

**USE OF EXTRACTS OF CINNAMON (*Cinnamomum zeylanicum*
Blume) AS DYEING AGENT ON COTTON FABRIC**



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ABSTRACT

Natural dyeing is considered as a suitable approach in textile dyeing, which can minimize the environmental impacts of synthetic dyes. The present study has shown that it is possible to use the bark of *Cinnamomum zeylanicum* Blume (cinnamon) to extract natural dyes using aqueous extraction method for coloring 100% cotton fabric. Cinnamaldehyde was the agent of interest for the current project as a dyeing agent. In order to fix cinnamaldehyde on cotton material, metal salts of Cu, Ni, Fe, Al, and Co were used during experiments. According to the results, a darker shade was seen with FeSO₄-mordanted cotton fabric. A CuSO₄-mordanted generated a medium shade. In the cotton samples mordanted with NiCl₂, CoCl₂, and (NH₄)Al(SO₄)₂, relatively light colors were seen.

Moreover, the antibacterial activity of dye and dye-fixed fabric against textile bacteria was investigated. The inhibitory effect was observed using the disk diffusion method. Cinnamon dye and cinnamon-dyed cotton fabric were not active against the tested bacteria culture.

Key words: *Cinnamomum zeylanicum*, Cinnamaldehyde; Antibacterial activity