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Preparation of nonionic softener based on wool wax and its utilization in functionalization of textile fabrics**H. El-Sayed¹, S. Mowafi¹, M. Abou Taleb¹, A. Hussein¹ and A. F. Al-Fiky¹***National Research Centre, Egypt*

Textile industries utilize huge amounts of auxiliaries to impart certain desired properties to the final textile goods. Herein we prepared a nonionic softener based on wool wax which is a by-product from the wool scouring process. The prepared softener was utilized as a finishing agent that imparts luxurious desirable touch for selected textile fabrics with the minimum accumulated electrostatic charge. Wool wax was extracted and purified from wool fleece to obtain lanolin. The extracted lanolin was saponified followed by neutralization to obtain free fatty acid. The free fatty acid was reacted with a di hydroxyl amino saturated aliphatic hydrocarbon to produce a condensate whose softening action of textile fabrics. The chemical structure of the prepared nonionic softener was elucidated using FTIR and ¹³C NMRC. Physical, chemical, and mechanical properties of the treated fabrics were evaluated using the appropriate methods of analysis. The scanning electron microscopy was used to monitor the change in the fibre morphology after application of the prepared softener.

Biography

H. El- Sayed¹ working as at National Research Centre, Textile Industries Research Division of Proteomic and Man-made Fiber's Department Egypt. His Research interests in the fields of Chemistry.