



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-003

Product Name: **PIPERINE**
(1-Piperonylpiperidine)

CAS Number: [94-62-2]

Lot Number: 0809052

Chemical Formula: C₁₇H₁₉NO₃

Molecular Weight: 285.34

Melting Point: 128-130°C

Appearance: Dark cream powder

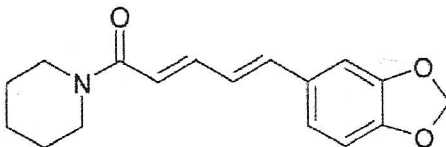
TLC: Hexane: Ethyl acetate (7:3)

Solubility: Soluble in chloroform

NMR Spectrum: Conforms to the structure

Storage: Store in a cool, dry place

Purity(HPLC): 97.36%



ICG INDOFINE Chemical Company, Inc.

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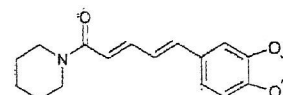
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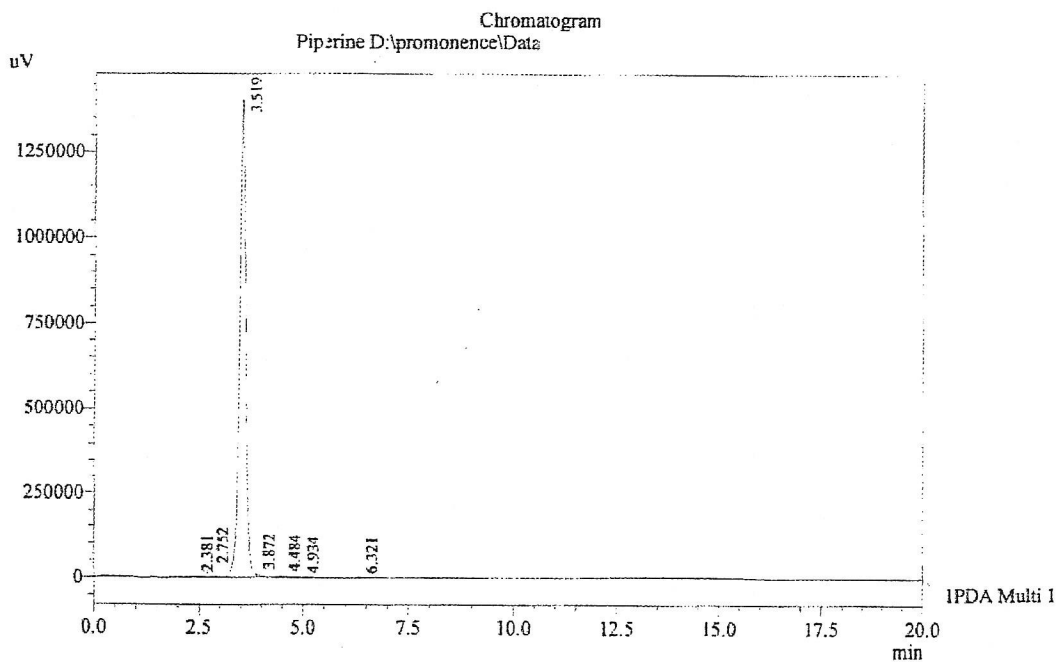
HPLC ANALYSIS

Acquired by : Sanjeev
Sample Name : Piperine
Sample ID : Lot No: 0809052
Injection Volume : 20 uL
Data Filename : 2005141.lcd
Method Filename : Linear Isocratic.M.lcm

Catalog No.: P-003
Product Name: Piperine
Lot No.: 0809052



Column : Inertsil ODS-3V, (150mm x4.6mm 5.0μ)
Flow : 1.000 mL/min.
Mobile Phase : A(30% of 0.01M OPA in water) B(70% of Acetonitrile)
Diluent : Acetonitrile



1 PDA Multi 1 / 254nm 4nm

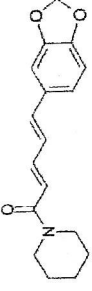
PeakTable

Peak#	Name	Ret. Time	Area	Area %	Relative Retention Time
1	RT:2.381	2.381	37194	0.25	0.68
2	RT:2.752	2.752	228480	1.54	0.78
3	Piperine	3.519	14403981	97.36	1.00
4	RT:3.872	3.872	39741	0.27	1.10
5	RT:4.484	4.484	60181	0.41	1.27
6	RT:4.934	4.934	14372	0.10	1.40
7	RT:6.321	6.321	10265	0.07	1.80
Total			14794214	100.00	



