ABSTRACT

In this study, the leaf fibres are hard, coarse and stiff in texture whereas the bast fibres are soft. The natural cellulose fibres come under the criteria of biodegradable textiles because of the presence of natural macromolecules like protein and cellulase. Hemp is the common name for plants of the entire genus Cannabis. Hemp is one of the fastest growing biomasses known, producing upto 25 tonnes of dry matter per hectare per year and one of the earliest domesticated plants known. Hemp is used for a wide variety of purposes, including the manufacture of cordage of varying tensile strength and clothing. Enzymes are protein substance preferred due to the reasons that these replace house chemicals, create no pollution, act as a catalyst and are degradable. The selected natural sources namely banana stem waste and cauliflower leaf stalk were chopped into small pieces of 2-3”size. These cut pieces were ground individually and juice from the same was extracted for identification of the presence of enzyme. The cellulase enzyme extraction method on fresh mouldy substrates obtained after incubation were soaked in distilled water and allowed to stand at room temperatures 30°C for one hour and extracted the enzyme from banana stem waste and cauliflower leaf stalk. The tests were conducts at Avinashilingam University. The treated yarns were visually and objective evaluations were carried out in the laboratory. The obtained results are compared with the banana stem waste and cauliflower leaf stalk.