



# 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](http://www.indofinechemical.com)

e-mail: [chemical@indofinechemical.com](mailto:chemical@indofinechemical.com)

## CERTIFICATE OF ANALYSIS

Catalog Number: P-004

Product Name: **PIPERLONGUMINE**  
(Piplartine)

CAS Number: [20069-09-4]

Lot No.: 1807310

Molecular Formula: C<sub>17</sub>H<sub>19</sub>NO<sub>5</sub>

Molecular Weight: 317.34

Appearance: Off white powder

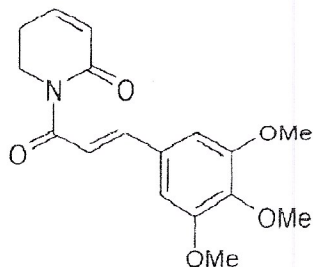
Solubility: Soluble in Chloroform

TLC: Hexane:Ethyl acetate (7:3)

NMR Spectrum: Enclosed (conforms to the structure)

Water content(KF): 0.24%

Purity(HPLC): 98.71%



Prepared by:  
*Ramesh Mandadi*  
Ramesh Mandadi  
Director of Operations

Reviewed and approved by:  
*Sujata Moton*  
S. Moton  
VP



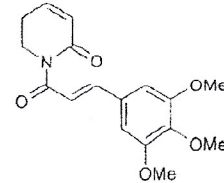
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## HPLC ANALYSIS

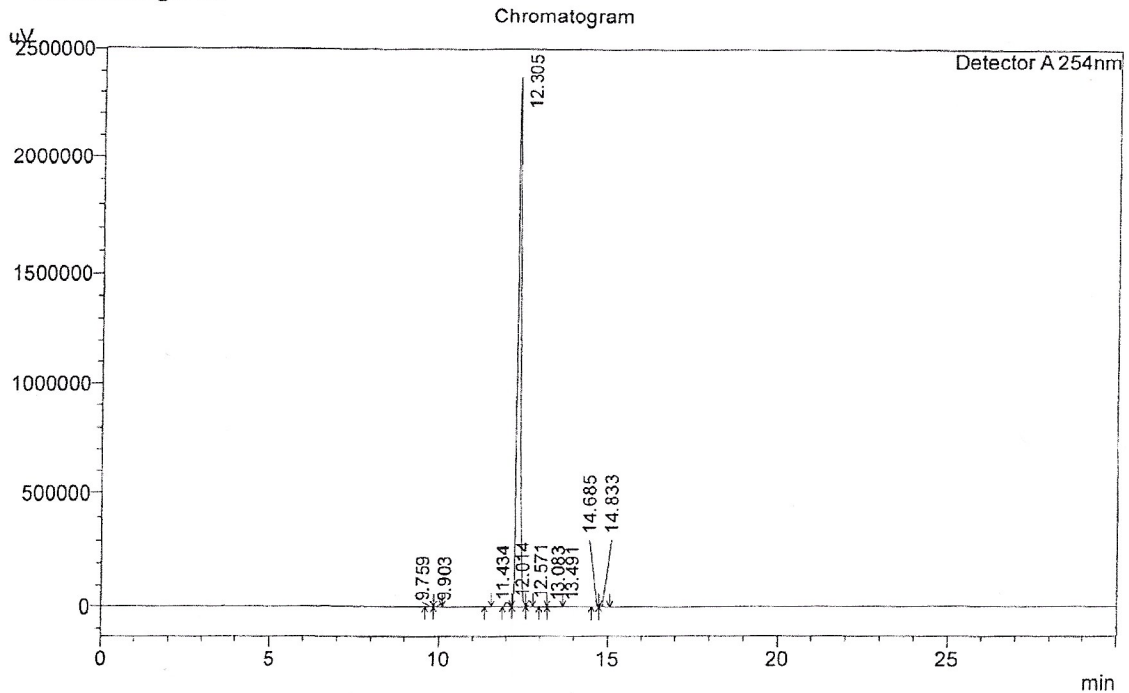
Sample Name : Piperlongumine  
Sample ID :  
Data Filename : 080818058.lcd  
Method Filename : General Method.lcm  
Vial # : 1-4  
Injection Volume : 20 uL

Catalog No.: P-004  
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Lot No.: 1807310



Column: Inertsil ODS-3v : 250mm x 4.6mm,5.0um  
MP-A: Acetonitrile,MP-B: 0.05% TFA in water  
Flow Rate: 1.0 ml/min,  
Gradient program : 0.01/90,12/10,20/10,23/90,30/90 (% of A Conc)  
Diluent: Acetonitrile  
Acquired by: Sanjeev

