

THE USE OF LIPOSOMES IN EXHAUSTION DYEING OF COTTON

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The use of liposomes in exhaustion dyeing of wool for controlled delivery of the dyes is well known. In the case of polyamide we have done research with liposomes and went a stage further in adapting it into an industrial process by preparing the liposomes previously and adding them as an auxiliary product to the dyebath. The dyes then migrate into the proliposomes forming liposomes that will release the dye in a controlled fashion, avoiding in this way the use of synthetic levelling agents, and improving greatly the quality of the effluent.

In this work we did studies of dyeing cotton with reactive dyes by applying proliposomes as a dyeing auxiliary. The exhaustion and fixation were measured and were higher when dyeing in the presence of proliposomes. This was shown to be due to the higher affinity that the dyes have for the cotton fibre in the presence of the prepared proliposomes.

For a tricromy of dyes, the three dyes behave differently in the presence of the liposomes. In previous studies of tricromies the interaction between the three dyes wasn't considered. In this work, the interactions were considered so as to have accurate results for the exhaustion curves.

With the development of an instrument that can do the analysis and correction of the curves automatically and with great accuracy, and show the evolution of the curves on-line, it was also possible to find out quickly the best concentration of proliposomes to be used so as to obtain the best exhaustion, fixation and compatibility of the three dyes.