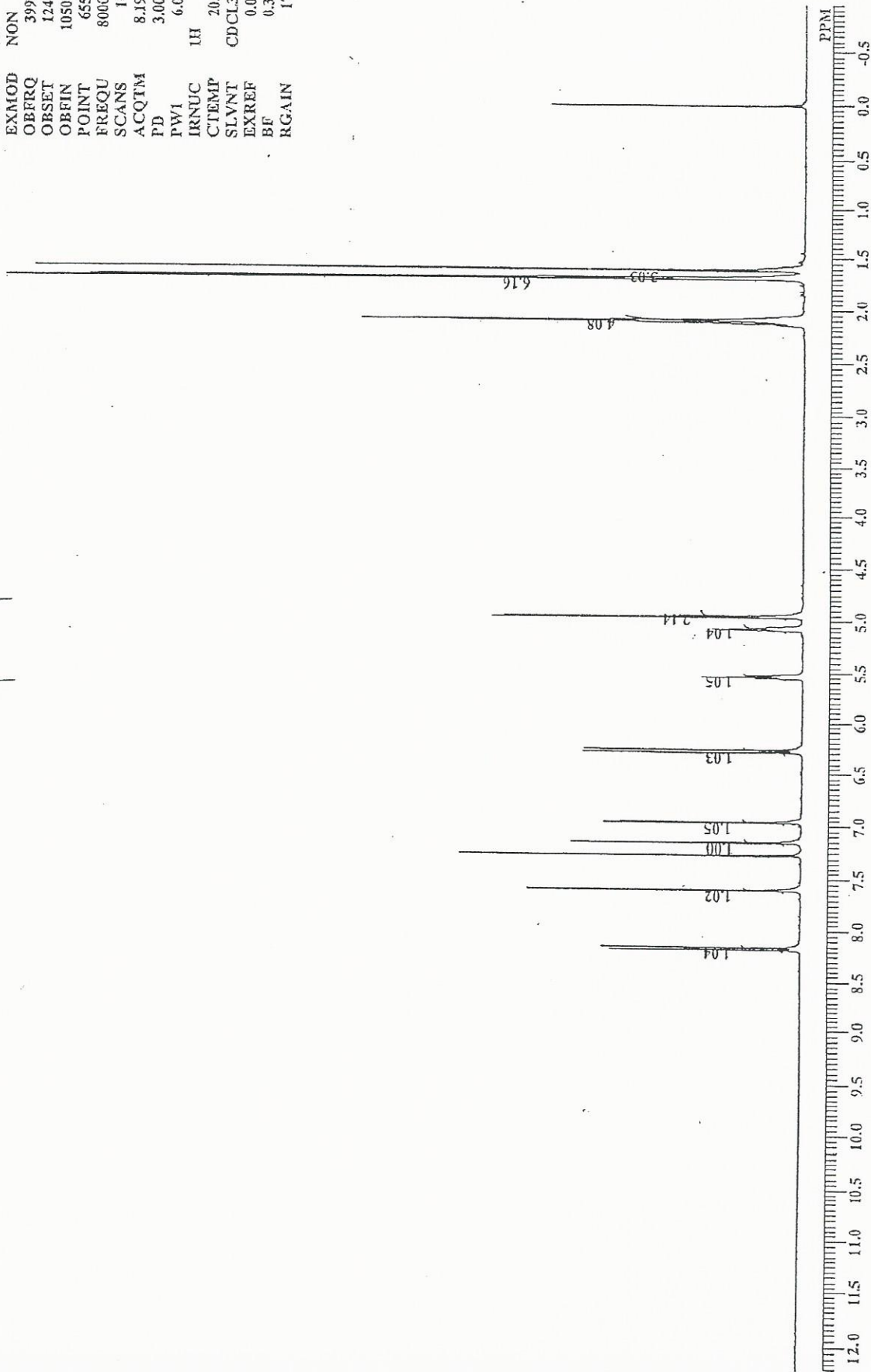
INDOFINE Chemical Company, Inc.
121 STRYKER LANE
BLDG. 30, SUITE 1
HILLSBOROUGH, NJ 08844