### <Chromatogram>

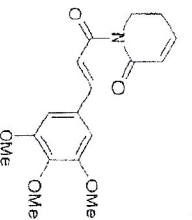


### <Peak Table>

Peak#	Name	Ret. Time	Area	Area%	Relative Retention Time
1		9.759	3813	0.02	0.79
2		9.903	2956	0.02	0.80
3		11.434	2410	0.01	0.93
4		12.014	122516	0.75	0.98
5	Piperlongumine	12.305	16057307	98.71	1.00
6		12.571	28543	0.18	1.02
7		13.089	2232	0.01	1.06
8		13.491	8524	0.05	1.10
9		14.685	11108	0.07	1.19
10		14.833	27896	0.17	1.21
Total			16267305	100.00	

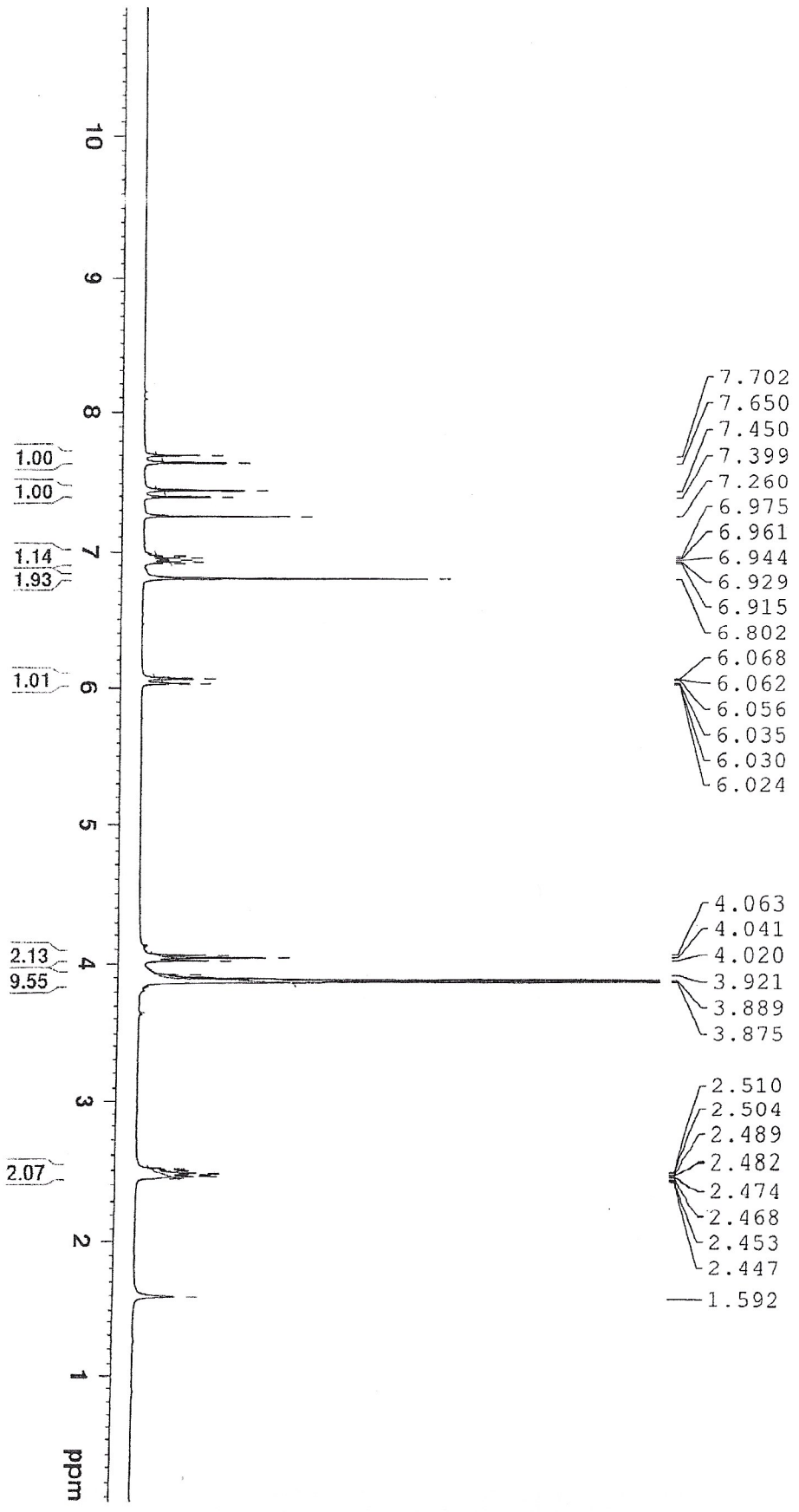


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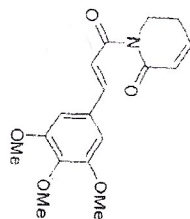
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<sup>1</sup>H in CDCl<sub>3</sub>  
Bruker AV 300MHz





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