

Q14 :

Describe the preparation of potassium dichromate from iron chromite ore.

What is the effect of increasing pH on a solution of potassium dichromate?

Answer :

Potassium dichromate is prepared from chromite ore (FeCr_2O_4) in the following steps.

Step (1): Preparation of sodium chromate



Step (2): Conversion of sodium chromate into sodium dichromate



Step(3): Conversion of sodium dichromate to potassium dichromate



Potassium dichromate being less soluble than sodium chloride is obtained in the form of orange coloured crystals and can be removed by filtration.

The dichromate ion ($\text{Cr}_2\text{O}_7^{2-}$) exists in equilibrium with chromate (CrO_4^{2-}) ion at pH 4. However, by changing the pH, they can be interconverted.

