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**Dyeing of Silk Fabrics with Natural Indigo
Extracted from *Polygonum tinctorium***

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Colorants were prepared by extraction of natural indigo which was harvested just in the blooming season(in the late of July). 100g of fresh leaves soaking in 1 ℓ water was kept at 30°C for 30 hours. A solution of 3g/ℓ calcium hydroxide was added into it to precipitate dye substance and it was freezing-dried into powder form. The dyeing mechanism and fermentation conditions were investigated. Its colour fastness was studied as well. The results obtained are summarized as follows;

When indigo powder was prepared in combination of 80g of fresh leaf/ℓ and 3g/ℓ of calcium hydroxide and at 30°C, H V/C of indigo represented a low value as PB hue. K/S value of silk fabrics was higher at 95°C for 20 min. than at 40°C for 20 hours. Furthermore, K/S value of silk fabric was raised by the addition of 3g/ℓ of glucose and 3g/ℓ of NaOH.

K/S value increased as extending of dyeing time when dyed till 2 hours at 30°C. K/S value decreased in order of 30°C, 40°C and 50°C, at the various dyeing temperatures and dyeing concentrations, and colour fastness ranged from 4 to 5 grade in terms of washing, perspiration and light fastness.