The biological and medicinal properties of these ligands and their derivatives have gained much interest. Semicarbazones 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 toxophyically important N–C=O moiety[6]. Semicarbazides and their Schiff bases also display anti-tumour[7-8] activity. It is expected that ligands will also show variability in structure and bonding in its transition metal complexes. It has been reported that semicarbazide 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 solvents 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, sodium acetate and different metallic salts.

**Preparation of ligands:**

- **Preparation of Acetoacetic ester semicarbazone (AESC)(L')**:
  Aqueous solution of semicarbazide hydrochloride (0.01 mol, 1.12 g) and acetoacetic ester (0.01 mol of 1.83 ml) were...