GENERAL REMARKS

1. The compound numbers, Figure numbers, Table numbers, Chart numbers and Reference numbers etc. given in each chapter refer to that particular chapter only. The references and figures are given at the end of each chapter.

2. All melting points are uncorrected and recorded on celcius scale.

3. All solvents were distilled before use.

4. Organic layers were dried over anhydrous sodium sulphate.

5. Column chromatographic separations were carried out using the column grade (60-120 mesh) silica gel.

6. Thin layer chromatography plates used were prepared by spreading organic solvent suspension of silica gel (TLC silica gel G, procured from ACME Synthetic Chemicals, Mumbai, India) uniformly over glass plates and precoated aluminium sheets with silica gel 60 F\textsubscript{254} procured from Merck KGaA, Darmstdt, Germany. The spots on TLC were visualized by exposing them to UV radiation or iodine vapors and / or spraying with a mixture of H\textsubscript{2}SO\textsubscript{4}-HNO\textsubscript{3} (1:1) followed by charring in an oven.

7. IR spectra were recorded on FTIR – 8300 SHIMADZU and ATI Mattson Research Series 1 FTIR spectrometer.

8. NMR spectra were recorded on Brucker FT AC-200, Brucker MSL-300, Brucker-400, Brucker DRX-500 and Varian Mercury Plus instrument operating at 24°C using residual signal of non-deuterated solvents as internal reference. The following abbreviations were used – singlet = s, doublet = d, triplet = t, quartet = q, multiplete = m, doublet of doublet = dd, broad singlet = bs, etc.

9. Mass spectra, EIMS, were taken on a Finnigan-Mat 1020 C mass spectrometer using ionization energy of 70 eV and LC-MS were taken on LC- MS-MS Perkin Elmer Applied Biosystems SCIEX-2000.

10. Elemental analysis was recorded on Carlo ERBA EA 110 B instrument
11. ESR spectra of complexes were recorded at room temperature on Varian E-112 spectrometer using TCNE as the standard.
12. Cyclic voltammograms were recorded on Electrochemical Analyzer CHI1100
13. UV spectra were recorded on Shimadzu – 3600 UV- vis-NIR spectrophotometer.
14. TG-DTA were thermo grams were recorded at air (Room temperature to 900°C) on SETARAM Instrumentation K & P technologies SETSYS Evolution -1750
15. Magnetic susceptibilities were measured at room temperature by Guoy method using Hg [Co (NSC)₄] as the calibrant.
16. Anthelmintic Activity of the test samples Indian Earthworm species Eicinia foetida was collected from Mahatma Phule Agriculture University, Pune, Maharashtra, India. All earthworms were of approximately equal size (9-10 cm).
17. Antimicrobial activity of the test samples were determined by disc diffusion method at National Agriculture and Food analysis And Research Institute, Pune India.
18. Reagents and Chemicals for HPTLC - All solvents used were of AR-grade and were obtained from Merck, Mumbai (India). Standard santonin was obtained from Sigma chemicals co.
19. pH meter - Digital p H meter was used to measure the p H of solution .
20. Colorimeter–systronic colorimeter–112 was used to measure the absorbance of sample solution before and after adsorption.