

Figure 6 Structure of iron phthalocyanine (the porphyrin ring system is shown in blue).



Figure 9 A Wheatfield, with Cypresses by Vincent van Gogh.



Figure 12 The Incredulity of S. Thomas by Cima da Conegliano in 1969 before restoration.



Figure 13 The painting in 1986 after cleaning and restoration.

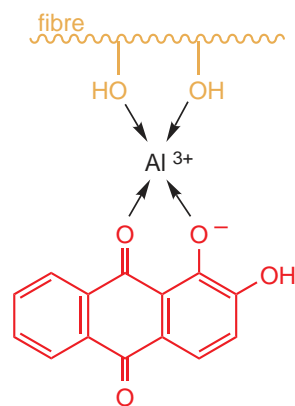


Figure 26 Chelate of Alizarin with the metal ion Al^{3+} (the two remaining ligand sites above and below the Al^{3+} ion could be taken up by OH^- ions).

Figure 14 The painting after cleaning and transfer to a new support – but before repairing the damaged paint layer.

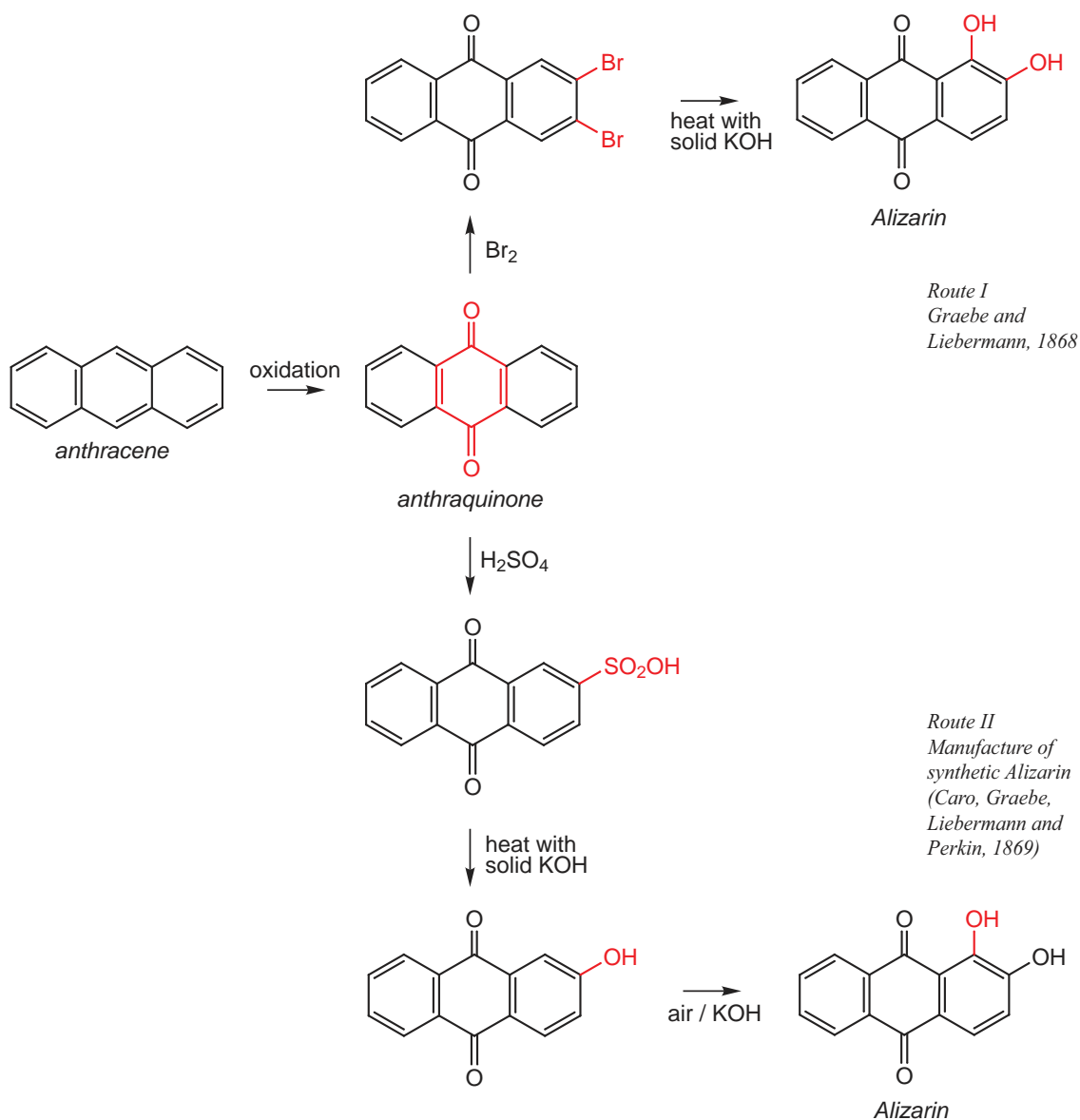


Figure 28 The conversion of anthracene to Alizarin. (The red colour shows the changes for each of the steps.)

