

GENERAL REMARKS

- ❖ Melting points were recorded on Polmon Melting point apparatus and are uncorrected.
- ❖ Infrared spectra were recorded on Perkin-Elmer Infrared spectrophotometer with NaCl optics. Spectra were calibrated against the polystyrene absorption at 1610 cm^{-1} . Samples were scanned either in neat, KBr wafers or in chloroform as a thin film.
- ❖ ^1H NMR and ^{13}C NMR spectra were recorded on either Varian Gemini 200 or Bruker Avance 300 or Varian Unity 400 or INOVA 500 MHz. The samples were made in $\text{CCl}_4/\text{CDCl}_3$ (1:1) or CDCl_3 or $\text{DMSO-}D_6$ or $\text{Benzene-}D_6$ using tetramethyl silane (TMS) as the internal standard and are given in δ scale. The standard abbreviations s, d, t, q, qt, m, dd, dt and br.s refer to singlet, doublet, triplet, quartet, quintet, multiplet, doublet of a doublet, doublet of a triplet and broad singlet respectively.
- ❖ Mass spectra were recorded on Micro Mass VG-7070H mass spectrometer for ESI and VG Auto spec M mass spectrometer for FABMS.
- ❖ The optical rotations were recorded on JASCO DIP-370 digital polarimeter.
- ❖ Analytical thin layer chromatography (TLC) was performed on precoated silica gel 60-F254 (0.5-mm) glass plates. Visualization of the spots on TLC plates was achieved either by exposure to iodine vapor or UV light or by dipping the plates into methanolic sulphuric acid- β -naphthol or to methanolic anisaldehyde-sulphuric acid-acetic acid or to ethanolic ninhydrin solution and heating the plates to 120 $^\circ\text{C}$.
- ❖ Column chromatography was performed using silica gel (60-120, 100-200 mesh) and the column was usually eluted with ethyl acetate-petroleum ether, methanol-chloroform (60-80 $^\circ\text{C}$).
- ❖ Enantiomeric excess were determined by using chiralcel-IA/IC/ column and was recorded on SHIMADZU HPLC.
- ❖ Moisture sensitive reactions were carried out using standard syringe septum techniques.
- ❖ All solvents and reagents were purified by standard techniques. All evaporation of solvents was carried out under reduced pressure on Heidolph or Buchi rotary evaporator below 45 $^\circ\text{C}$.
- ❖ Yields reported are isolated yields of material judged homogeneous by TLC and NMR spectroscopy.
- ❖ The names of all the compounds given in the experimental section were taken from ChemDraw Ultra 11.0.