ABSTRACT

Corn cob is considered to be agricultural waste during corn production,but it is one of the rich source ofcellulose.Cellulose is the chief element of plant's cell wall.The method of isolation of cellulose from various plants gives rise to its different types.Microcrystalline cellulose and nanocellulose are among the most important byproducts of cellulose .Corn cob was ground to powder form.Lignin,hemicelluloses and other impurities were removed with NaOH solution and water.The surplus cellulose obtained after this pretreatment process was bleached with NaClO and hydrolyzed with Sulfuric Acid to synthesize Microcrystalline Cellulose.The structure and weight loss of the desired product(MCC) is confirmed by FTIR and TGA respectively.MCC has superior flow properties which offers its remarkable functionalities in cosmetics,food and pharmaceutical industries.