

## Cotton Fabric Dyeing with indigo and Japanese pagoda for Color mixture

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### 1. INTRODUCTION

*Persicaria tinctoria* is a genus of plants in the family Polygonaceae, collectively included annuals. Indigo, which is extracted from *Persicaria tinctoria* is insoluble dyes, is resolved colorlessness compound by alkaline reducer. This compound is absorbed on fabric and then revived insoluble dyes by oxidization. The botanical name of Japanese pagoda which is one of yellow dyes is *Sophora japonica* L. *Styphnolobium* is a small genus of three or four species of small trees and shrubs in the subfamily Faboideae of the pea family Fabaceae. In this research, the color mixture by using indigo and Japanese pagoda is used to diversify colors of natural dyes as well as keep the characteristic functions. And also the color mixture with the use of mordant can be expected more effective to get diverse colors.

### 2. EXPERIMENT

#### 2.1 MATERIAL

Standard cotton is used for color fastness which is regulated at KS K 0905.

#### 2.2 DYESTUFF and MORDANTS

To regulate quantitative dyeing condition and get colors, Japanese pagoda extract powder is used from Mikwang INT'L and Indigo powder is bought from

Sombe. Four kinds of first grade reagent are used for mordant as below.

#### 2.3 DYEING

The color mixture by using indigo and Japanese pagoda tree is tried two different way such as dyeing indigo first and then Japanese pagoda, and Japanese pagoda first then indigo.

### 3. RESULTS

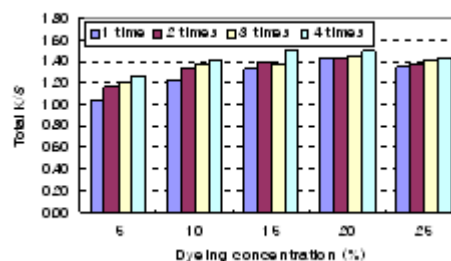


Fig. 1. K/S value of cotton fabric dyed with Japanese pagoda tree and indigo

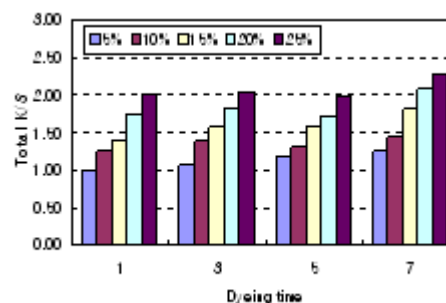
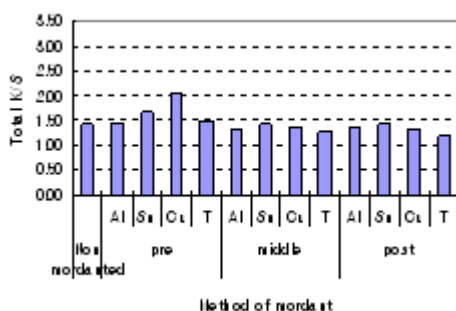
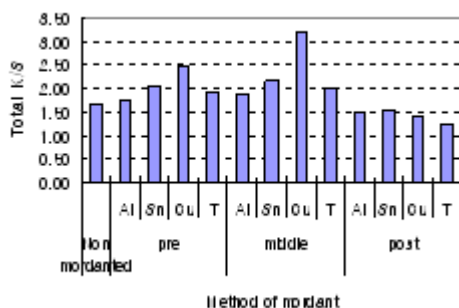


Fig. 2. K/S value of cotton fabric dyed with indigo and Japanese pagoda tree



**Fig. 3.** K/S value of cotton fabrics dyed with Japanese pagoda tree topping with indigo according to method of mordant and kind of mordant



**Fig. 4.** K/S value of cotton fabrics dyed with indigo topping with Japanese pagoda tree according to method of mordant and kind of mordant

#### 4. CONCLUSION

1. The process which is using indigo first and then Japanese pagoda tree can be allowed to get high level of K/S value than that of using Japanese pagoda tree first.
2. The color mixture which is using indigo first and then Japanese pagoda tree can be allowed various possibilities of color combination with increased blue color than that of using Japanese pagoda tree first.
3. With the use of mordant which is using Japanese pagoda tree first, the K/S value level is high on cotton when the process of preparatory mordant and co-mordant is worked.

#### REFERENCES

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