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Mass Spectral Fragmentation Patterns of (E)-2-(((4-((4-aminophenyl)sulfonyl)phenyl)mino)methyl)phenols.

Dr. Vikas B. Suryawanshi
Department of Chemistry , KMC College ,
Khopoli, Maharashtra-410203 India

Abstract

A Series of aromatic imines have been prepared by condensation of hydroxyl aldehyde with sulphadrug (Dapsone) in Fairly good yield. The compounds have been characterized by IR,NMR, ^{13}C NMR and Mass spectral studies The Mass spectral fragmentation patterns of the compound described as.

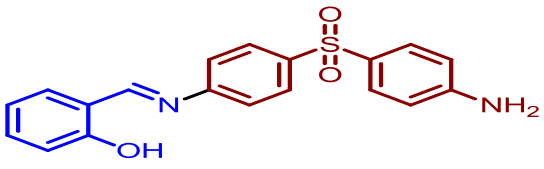
Key Words: *Imines,sulphadrug,mass spectra.*

Introduction :

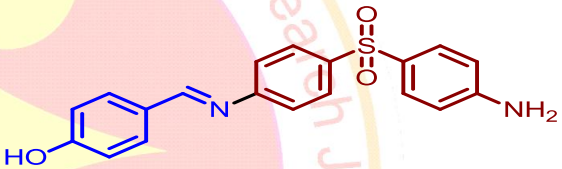
Imines and their derivatives are useful intermediates in organic synthesis particularly in preparation of hetrocycles and non-natural b-aminoacids.During the past several years the synthesis and application of N-sulfonylimines from aldehyde with sulfonamides has been found very useful in organic chemistry. Because N-sulfonylimines are powerful synthetic intermediates and they are also used in various reactions. The drugs containing the sulfonamide functional group have long been identified as a potential ETA antagonists and showed good performance in the treatment of congestive heart failure. Due to importance of imines in industrial use as well as in biology. We synthesized by ecofriendly and catalyst –free protocols of imines from aldehyde and substituted long chain and branched imines (sulphadrugs).

As part of structural investigation mass spectra of three new compounds 1a-c belonging to this series were recorded .The fragmentation pattern is described in result and discussion.

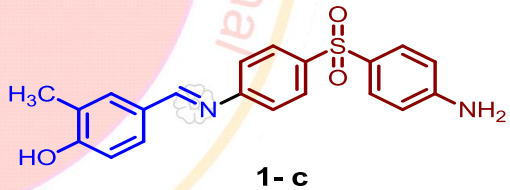
Synthesised Imines



1- a



1- b



1- c

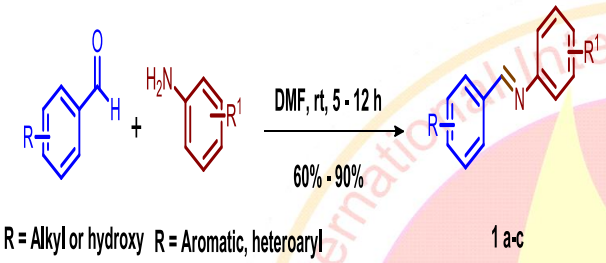
Result And Discussion :

The mass spectra of compounds 1a-c are fully consistent with the assigned structure.in each case ,intense molecular ion peaks were observed. Thus the compound 1a and 1b showed an intense peak molecular ion peak at M/Z 352 corresponding to the molecular formula $C_{19}N_2O_3SH_{16}$.And the compound 1c shows the molecular ion peak at M/z 366 corresponding to the molecular formula $C_{20}N_2O_3SH_{18}$.The molecular ion peak was found to be the base peak .The molecular ion peak was found to be the base peak. The M+2 peak were observed along with the molecular ion peak due to the presence of isotopes of sulpher present in the compound. The peak appeared at M/Z 122, M/Z 93, M/Z 66 due to the formation of radicals $C_7N_1OH_8$,$C_6N_1H_7$, SO_2H_2 respectively.

Experimental:

The imines are synthesized by taking 10 mmol of aldehyde and 10 mmol amines (sulphadrug) in a round bottom flask in which 50 ml DMF(Dimethyl formamide) added thoroughly and stirred at room temperature for 5-12 hours .The reaction completion was monitored by TLC,20 mi water is added in round bottom flask solid appeared filtered and dried fine powder obtained.

The mass spectra were recorded on Jeol JSM D-300 Mass spectrometer operating at 70 Ev.



R = Alkyl or hydroxy R = Aromatic, heteroaryl 1 a-c

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