

## Experiment No. 10: Dyeing of Silk Cloth/Filament

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**Aim:** To get required colour on silk.

**Requirements:** Heater, vessel, thermometer, balance, glass wares, degummed silk, different dye stuffs, glauber's salt, acetic acid *etc.*,

**Preparation of Dye Solution:** In order to prepare 1% shade, dissolve exactly 1% of dye powder on the basis of silk weight in required amount of water. Make a clear paste without any dye granules before preparing final solution.

### Procedure:

1. Weigh the given degummed silk sample and note down the weight as  $W_1$  g.
2. Prepare the dye bath with dye solution by taking required amount of water (*i.e.*, at the ratio of 1:40) and glauber's salt (10%).
3. Start the dyeing at room temperature and raise the temperature to 40 °C gradually. Work the material for 15 min at 40 °C.
4. After 15 min take out the material from the dye bath and add required amount of acetic acid stir the solution and again dip the material into dye bath.
5. Raise the temperature to 90-95 °C and work for about 45-60 min.
6. If the colour is not exhausted in the dyeing bath, add some additional amount (2%) of acetic acid and continue the dyeing.
7. After 45-60 min take out the material, wash it in cold water and dry under shade.

### Observations and Calculations:

Weight of the degummed silk = \_\_\_\_\_ (W) g

Liquor ratio 1:40 *i.e.*,  $W \times 40 = \text{-----}$  ml of water

Glauber's salt @ 10% =  $\frac{10X W}{100} = \text{---}$  gm.

Acetic acid @ 4% =  $\frac{4 X W}{100} = \text{---}$  ml.

Dye Stuff 1. Orange 1% =  $\frac{1XW}{100} = \text{---}$  gm.

2. Green 2% =  $\frac{2XW}{100} = \text{---}$  gm.

1. Red 3% =  $\frac{3XW}{100} = \text{---}$  gm.

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