SUBSTITUTION OF FORMALDEHYDE CONTAINING REAGENTS WITH ENVIRONMENTALLY SAFE POLYCARBONIC ACIDS IN TEXTILE MANUFACTURING

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Received January 31, 2018

Abstract – The paper addresses the challenge of substituting formaldehyde-containing reagents based on N-alkyloyl melamine/urea derivatives used in manufacturing textile materials, with less toxic polycarboxylic acids. A combined technology of dyeing and final crease-resistant finishing of cotton fabric in the presence of polycarboxylic acids (oxalic acid, citric acid, and ethylenediaminetetraacetic acid) is found to ensure a number of benefits in manufacturing finished products, furthermore, it is safe both for the environment and for consumers. The technology can be also recommended for obtaining textiles directly contacting with the skin.

Keywords: textile materials, dyeing, crease-resistant finish, cotton and linen fabrics, polycarboxylic acids, replacement of formaldehyde-containing reagents.