

PRODUCTION OF COLOURANT FROM MICROALGAE
Chlorella vulgaris

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ABSTRACT

PRODUCTION OF COLOURANT FROM MICROALGAE *Chlorella vulgaris*

Natural colourants are perceived as interesting alternatives to synthetic dyes. Microalgae are one of the sources of natural colourant available. This is because microalgae contain pigments that could give colours. The basis of this study is to produce colourant from microalgae *Chlorella vulgaris*. The algae were grown and cultivated for a month in Bold's basal medium (BBM) and the algal biomass was then harvested via centrifugation prior to chlorophyll extraction using an alcoholic method. The extracted colourant produced was used for dyeing silk fabric. The colourant was treated with two different mordants; iron (II) sulphate and tin (II) chloride, which produced different colours on the silk. The one treated with the former yielded light yellowish green shade on the silk whilst the one treated with the latter produced light yellow shade on the silk. Test for colour fastness to washing was done in order to evaluate the colour after washing. The ratings obtained were between 4 and 4/5. The colour fastness of the silk treated with iron (II) sulphate was rated 4, indicating good result whereas the colour fastness of the silk treated with tin (II) chloride was rated 4/5 indicating good to excellent result. In conclusion, the purpose of this study was successfully achieved. The natural dye obtained yielded two almost-similar colours with different mordants and exhibited good to excellent result of colour fastness to washing.