



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

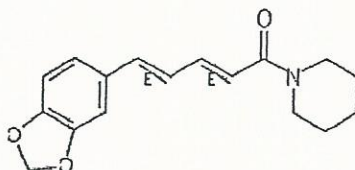
website: www.indofinechemical.com

e-mail: chemical@indofinechemical.com

CERTIFICATE OF ANALYSIS

Cat. No.: P-003

<u>Product:</u>	PIPERINE (1-Piperonylpiperidine)
<u>CAS Number:</u>	[94-62-2]
<u>Lot No.:</u>	PPN-488
<u>Molecular Formula:</u>	C ₁₇ H ₁₉ NO ₃
<u>Molecular Weight:</u>	285.35
<u>Melting Point:</u>	128-131°C
<u>Appearance:</u>	Off white fluffy powder
<u>TLC:</u>	Hexane: Ethyl acetate (7:3)
<u>Solubility:</u>	Soluble in Chloroform
<u>NMR Spectrum:</u>	Enclosed
<u>Storage Condition:</u>	Store in cool, dry place
<u>Purity (HPLC):</u>	98.76%





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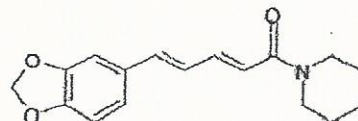
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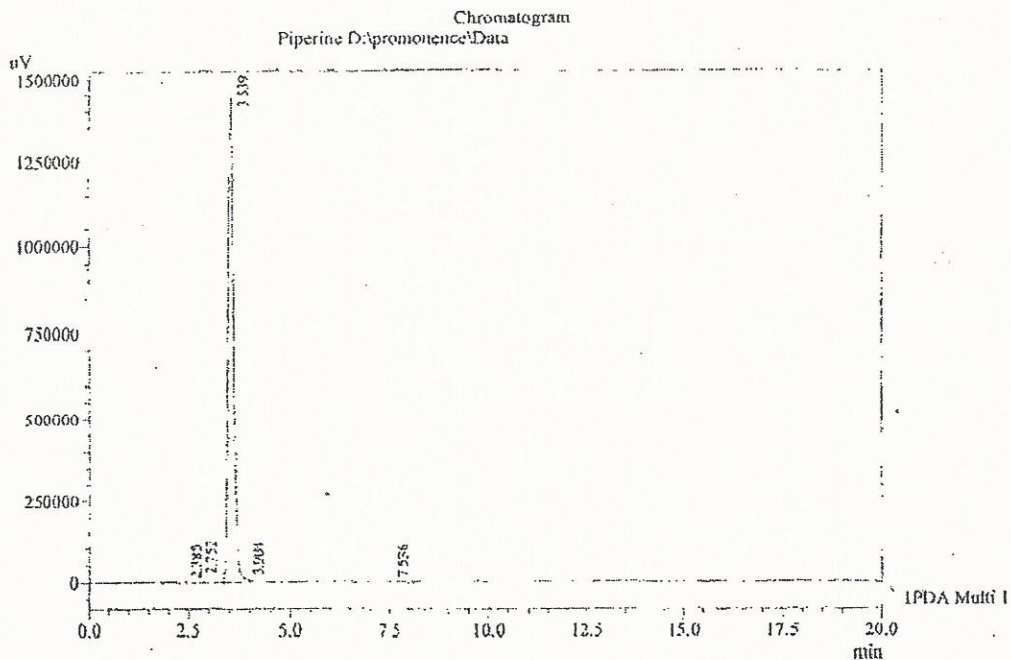
HPLC ANALYSIS

Catalog no.: P-003
Product name: Piperine
Lot No.: PPN-488

Acquired by : Sanjeev
Sample Name : Piperine
Sample ID : Lot No:-PPN-488
Injection Volume : 20 μ L
Data Filename : 310512C.lcd
Method Filename : Linear Isoocratic.M.lcm



Column : Inertsil ODS-3V, (150mm x4.6mm 5.0 μ)
Flow : 1.000 mL/min.
Mobile Phase : A(30% of 0.025% OPA in water) B(70% of Acetonitrile)



