**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 properly. Land filling, incineration and recycling are the most common methods employed for the disposal of plastics with the side effects of environmental and health hazards. So, biodegradation will be the right choice for the 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 30 days in a synthetic medium containing LDPE films. The bacterial isolates,*Actinomycetes sp, Bacillus mycoidesis, Bacillus subtilis,Brevundimonasdiminuta, Pseudomonas putida*and*Pseudomonas stutzeri*were able to reduce the weight of the polymer up to 17%,14%, 30%, 22% 29% and 25% respectively. Degradation was monitored by observing weight loss and changes in physical structure by Fourier Transform Infrared (FTIR) Spectroscopy.