ABSTRACT

Abstract

At STT Tekstil Bandung there is a textile dyeing laboratory where in the laboratory students do several practicums, one of which is the practicum of the color dyeing process on textile fabrics which is carried out manually. In the fabric color dyeing practicum, the temperature setting is carried out in an open system, resulting in the temperature produced by the heater not in accordance with the needs of the fabric and the dyeing process is not optimal. This research proposes an idea of designing a tool system that works semi-automatically in temperature regulation and stirrer. The tool is designed to use a temperature sensor as a temperature monitoring with a closed system and for the stirrer using a dc motor so that the fabric color dyeing process runs semi-automatically. Based on testing, the best results are found in the fabric dyeing process using a semi-automatic tool rather than a manual, this can be seen from the K/S value using a semi-automatic tool higher than manual. Color fastness testing for rubbing and color fastness testing for washing, with the values obtained on dry rubbing and wet rubbing showing good values, this shows that fabrics immersing with natural dyes and synthetic dyes using tools have good dry rubbing and wet rubbing resistance compared to manual methods.

Keywords: Fabric dyeing, semi automatic, natural dyes, synthetic dyes, cotton fabrics