IPDA Multi 1 / 254nm 4nm

PeakTable

Peak#	Name	Ret. Time	Area	Area %	Relative Retention Time
1	RT:2.385	2.385	2320	0.02	0.67
2	RT:2.752	2.752	106156	0.79	0.78
3	Piperine	3.539	13238931	98.76	1.00
4	RT:3.904	3.904	41311	0.31	1.10
5	RT:7.536	7.536	16420	0.12	2.13
Total			13405318	100.00	



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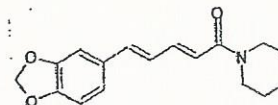
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Catalog no.: P-003
Product name: Piperine
Lot No.: PPN-488

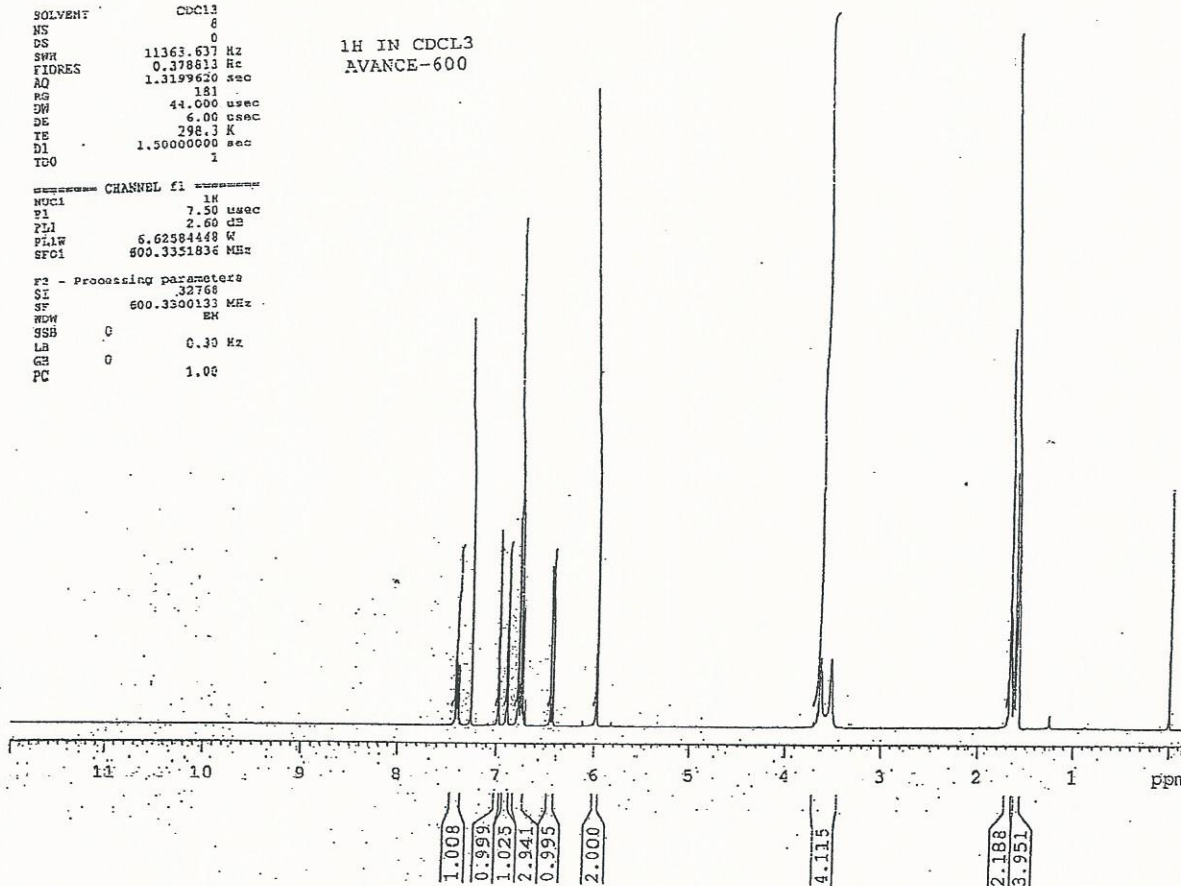


SOLVENT CDCl3
NS 6
DS 0
SWH 11363.637 KHz
FIDRES 0.378813 Hz
AQ 1.3199620 sec
RG 181
SW 44.000 usec
DE 6.00 usec
TE 298.3 K
DI 1.50000000 sec
TEO 1

