

**EXTRACTING NICOTINE FROM TOBACCO (*Nicotiana Tabacum*)  
TO TEST AS A FABRIC DYE ON COTTON**



**BY**

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## ABSTRACT

Nowadays, there is trend toward selecting products that are made using natural resources. The demand and acceptance for natural products is on the rise. Therefore various industries including textile dyeing industry focus on natural products. In the present study, the aim is on tobacco to be used as a natural dye source. In this study nicotine (NCT) is extracted from leaves of tobacco using 0.01M HCl. The NTC extract was used on cotton fabrics. This study tested two NTC extracts based dyeing conditions. First, cotton was oxidized using oxidizing agents ( $H_2O_2$ , NaOCl and  $KMnO_4$ ) at pH 7 without using a mordant, thereafter oxidized cotton was dyed using NTC extract. In the second test NTC extracts were used to dye cotton with mordants ( $(NH_4)Al(SO_4)_2$ ,  $FeSO_4$  and  $CuSO_4$ ) at pH 9. In addition, anti-bacterial efficacy of NTC extract and NTC dyed cotton were tested. According to the results, NTC extracts with different mordants gave respective shades on cotton. Oxidized cotton once dyed with NTC extract also produced shades of color. Appearance of fabric was observed to determine shades of color; NTC extracts on cotton gave yellow and dark brown shades in general. The fabric treated with mordant  $FeSO_4$  and the fabric oxidized with  $KMnO_4$  appeared dark brownish to black. Also, there is no significant antibacterial efficacy result produced by NTC extracts when taken alone as a dye or when taken as a dye fixed on cotton fabric.

**Key word:** Cellulose, Mordant, Natural dye, Oxidization, Tobacco

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