

# An Improvement of Leveling Effect for Silk Dyeing(Ⅱ)

Jun Ho Park

Department of Convergent Textile Technology, Korea Institute of Industrial Technology  
1271-18 Sa 1-dong, Sangnok-gu, Ansan City  
E-mail: [flosty@kitech.re.kr](mailto:flosty@kitech.re.kr)

## 1. Introduction

Silk fabric having a similar dyeing adsorption rate is dyed together because silk fabric has difference of dyeing adsorption rate in a field dyeing according to Lot difference and also silk fabric has different dyeing adsorption rate by the textile scheme such as plain or satin.

Habutae is more stiff and hard to being penetrated by dyes compared to silk crepe de chine or satin because habutae is high density. It is hard to remove sericin of habutae fabric easily and completely because habutea fabric is scoured and bleached after weaving. For this reason, habutae has more different dyeing adsorption rate on Lot.

In case of dyeing of habutae fabric which is removed sericin incompletely, an initial dyeing adsorption is faster than other fabric scheme and a possibility of unevening is occurred highly. Therefore, it is not expected that using leveling agent on silk dyeing can not solve the difference of dyeing adsorption rate of Lot.

In this study, several leveling agents are used to find out more effective agent on leveling effect of silk habutae.

## 2. Experimental

### 2.1. Materials

The silk habutae used was produced by Namkyong Silk Co., Ltd. Dyes used this study was C.I. Acid Black 58(Clariant Co., Ltd.). Surfactants used this study were three Cationic leveling agents(Polyoxyethylene tallow amine TM60, Polyoxyethylene stearyl amin SM 30, SM15), two amphoteric leveling agents, three anionic scouring agents(Sodium dodecylbenzene sulfonate DBS, Sodium Lauryl sulfate LAS, normal synthetic detergent) and three anionic fixing agents for acid dye. Several industrial grade agents were used.

### 2.2. Methods

Difference of dyeing adsorption rate of Lot, penetration effect and dye-transfer effect were investigated using Gretag Macbeth COLOR-EYE 3100 after.

## 3. Conclusion

To decrease difference of dyeing adsorption rate of Lot of silk habutae, the leveling effect was investigated using several leveling agents. The cationic surfactants were better than other agents on penetration. The anionic surfactants and the amphoteric leveling agents were better than other agents on dye-transfer. The anionic fixing agents for acid dye are more effective to decrease difference of dyeing adsorption rate of Lot of silk habutae. Although anionic fixing agents for acid dye were more effective on penetration than other agents, it is not sufficient to get enough leveling effect because of high density of silk habutae. Therefore, investigation must carry out on penetration to improve leveling effect on difference of dyeing adsorption rate of Lot of silk habutae.

## 4. REFERENCES

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