The biological and medicinal properties of these ligands and their derivatives have gained much interest. Thiosemicarbazones and their 3d-metal complexes have been found to exhibit anti-fungal[1], anti-bacterial[2], anti-viral[3], anti-tubercular[4] and anti-carcinogenic activities[5]. The anti-fungal activity of these compounds is due to the presence of toxophyrically important N–C=S moiety[6]. Thiosemicarbazides and their Schiff bases also display anti-tumour[7-8] activity. It is expected that thio ligands will also show variability in structure and bonding in its transition metal complexes. It has been reported that thiosemicarbazide and its complexes with 3d-metal ions show in vitro and in vivo anti-tumour activity[9].

RESEARCH METHODOLOGY

A.R. Grade chemical and fluka reagents were used in the present study. The solvent were purified before use by processing. Semicarbazide hydrochloride, acetoacetic ester, isopropyl ester, methyl ester of 6-methyl Pyran-2-one-4 hydroxy 3 diacarboxylic acid ester thiosemicarbazone, Biological activity

ABSTRACT

Complexes of cobalt (II) of general composition [ML₂X₂], [ML₂X]X were prepared with thiosemicarbazones (L¹, L², L³ and L⁴). These complexes were characterized by elemental analysis, molar conductances measurements, Magnetic moments IR, electronic spectra, and EPR spectral studies. All are the nonelectrolyte in nature therefor these complexes may formulated [M(L)₂X₂]. All the complexes are of high-spin and show octahedral geometry.

Key Words : Acetoacetic ester thiosemicarbazone, Isopropyl ester thiosemicarbazone, 6-methyl Pyran-2-one-4 hydroxy 3 diacarboxylic acid ester thiosemicarbazone, Biological activity