

Dyeing Properties of Natural Dyes on Silk Treated with β -Cyclodextrin

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Abstract : In this work, silk yarns were treated using β -cyclodextrin (β -CD) and cross-linked with citric acid (CA) via pad-dry-cure method. Elemental and FESEM analyses confirmed the presence of β -CD on the treated silk samples even after five washing cycles. Then, the treated samples were dyed using natural dyes (carrot, orange and tomato). Results showed that the color strength (K/S) of the treated samples had been markedly enhanced compared with the control sample (after treatment with metal mordant). Finally, the color strength (K/S value) and color fastness (fading, staining and light fastness) of the treated samples with β -CD were investigated and compared.

Keywords : β -cyclodextrin, dyeing, natural dyes, silk yarn

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