

Innovation Approach -Preparation of Lemon Wood Charcoal Finishing with Natural Materials

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Abstract: Charcoal are of natural origin has anti-odour properties by controlling the metabolism of odour causing bacteria and fungi. In the present study, charcoal prepared from natural sources are finished on to natural cotton and bamboo fabrics with the aim of developing anti-odour fabrics. Finished fabrics were subjected to anti-odour testing using modified artificial sweat studies against the test bacterial specimens (*Staphylococcus aureus* and *Micrococcus luteus*). The infection associated with odour causing organisms were considered significant and hence the antibacterial and antifungal activity was tested using standard EN ISO 20645 test method and AATCC-30 test method respectively. No fungal organism was recorded for all the test specimens finished with lemon charcoal finished fabrics. Antibacterial and antifungal activity test also revealed the efficacy of charcoal finished fabrics in terms of inhibitory zones against the test organisms. This study would be considered highly significant by providing an eco-friendly and sustainable products for different fields of applications by developing charcoal from waste recycle process.

Keywords: Wood Charcoal, Lemon Wood Charcoal, Eco-Friendly, Anti- Bacterial, Anti Fungal

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