

Accepted Manuscript

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PII: S0144-8617(13)00734-0
DOI: <http://dx.doi.org/doi:10.1016/j.carbpol.2013.07.048>
Reference: CARP 7947

To appear in:

Received date: 31-3-2013
Revised date: 19-7-2013
Accepted date: 22-7-2013

Please cite this article as: Rekaby, M., Abd-El Thalouth, J. I., & Abd EL-Salam, Sh. H., Improving Reactive Ink Jet Printing via Cationization of cellulosic Linen Fabric, *Carbohydrate Polymers* (2013), <http://dx.doi.org/10.1016/j.carbpol.2013.07.048>

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Improving Reactive Ink Jet Printing via Cationization of cellulosic Linen Fabric

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Abstract: 4

Cellulose Linen fabric samples subjected to cationization using different cationizing agents: dodecyl trimethyl ammonium bromide (DTAB), tetra methyl ammonium hydroxide (TMAH), and Quat 188, via pad batch technique, followed by ink jet printing with reactive dyes. 8

The % N as well as the K/S of the cationized samples was found to be depends on: (a) the nature of the cationizing agent and (b) on the time of batching. As the latter increases both of the nitrogen content and K/S increases to a maximum depending on the nature of the reagent used. Further increase in the batching time up to 30 hours is accompanied by a decrease in both the %N and K/S irrespective of the nature of the cationizing agent used. Cationization improves the printability of reactive dye ink jet printed linen fabrics with no remarkable effect on the overall colour fastness properties. 16

Keywords: Ink-jet, linen, cationization, quaternary ammonium salts, and reactive dyes 17

Introduction: 18

Coloration of cellulosic fabrics with anionic dyes is still possessing some environmental concern as it consumes large quantities water, salts and energy (O'PA, 1979; Green & Sokol, 1985). Cellulose fibers when immersed in water produce a negative zeta potential and most of the dye classes suitable for cellulosic fabrics are anionic in nature. 23

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