



PIGMENT

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Mechanism of pigment dyeing

- **Small pigment particles are given a slightly negative charge by ionic dispersing agents.**
- **To hold the pigment in place, a cationic binder is used.**
- **Cationic positively charged cationic pre treat is added to the fiber**



steps in the pigment dyed garment

1. Giving electric charge to fabric by cationic pretreatment:

The cationic agent is applied to the fabric in the dyeing machine to gather with the wetting agent and acetic acid. The fabric is then rinsed after being kept in the machine for a while.





2. Pigment exhaustion on the fabric:

The pigments are given an anionic charge by first combining them with water and a dispersion agent. The dyeing machine is then progressively fed with the newly created negatively charged pigment. The bath temperature is gradually raised, and the machine is kept at a high temperature for around 20 minutes.

3. Binder application:

Following the exhaustion of the pigment, the binder is fed into the dyeing machine and exhausted onto the fabric over a period of time, after which acetic acid is added to the bath to aid binder polymerization. The fabric is then rinsed, and the dyeing machine is turned off.



Dyeing process:

- **Scouring (Half bleach) the garments through caustic soda then rinse the garment with the normal water**
- **Take new water and make it soft with the acidic acid.**
- **Apply pigment dyes with the dyeing recipe ratio.**
- **After the wet process, tumble dry the garment for curing the dyeing.**
- **After the dry process , put the garment in to the garment dyeing machine (winch) for the bio - polish enzyme to remove the unfix dyes and developing the frosting look.**
- **After the washing process, tumbles dry the garment.**

chemical properties

- 1. most of the pigments are azoic compounds. besides that it may be inorganic oxide, inorganic salt phthalocyanine metal compound.**
- 2. insoluble in water and other solvent like white spirit, perchloroethylene, trichloroethylene.**
- 3. pigment are toxic, some are oral toxic, some are dermal toxic, some causes eye irritation**