Catalog no.: 19-335
Product name: Bergamottin
Lot No.: 1210248



Bergamottin 1H NMR CDCl3

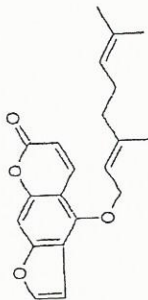
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OBSET 124.00 KHz
OBFIN 10500.00 Hz
POINT 65536
FREQU 8000.00 Hz
SCANS 16
ACQTM 8.1920 sec
PD 3.0000 sec
PWI 6.00 usec
IRNUC 1H
CTEMP 20.2 c
SLVNT CDCL3
EXREF 0.00 ppm
BF 0.30 Hz
RGAIN 17





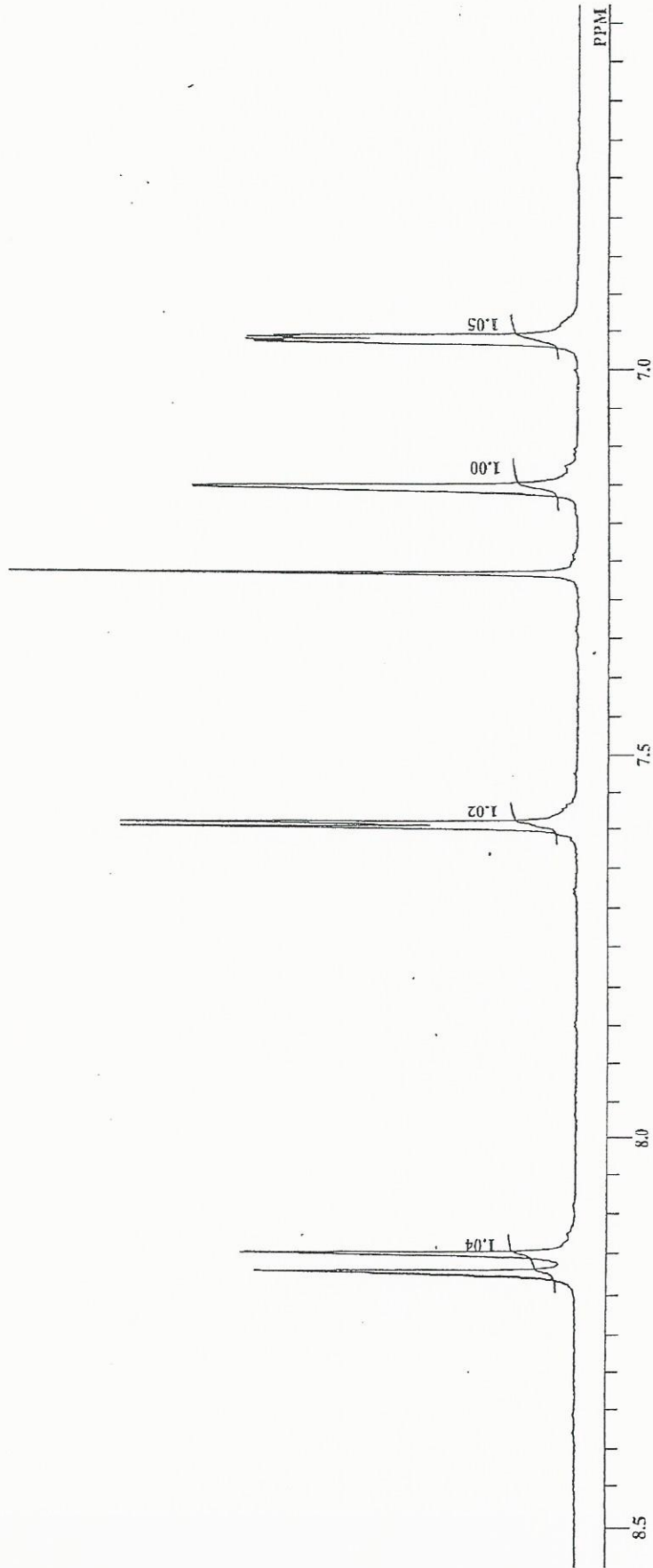
INDOFINE Chemical Company, Inc.
121 STRYKER LANE
BLDG. 30, SUITE 1
HILLSBOROUGH, NJ 08844

