An Executive Summary of the Final Report of Work Done on the Minor Research Project of Ms Ashwini entitled "Synthesis and Characterisation Of biodegradable Polymer Blends With enhanced mechanical and electrical properties" sanctioned by UGC, vide Sanction Letter No. MRP(S)-0125/12-13/KAMA002/UGC-SWRO dated

23-09-2013.

The term blend describes the intimate mixture of ingredients.Polymer blend is mixture of two or more polymers or copolymers .Polymer blends can be either miscible or immiscible.

This project involves the preparation of polymer blends involving two polymers which are miscible. The blends of polylactic acid and polyisobutylene of different compositions was prepared. The net weight of the polymer blends in each composition is found to be 1g.

While preparing the polymer blends i.e. before mixing the two polymers,each polymer should be dissolved completely using a suitable solvent separately.Then both the polymer solutions were mixed using a magnetic stirrer to get a homogeneous solution.Then it is poured to the petridish carefully and then kept for drying.

The blends of polylactic acid nylon-6, 6 of different compositions were prepared in a similar manner.

Characteristic study such as IR and DSC for polymer blends of each composition were done.

The spectra were then compared with the FTIR spectra of the component polymers. It was observed that there were small shifts in the peak positions and intensity of absorption in the blend spectrum. Hence it was evident that there was some interaction between the two blended polymers. Most probably there would be some physical interaction between the polymers.

Their mechanical and electrical properties such as Young's modulus and dielectric constant was also studied.

The Young's modulus of the blend decreased with decrease in nylon 6,6 content. Also, PLA-PIB blend showed higher value for the Young's modulus than PLA-nylon 6,6 blend.

The increase in the PLA content in the blend appeared to have increased the dielectric constant of the blend.