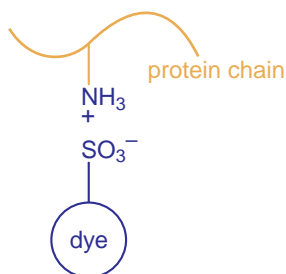


Figure 33 Interaction between a dye molecule and a protein chain.

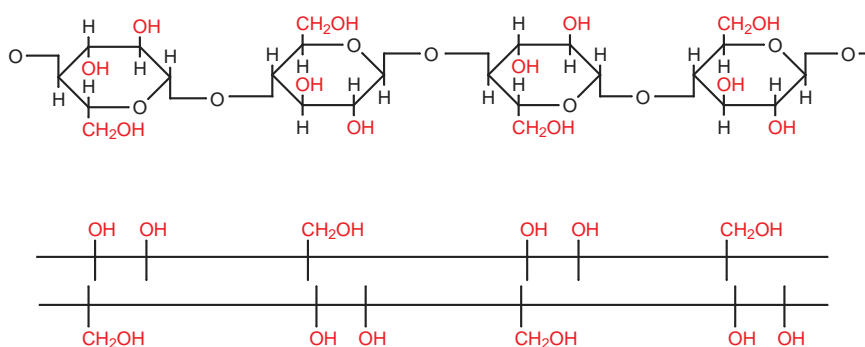


Figure 34 Two ways of depicting a cellulose fibre: in the top diagram the molecule is shown to be a chain of glucose units; in the lower diagram only the reactive —OH groups are shown (in red).

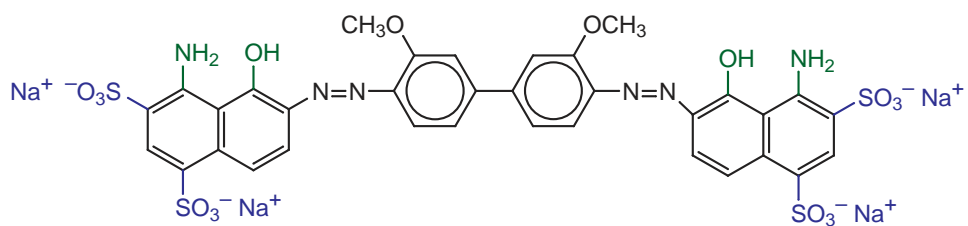


Figure 35 The structure of Direct Blue 1 (CI 24410).

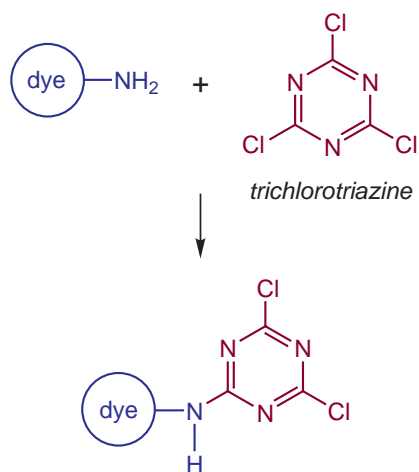


Figure 36 Building a reactive dye to react with wool.

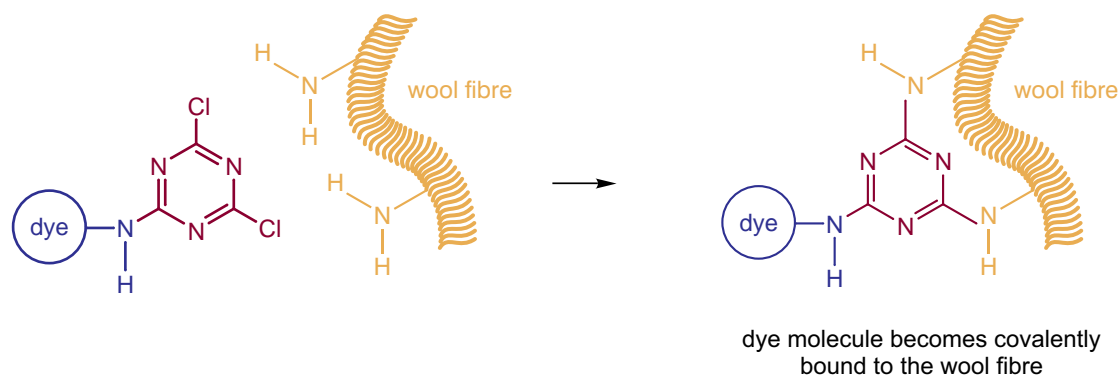
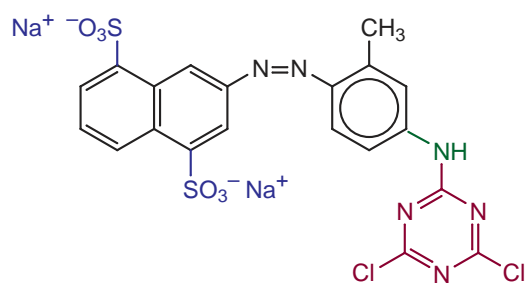
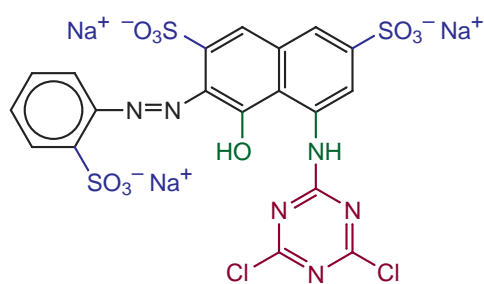


Figure 37 The planned reaction of the new dye with amino groups in wool fibres.



