ABSTRACT

Carbon nano particles from four different seed oils (mustard, olive, linseed and castor oils) were prepared. Simple combustion method was found to be equally efficient as others for example electric arc discharge, chemical vapour deposition and laser ablation methods *etc.* This facile and cheaper method yielded the carbon particles in nano range from above mentioned oils.

After the preparation of carbon nanoparticles, they were characterized by different techniques such as powder X-Ray Diffraction (XRD), Thermo Gravimetric analysis (TGA), Differential Scanning Calorimetry (DSC), Scanning Electron Microscope (SEM) and Fourier Transform Infra Red spectroscopy (FTIR). The average Particle size of carbon nanoparticles as investigated by powder X-Ray Diffraction analyses was found to be 18 nm, 24nm and 57nm for mustard, olive and linseed oils respectively. SEM analyses revealed the surface morphology of these carbon nanostructures.

Thermo Gravimetric analysis (TGA) and Differential Scanning Calorimetry (DSC) provided information about the thermal stability of these carbon nano particles. The synthesized carbon nanoparticles were screened for antibacterial activities against different species (*e.g.* Pseudomonas aeruginosa, Streptococcus haemolyticus, Proteus refrigere and Staphylococcus aureus) and fruitful results have been obtained which are summarized in table.