

ABSTRACT

APPLICATION OF MICROALGAE NATURAL DYES IN TEXTILE USING TIE DYE TECHNIQUES

By

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Although synthetic dyes have been widely used, recently, natural dyes are highly developing in the world of textiles because the nature of non carcinogenic, environmentally friendly, and have enormously high sales value. Even now, microalgae with phylum cyanobacteria of arthospira plantesis can also be used as natural dyes, as a research conducted by Balqis (2019), a Telkom University student who applied microalgae natural dyes on tukel yarn and gedog weaving of Tuban. These natural dyes have so advantages such as rapid growth, and not requiring much space of land.

Based on previous research conducted by Balqis, this research used surface textile then focused on the tie dye technique with arthospira plantesis microalgae dyes to optimize the opportunities and potential of color application techniques used in previous research, the development of the resulting color pigments, and the application of natural textiles to be processed into fashion products.

Keywords: natural dyes, microalgae arthospira plantesis, surface textile, natural textiles