Catalog no.: 19-335
Product name: Bergamotfin
Lot No.: 1210248



Bergamotfin 1H NMR CDCl3

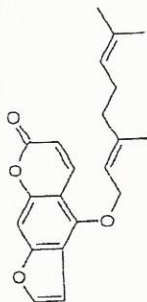
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EXMOD NON
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OBSET 124.00 KHz
OBFIN 10500.00 Hz
POINT 65536
FREQU 8000.00 Hz
SCANS 16
ACQTM 8.1920 sec
PD 3.0000 sec
PW1 6.00 usec
IRNUC 1H
CTEMP 20.2 c
SOLVT CDCl3
EXREF 0.00 ppm
BF 0.30 Hz
RGAIN 17





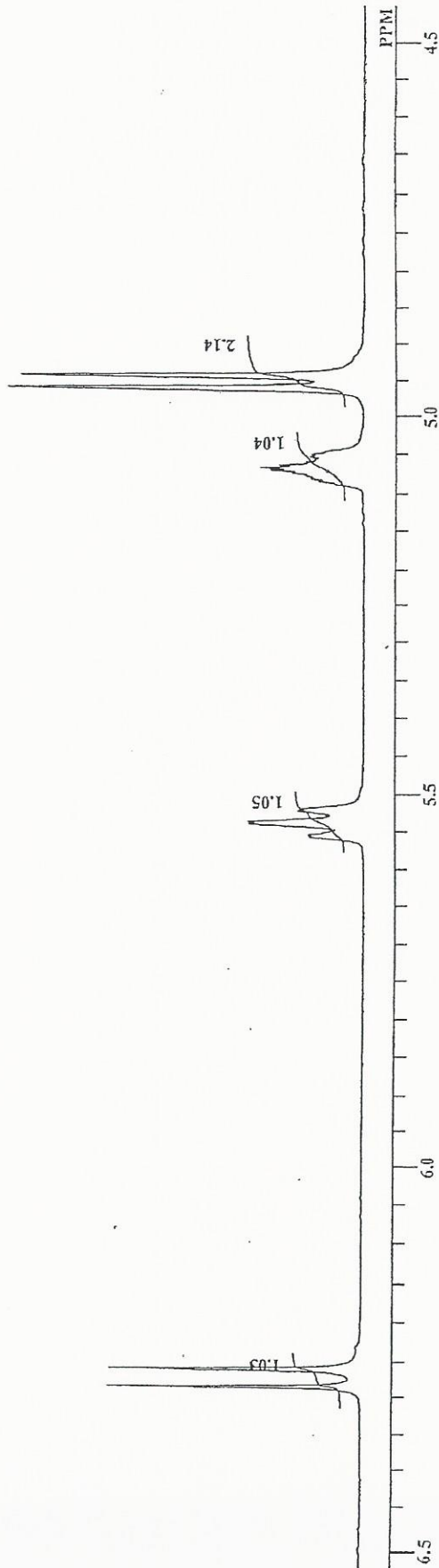
INDOFINE Chemical Company, Inc.
121 STRYKER LANE
BLDG. 30, SUITE 1
HILLSBOROUGH, NJ 08844

Catalog no.: 19-335
Product name: Bergamottin
Lot No.: 1210248



Bergamottin ¹H NMR CDCl₃

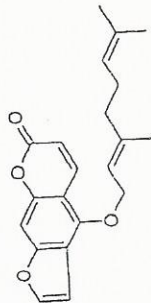
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EXMOD NON
OBFRQ 399.65 MHz
OBSET 124.00 KHz
OBRIN 10500.00 Hz
POINT 65536
FREQU 8000.00 Hz
SCANS 16
ACQTM 8.1920 sec
PD 3.0000 sec
PWI 6.00 usec
IRNUC ¹H
CTEMP 20.2 c
SLVNT CDCl₃
EXREF 0.00 ppm
BF 0.30 Hz
RGAIN 17





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Bergamottin III NMR CDCl3

DFILE	Bergamottin.als
COMNT	Bergamottin IH NMR
OBNUC	1H
EXMOD	NON
OBFRQ	399.65 MHz
OBSET	124.00 KHz
OBFIN	10500.00 Hz
POINT	65536
FREQU	8000.00 Hz
SCANS	16
ACQTM	8.1920 sec
PD	3.0000 sec
PW1	6.00 usec
IRNUC	1H
CTEMP	20.2 c
SLVNT	CDCl3
EXREF	0.00 ppm
BF	0.30 Hz
RGAIN	17