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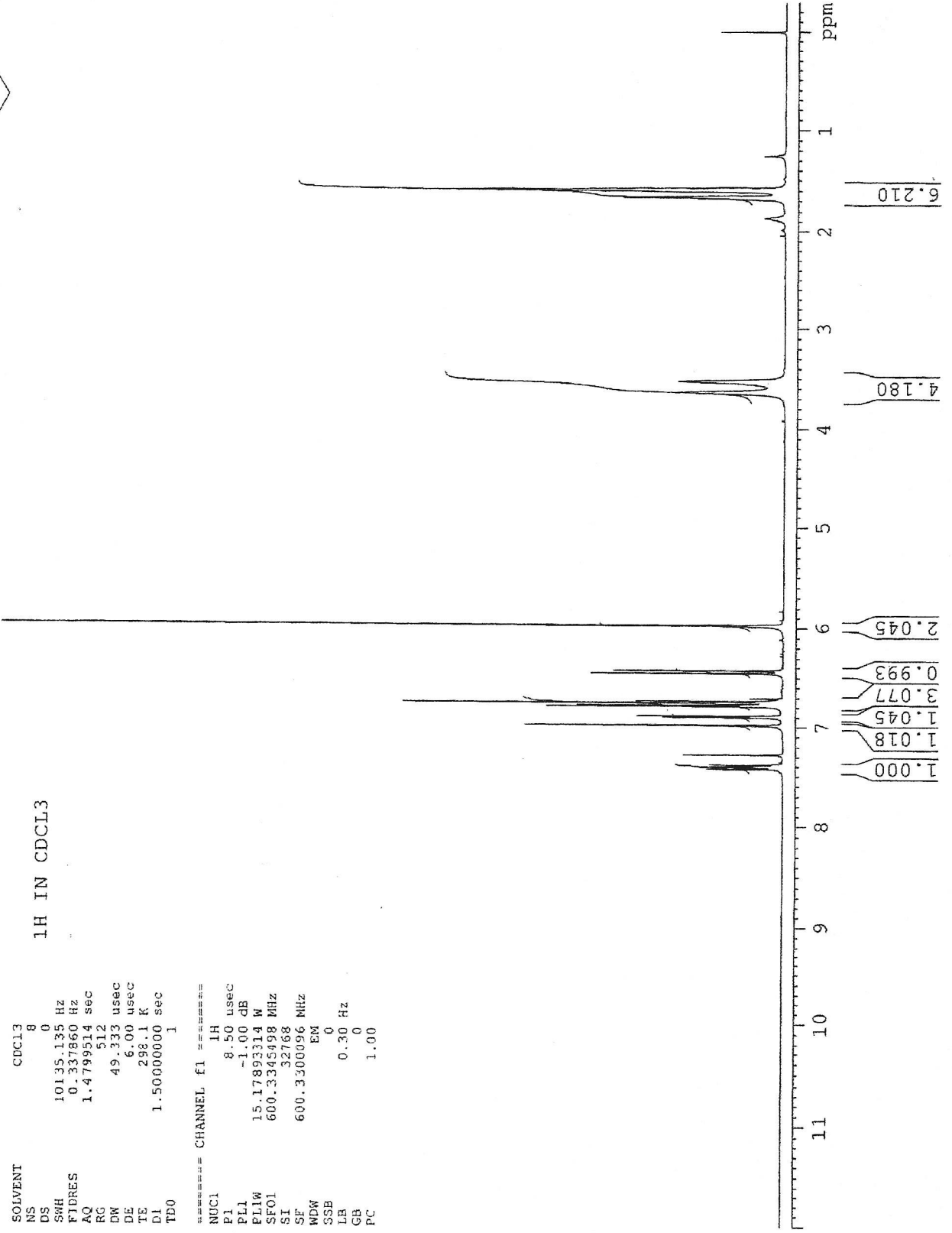
Catalog No.: P-003
 Product Name: Piperine
 Lot No.: 0809052



1H IN CDCL3

SOLVENT CDCL3
 NS 8
 DS 0
 SWH 10135.135 Hz
 FIDRES 0.337860 Hz
 AQ 1.4799814 sec
 RG 312
 DW 49.333 usec
 DE 6.00 usec
 TE 298.1 K
 DI 1.50000000 sec
 TD0 1

