

## PIGMENT DYEING – PART I

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### Introduction

Pigment dyeing is common in garment dyeing. Pigment dyes are useful to give a wash down casual look on leisurewear. However, pigment dyeing is also done on fabrics by padding technique usually for home textiles. It is applicable to a wide range of textiles and wide gamut of colors including some brilliant fluorescent ones is available.



### Pigment Dyeing of Garments

Pigment dyeing is not actually dyeing in its real form. The pigments stick on the surface of the garment with the help of binders and no chemical reaction takes place between the dye and the fabric.

There are three important steps in pigment dyeing of garments:

- **Cationization of the garment** - Cationization is giving electric charge to the fabric by cationic pretreatment. Along with wetting agent and acetic acid, the cationic agent is applied onto the garment. It is basically an electrical process where the garments are given an electrical charge opposite that of the pigment. When the pigment is added to the bath, the opposite electrical charges attract each other.





- **Exhaustion of the pigment on the garment** - The pigments are mixed with water and a dispersing agent which imparts an anionic charge to the pigments. The solution is added gradually and the dyeing temperature of the bath is slowly increased. Thus facilitating the adsorption of the pigments.
- **Binder application** - A binder is used in the pigment dyeing of garments for fixing the pigments. Binders are commonly acrylic polymers with nonionic and cationic nature. After the pigment is exhausted, the binder is fed into the dyeing machine and exhausted onto the fabric over a period of time. Acetic acid is added to the bath, which facilitates binder polymerization.

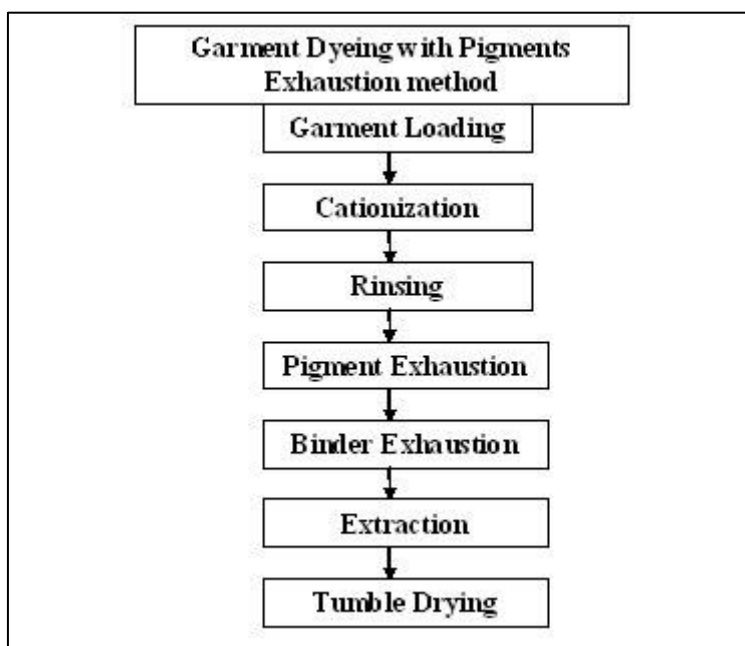


Fig 1.1 Garment dyeing with pigments – Process Flow Chart

To be continued...

Wishing you a great week ahead!

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