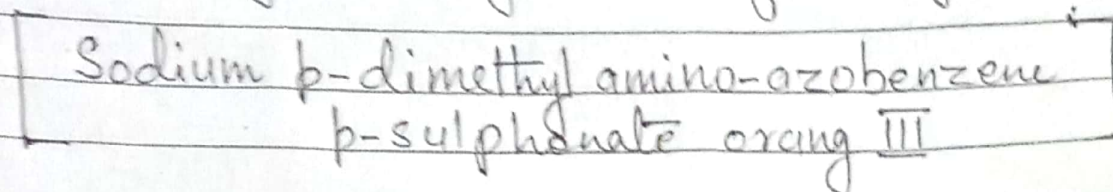


Synthesis of dyes

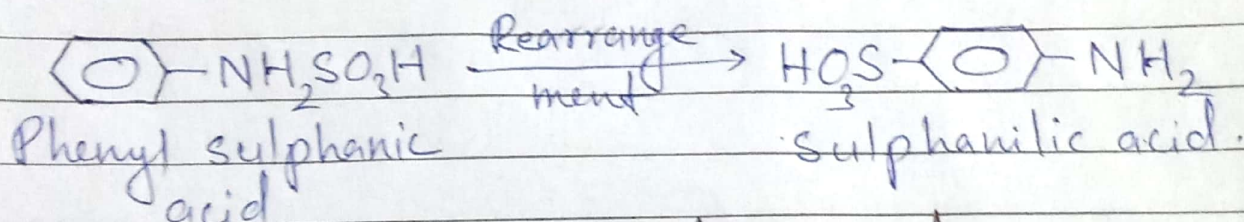
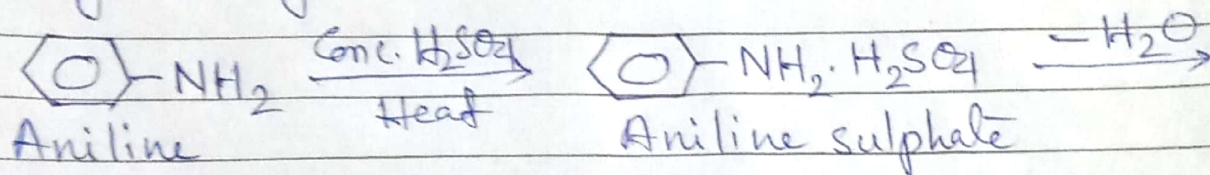
(1) Chemistry and synthesis of methyl orange



It is synthesised by diazotisation of sulphanilic acid followed by coupling with N,N-Dimethyl aniline. The dye is generally isolated as sodium salt.

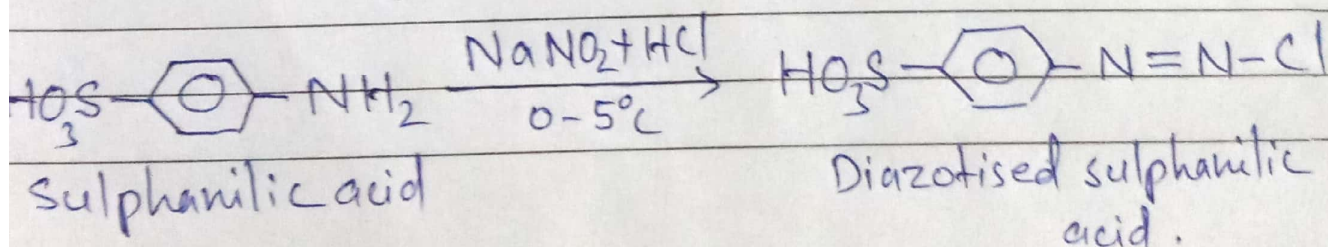
Synthesis of sulphanilic acid from aniline.

