Investigation of cashew nut shell liquid (CNSL) as potential colouring and finishing agent for textile substrates

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From time immemorial, man has been using bio-materials for his food needs, shelter and clothing. Even colours which make human beings attracted to, were originally extracted from biological and mineral sources. However, with the advent of the first synthetic dye in 1856, there began a quick decrease in the use of natural dyes which were more expensive and more cumbersome to use. Today almost all colours and finishes used in the 'textile industry' are synthetic man-made dyes and chemicals.

One of the major problems created by the Textile Industry is extensive environmental pollution. The production of synthetic dyes from petroleum based chemicals involves violent reactions as well, leading to the production of hazardous intermediates and various skin deseases such as cancer.

Presently there is a growing interest and development in the use of natural products for colouring as well as finishing of textiles. This tendency is growing fast since natural products generally exhibit better bio-degradability with higher environmental compatibility and lower levels of toxicity and allergic reactions.

This investigation of Cashew Nut Shell Liquid (CNSL) is an attempt to search for the possibility of obtaining bio-ingredients applicable to textiles for colour and crease resistant developments using bio-waste.

CNSL was solvent extracted using Hexane and used as the 'coupling component' to produce Naphthol type colours which have reasonable tinctorial values as shown by samples.

CNSL was also assessed for its crease resisting behaviour and reasonable results have been shown.

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