1H IN CDCL3
AVANCE-600

----- CHANNEL f1 -----
NUC1 1H
P1 7.50 usec
PL1 2.60 dB
PL1W 6.62584448 W
SFO1 600.3351836 MHz

F2 - Processing parameters
SI 32768
SF 600.3300133 MHz
WDW EM
SSB 0
LB 0.30 KHz
GB 0
PC 1.00





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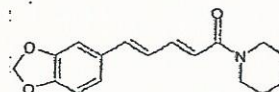
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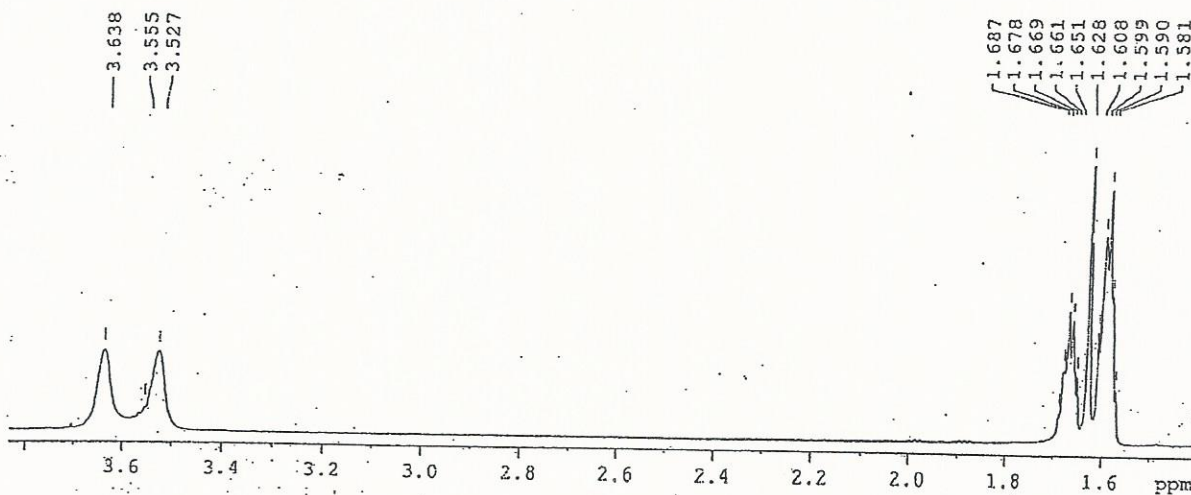
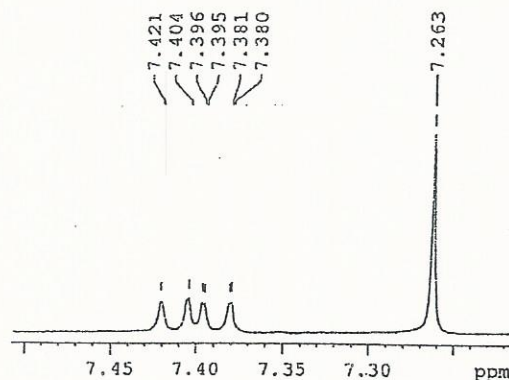
Catalog no.: P-003
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ES 0
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FIDRES 0.378813 Hz
AQ 1.3199620 sec
RG 181
DW 44.000 usec
DE 6.00 usec
TE 298.3 K
D1 1.50000000 sec
TDO 1

1H IN CDCl3
AVANCE-600

===== CHANNEL f1 =====
NUC1 1H
P1 7.50 usec
PL1 2.60 dB
PL1W 6.62584448 W
SFO1 600.3351836 MHz
SI 32768
SF 600.3300133 MHz
NMR EM
SSB 0
LA 0.30 Hz
GB 0
PC 1.00





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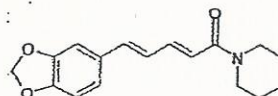
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AVANCE-600

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