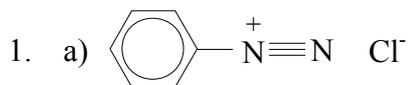


Chemguide – answers

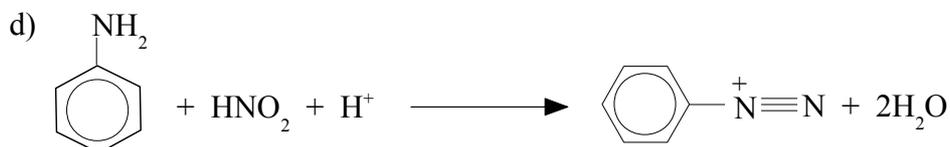
PHENYLAMINE: MAKING DIAZONIUM SALTS



(It doesn't matter where you put the diazo group on the ring, or if you have rotated the ring into its more common position.)

b) Make a solution of phenylamine in dilute hydrochloric acid and stand it in a beaker of ice. Make a solution of sodium or potassium nitrite and stand that in ice as well. Then very slowly add the nitrite solution to the phenylamine solution not allowing the temperature to go above 5°C.

c) The reaction between nitrite ions from the sodium or potassium nitrite and hydrogen ions from the hydrochloric acid.



(Again, it doesn't matter where you have placed the groups on the ring, or whether you have rotated the ring as here. I have just chosen to draw the phenylamine as you would normally meet it, and the diazonium ion in the way which is most useful to show its reactions.)

e) You would get a black oily product and a colourless gas. (Care! If you are asked what you would *see*, you can't answer "nitrogen". All you will *see* is bubbles of a colourless gas. You can only *deduce* the fact that it is nitrogen by doing further tests.)