

Potentials of Henna Leaves as Dye and Its Fastness Properties on Fabric

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Abstract : Despite the widespread use of synthetic dyes, natural dyes are still exploited and used to enhance its inherent aesthetic qualities as a major material for the beautification of the body. Centuries before the discovery of synthetic dye, natural dyes were the only source of dye open to mankind. Dyes are extracted from plant - leaves, roots, and barks, insect secretions, and minerals. However, research findings have made it clear that of all, plant- leaves, roots, barks or flowers are the most explored and exploited. Henna (*Lawsonia innermis*) is one of those plants. The experiment has also shown that henna is used in body painting in conjunction with an alkaline (Ammonium Sulphate) as a fixing agent. This of course gives a clue that if colour derived from henna is properly investigated, it may not only be used as body decoration but possibly, may have affinity to fibre substrate. This paper investigates the dyeing potentials - dyeing ability and fastness qualities of henna dye extract on cotton and linen fibres using mordants like ammonium sulphate and other alkalies (hydrosulphate and caustic soda, potash, common salt and alum). Hot and cold water and ethanol solvent were used in the extraction of the dye to investigate the most effective method of extraction, dyeing ability and fastness qualities of these extracts under room temperature. The results of the experiment show that cotton have a high rate of dye intake than linen fibre. On a similar note, the colours obtained depend most on the solvent and or the mordant used. In conclusion, hot water extraction appear more effective. While the colours obtained from ethanol and both cold and hot method of extraction range from light to dark yellow, light green to army green, there are to some extent shades of brown hues.

Keywords : dye, fabrics, henna leaves, potential

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