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Your abstract: DIRECT REUSE OF DYEING BATHS: POLYESTER MICROFIBERS AND DISPERSE DYES

Environmental pressures on Textile industry and the high consumption of energy and water, makes this industrial sector to take measures on the way of process optimization. Direct reuses of dyeing baths, with intermediate stages or not, is one of the promising techniques to decrease this environmental impact.

In this work, we have studied the case of microfibers and disperse dyes, analysing the behaviour of a tricromy(C.I. Disperse Blue 56, C.I. Disperse Yellow 211 and C.I. Disperse Red 167:1) and the final results obtained after twenty five reuses of the original dyeing bath, without intermediate stage.

The color of dyed samples is determined using colorimetry on the basis of the sample's reflectance measurements in the CIELAB color space coordinates and the differences between fabrics dyed in reused dye baths and the standard fabric dyed in the initial dyeing process.

We also calculate the fabric color estimation for every known concentration by using K/S for color mixtures (Kubelka-Munk Theory)and it is compared with the color of the original fabric.