



Cotton/Wool Printing with Natural Dyes Nano-Particles

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Abstract: In the present work, cotton/wool 50/50 blended fabric is printed via three natural dyes nanoparticles namely: turmeric, madder and rhubarb. Dye powder of the three plants was milled for 30 days after which it was exposed to ultrasound for 6 hours. Cotton/wool substrate is mordanted prior to printing process using two mordants separately: tartaric acid and potassium aluminium sulphate (alum). All parameters that are found to influence colour intensity as well as fastness levels of the prints are investigated in detail. Moreover, all required measurements that show the impact of milling and sonication on dye particles are carried out.

Keywords: *Ball miller, blended fabric, colour intensity, fastness levels, mordant, nanoparticles, natural dyes and sonication.*

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