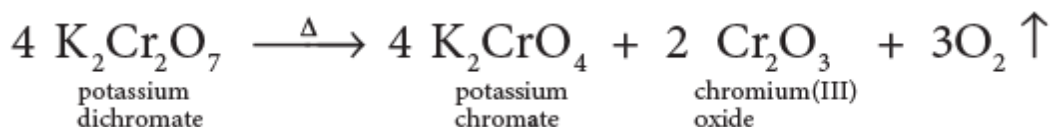


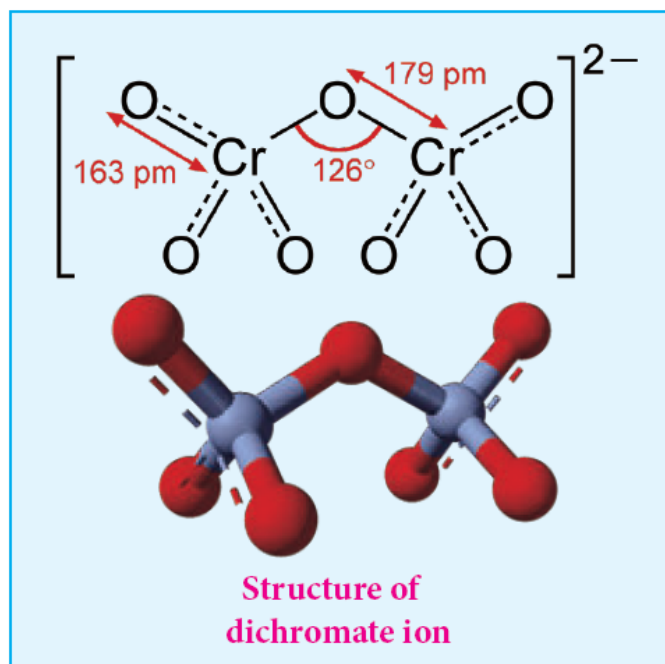
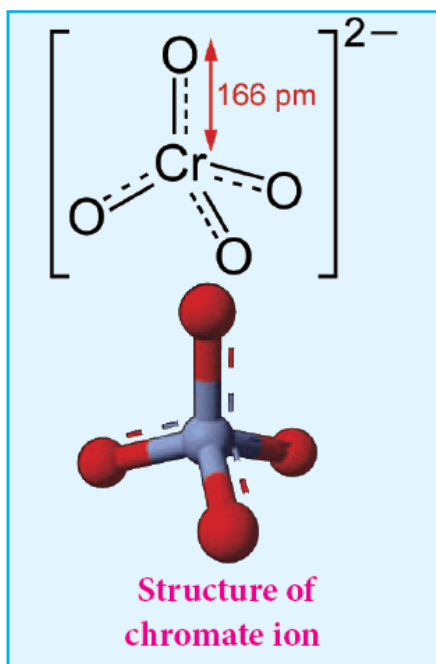
Structure and Physical Properties of dichromate ion:

Physical properties:

Potassium dichromate is an orange red crystalline solid which melts at 671K and it is moderately soluble in cold water, but very much soluble in hot water. On heating it decomposes and forms Cr_2O_3 and molecular oxygen. As it emits toxic chromium fumes upon heating, it is mainly replaced by sodium dichromate.



Structure of dichromate ion:



Both chromate and dichromate ion are oxo anions of chromium and they are moderately strong oxidizing agents. In these ions chromium is in +6 oxidation state. In an aqueous solution, chromate and

dichromate ions can be interconvertible, and in an alkaline solution chromate ion is predominant, whereas dichromate ion becomes predominant in acidic solutions.