**Abstract**

Plastic are one of the most widely used materials and in most cases, they are designed to have long life time. Though plastics have become cosmopolitan, now days, they are very hazardous and should be disposed off, properly. Land filling, incineration and recycling are the most common methods employed for the disposal of plastics and all methods have their own environmental and health hazards. So, biodegradation will be the right choice for the proper disposal of plastic wastes. Soil samples from the compost yard have the rich consortia of biodegrading microbes. These samples were inoculated into nutrient agar medium with plastic as the sole carbon source for the isolation of the plastic degrading strains. Characterization of bacterial strains was done based on morphological, biochemical and molecular characterization. The process of biodegradation was observed at regular interval for 90 days in a synthetic medium containing Low Density Polyethylene (LDPE) films. The bacterial isolates,*Bacillus sp*and*Pseudomonas sp*were able to reduce the weight of the polymer up to 0.3% and 0.6% respectively. Degradation was monitored by observing weight loss and changes in physical structure by Scanning Electron Microscopy (SEM) and Fourier Transform Infrared (FTIR) Spectroscopy.