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EXTRACTION OF POLYSACCHARIDES FROM VEGETABLE WASTE AND CHEMICAL-PHYSICAL ANALYSES FOR THEIR ECO-FRIENDLY REUSE

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ABSTRACT

Waste generation is a major problem that has accompanied urbanization. Disposal of waste is a bigger problem. Therefore, exploitation of alternative biomasses like vegetable waste for the sustainable production of materials, drugs and energy has to be implemented. We need to opt for "greener" methods of production and implement these processes and technologies that are safe for the environment and that allow a more complete exploitation of such wastes for a sustainable production of polysaccharides.

Our present work focuses on the extraction of Polysaccharides, namely Cellulose and Pectin from Vegetable waste followed by their characterization by FT-IR and finally use it for biomedical and other Tissue Engineering applications. The Cellulose extracted has been used to generate nano-fibres by the process of Electrospinning. It has also been modified to produce Methyl Cellulose, which has a wide range of applications. Apart from this, cellulose obtained from corn husk, was tested for the property of insulation by the addition of Boric Acid.