

Que- classify the dye on the basis of origin

Ans- A dye is a coloured compound, normally used in solution, which is capable of being fixed to a fabric. The dye must be 'fast' or chemically stable so that the colour will not wash with soap and water, fade on exposure to sunlight etc. Dyeing is normally done in a special solution containing dyes and particular chemical material. After dyeing, dye molecules have uncut Chemical bond with fiber molecules. The temperature and time controlling are two key factors in dyeing

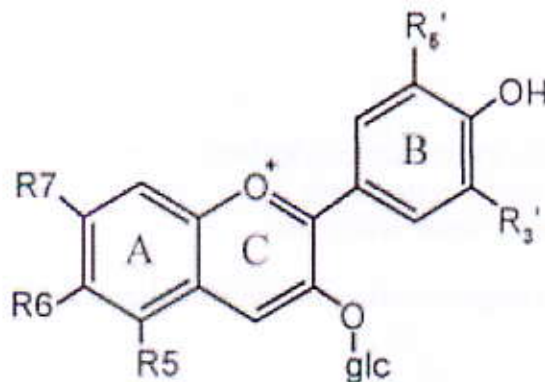
Natural dye:

Natural dyes are simply dye substances extracted from natural sources. Although the main source of dyes for early times, they have largely been replaced by synthetic dyes, which are usually more reliable, cheaper and can be supplied more readily. Natural dyes still in use include haematoxylin, carmine, orcein

Colouring materials have been used for many thousands of years by man. Leather, cloth, food, pottery and housing have all been modified in this way. Some of our most common dyes are still derived from natural sources. These are termed natural dyes. The Colour Index uses this as a classification and naming system.

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Natural + base colour + number

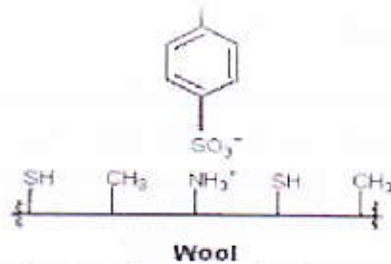


Natural dyes are often negatively charged. Positively charged natural dyes do exist, but are not common. In other words, the coloured part of the molecule is usually the anion. Although the molecular charge is often shown on a specific atom in structural formulae, it is the whole molecule that is charged. Many, but by no means all, natural dyes require the use of a mordant.

Synthetic

dye

Dyes derived from organic or inorganic compound are known as synthetic dyes. Examples of this class of dye are Direct, Acid, Basic, Reactive, Mordant, Metal complex, Vat, Sulphure, Disperse dye etc. Synthetic dye quickly replaced the traditional natural dyes.



They cost less, they offered a vast range of new colors, and they imparted better properties to the dyed material dyes are now classified according to how they are used in the dyeing process.

Ques-2 What is Pretreatment? | Objective of Pretreatment

Ans- Natural fibers and synthetic fibers contain primary impurities that are contained naturally, and secondary impurities that are added during spinning , knitting and weaving processes. Textile pretreatment is the series of cleaning operations. All impurities which causes adverse effect during dyeing and printing is removed in pretreatment process.

Pretreatment processes include desizing, scouring, and bleaching which make subsequent dyeing and softening processes easy. Uneven desizing, scouring, and bleaching in the pretreatment processes might cause drastic deterioration in the qualities of processed products, such as uneven dyeing and decrease in fastness.

Objective of Pretreatment:

- To Convert fabric from hydrophobic to hydrophilic state.
- To remove dust, dirt etc from the fabric.
- To achieve the degree of desire whiteness

Ques-3 .write down the recipe of cotton fabric with direct dye

Ans Shade5 %

- Wetting agent1 g/l
- Sequestering agent1 g/l
- Levelling agent0.5 g/l
- Soda ash3 g/l
- Gluber salt..... 4 g/l
- pH..... 10-11
- Temperature70
- Time30
- M:L1:30
- Sample Weight5 gm