

05

JANUARY

WEDNESDAY

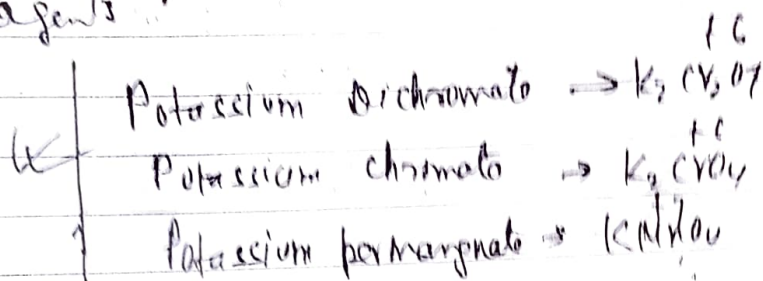
1005-360° WK 2

JANUARY						
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

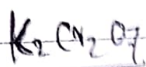
As we move along the period of transition series, the stability of  $+2$  oxidation state increases.

This means that the tendency of the metals to give electrons becomes more as we move in a period, therefore, the reducing power of oxides of transition elements increase in a period from left to right.

eg.  $\text{VO}$  and  $\text{CrO}$  are strong reducing agents.



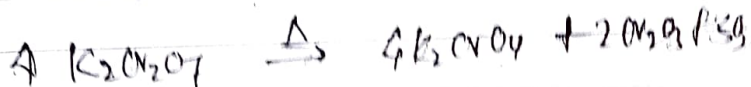
Potassium dichromate & Potassium chromate:  
 $\text{K}_2\text{Cr}_2\text{O}_7$  &  $\text{K}_2\text{CrO}_4$ .



Properties: (1) It is an orange red crystalline solid having m.p.  $670^\circ\text{C}$ .

(2) It is moderately soluble in cold water but readily soluble in hot water.

(3) Action of heat:



2011

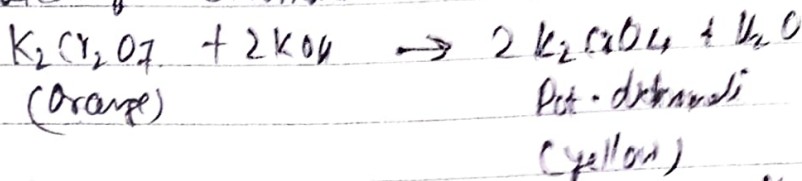
Potassium dichromate

Potassium chromate

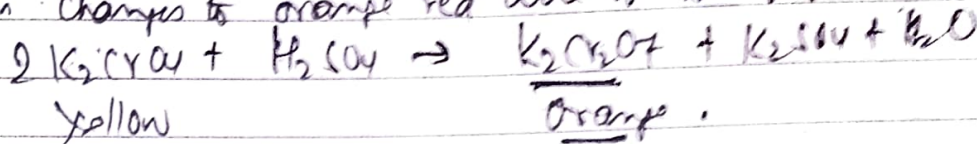
WK	M	T	W	T	F	S	S
6		1	2	3	4	5	6
7	7	8	9	10	11	12	13
8	14	15	16	17	18	19	20
9	21	22	23	24	25	26	27
10	28						

(4) Reaction with alkalies:

On heating with alkalies, the orange colour of dichromate solution changes to yellow due to the formation of chromate ions.



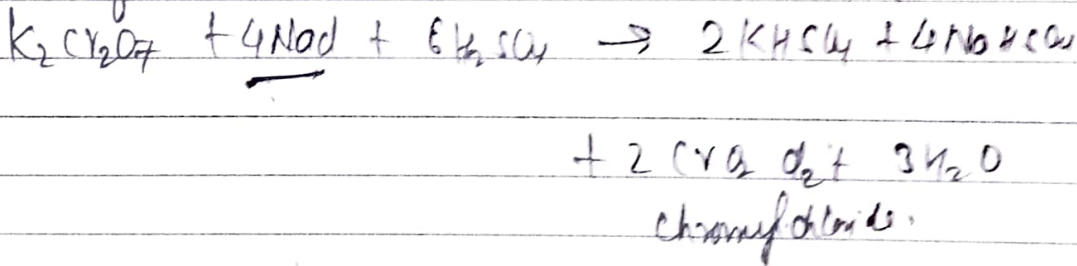
On acidification the yellow solution, the colour again changes to orange red due to the reversible reaction.



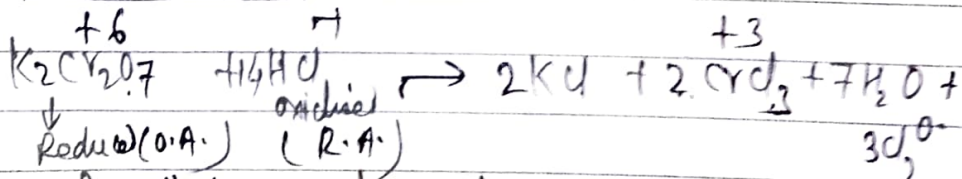
i.e. In an alkaline solution, chromate ions are present while in acidic solution, dichromate ions are present.

Chromyl chloride test:

It is used for the confirmatory test of chloride ion.



(6) Reaction with HCl:



In this reaction,  $K_2Cr_2O_7$  is reduced in which O.N. of Cr is decreased from +6 to +3.