Procion Yellow RS



Procion Brilliant Red 2BS

Figure 39 The first fibre reactive dyes.

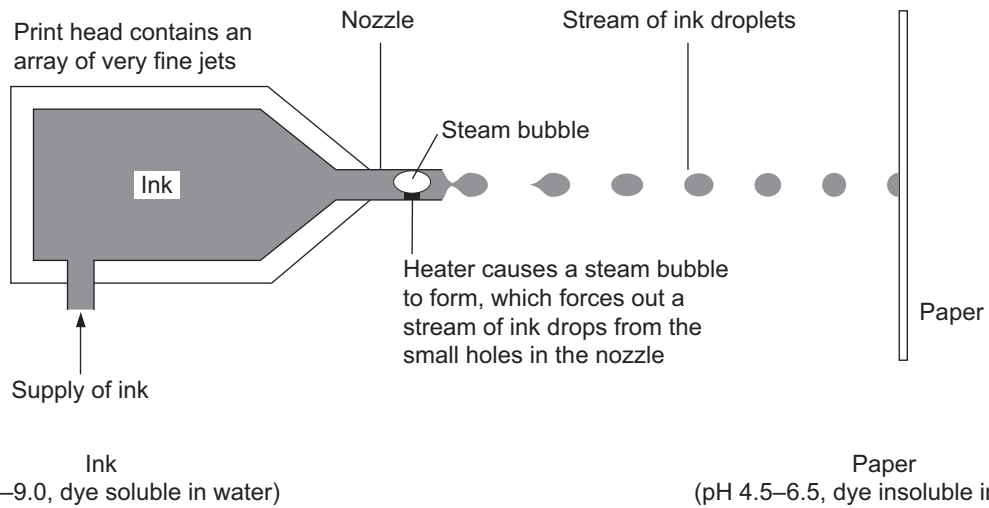


Figure 42 An ink jet printer.

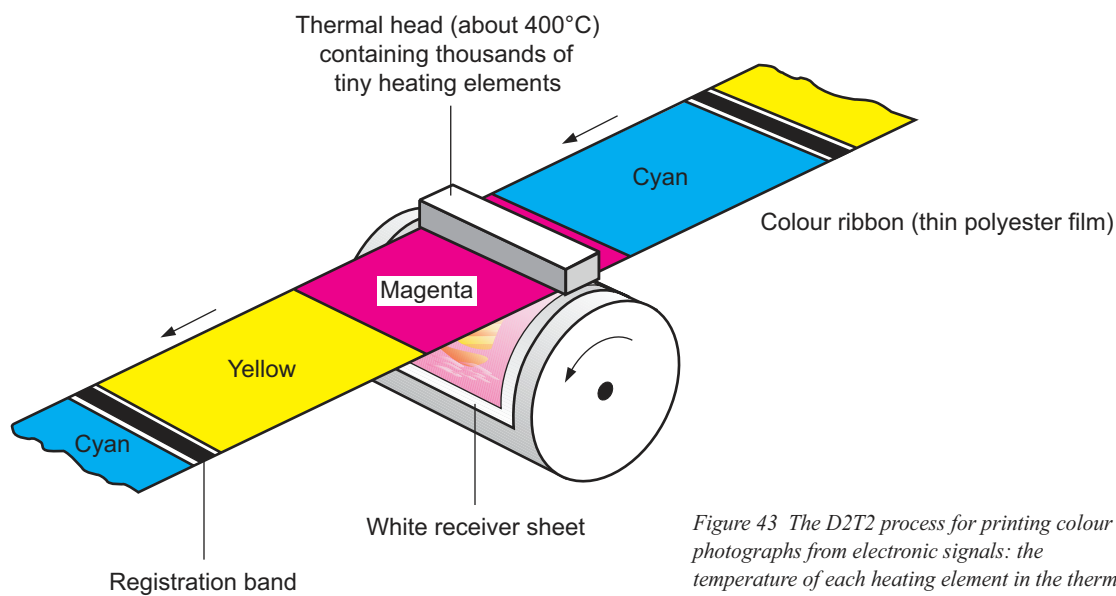


Figure 43 The D2T2 process for printing colour photographs from electronic signals: the temperature of each heating element in the thermal head is determined by an electronic signal linked to a point on the picture – the electronic signal triggers the diffusion of the right amount of each of the dyes.