

**PRODUCTION OF NATURAL COLORANT FROM  
FUNGI USING TWO DIFFERENT EXTRACTION  
METHODS**

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## ABSTRACT

### PRODUCTION OF NATURAL COLORANT FROM FUNGI USING TWO DIFFERENT EXTRACTION METHODS

Fungi are proposed as a significant source of natural colorant due to a large range of biological activities. The present study is an attempt to produce natural colorant from submerged fermentation of fungus, *Aspergillus niger*. The fungal cultures were grown under static condition with temperature of 28°C for 3 weeks in Potato Dextrose (PD) broth and GCO (Garlic Corn Onion) broth. The color of fungal mycelium in PD broth darker compared to GCO broth. The surface area and density of fungal mycelium are greater in PD broth compared to GCO broth after 3 weeks of incubation. Two different extraction methods of natural colorant were used, thus it was found that alcoholic method was advantageous over alkaline method as the color pigments were most suitable to be dye medium. Silk was used for dyeing with the extracted natural colorant in different mordants; Iron (II) sulfate and Tin (II) chloride in meta-mordanting dyeing method. The values of a\* and b\* indicate that most of the sample are mostly reddish yellow in color. The colorfastness to washing test revealed that all dyed sample is shows good result (rating 4) except for dyed sample mordanted with Tin (II) chloride shows good to excellent result.