

BACTERIAL CELLULOSE: A NEW ALTERNATIVE MATERIAL IN PAPER PRODUCTION

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ABSTRACT

Nowadays, the world consumes 300 million tons of paper per year made of 35% of total trees cut around the world. Alternative sources of paper material are of great importance in eco-friendly industries.

Sheets of bacterial cellulose (BC) were made using a wild strain of *Acetobacter* spp.. Printing on these sheets was performed after treatment in 1% sodium hydroxide and drying at 100 °C. Mechanical and thermal properties of the sheets were studied using DMA and TGA. Waterproofing was assessed and related to the drying procedure. Optical microscopy and SEM were used to investigate the quality of the printed patterns.