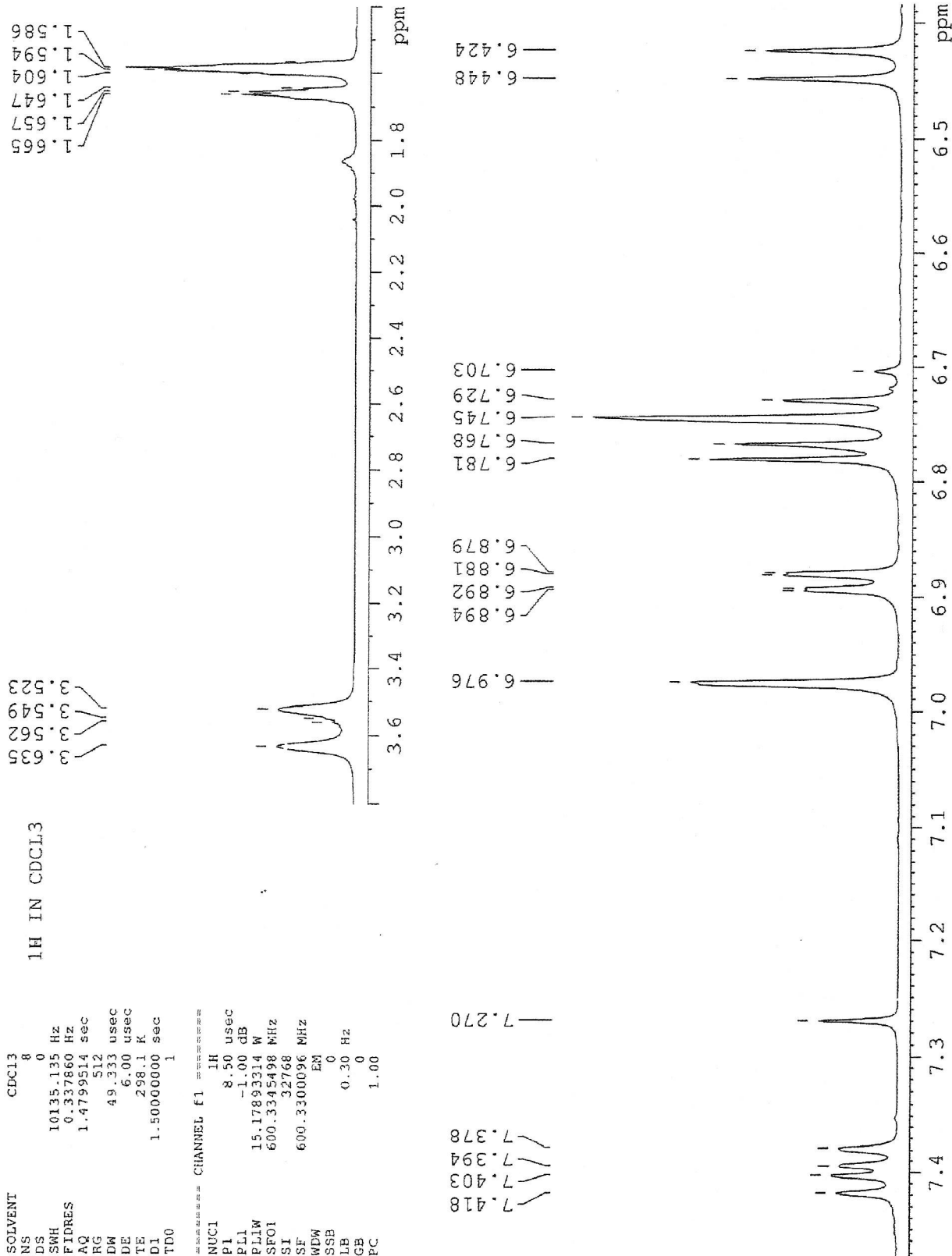
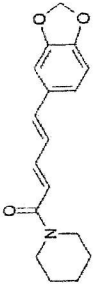
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 NUC1 1H
 P1 8.50 usec
 PL1 1.00 dB
 PL1W 15.17893314 W
 SF01 600.3345498 MHz
 SI 32768
 SF 600.3300096 MHz
 EM 0
 WDW 0
 SSB 0.30 Hz
 LB 0
 GB 0
 PC 1.00





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Catalog No.: P-003
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SOLVENT CDCL3 8
 NS 0
 DS 0
 SWH 10135.135 Hz
 FIDRES 0.337860 Hz
 AQ 1.4799514 sec
 RG 512
 DW 49.333 usec
 DE 6.00 usec
 TE 298.1 K
 D1 1.50000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 8.50 usec
 PL1 -1.00 dB
 PL1W 15.17893314 W
 SF01 600.3345498 MHZ
 SI 32768
 SF 600.3300096 MHZ
 EN 0
 WDW 0.30 Hz
 SSB 0
 LB 0
 GB 0
 PC 1.00