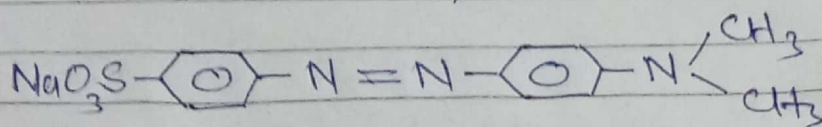
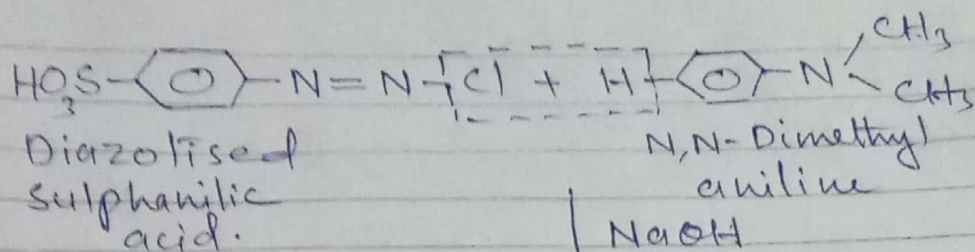
Sulphanilic acid is prepared from aniline by heating with conc. H_2SO_4 .



Diazotisation and Coupling reaction between sulphanilic acid and N,N-dimethyl aniline

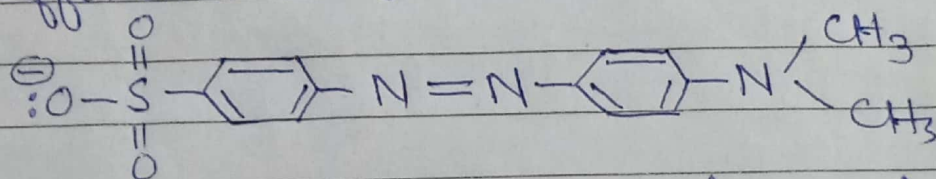
Diazotisation of sulphanilic acid and Coupling reaction with N,N-dimethyl aniline.



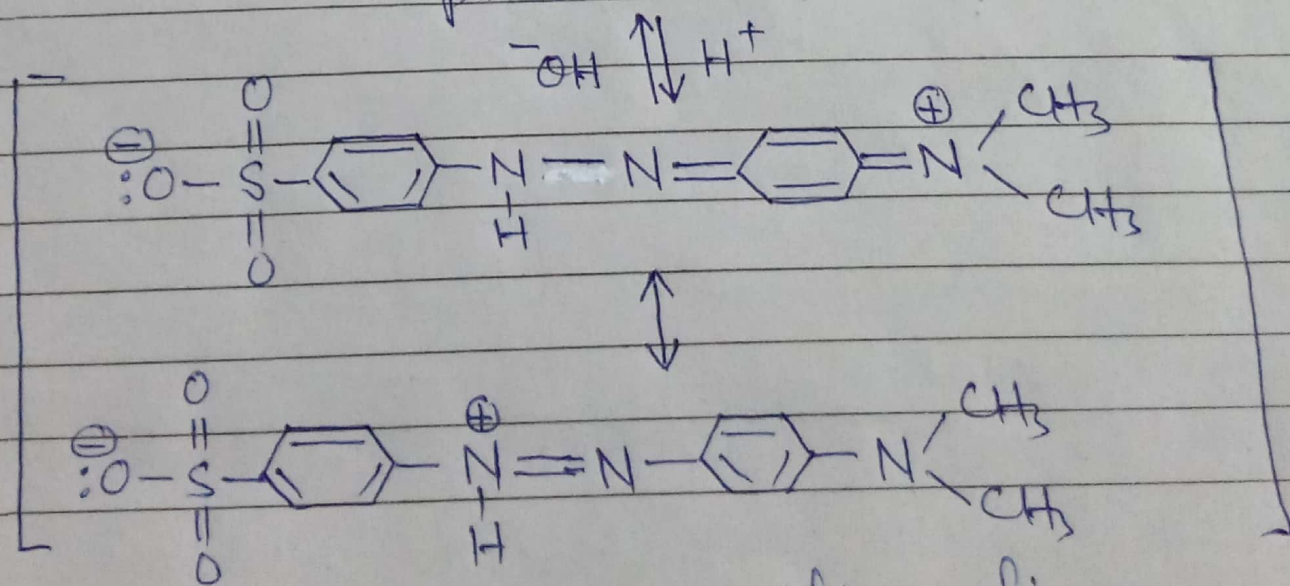


Methyl orange

Methyl orange is not used as dye, because it is not sufficiently fast to light or soap solution. However, it is commonly used as acid-base indicator in acid-alkali titrations. It gives yellow colour in alkaline solution and red colour in acidic solution. The change in colour of the compound in different media is due to the difference in structure in the two media.



Negative ion in alkaline medium.
pH 5 - 14 (Yellow)



Dipolar ion in acidic medium
pH 0 - 3 (Red)