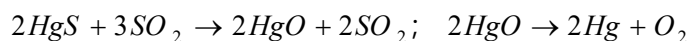


## Mercury and its Compounds.

Ores: Cinnabar ( $HgS$ )

Extraction:Roasting : The concentrated ore roasted at 770 K to 780 K in the pressure of air.



Refining: By filtering impure  $Hg$  through thick canvass or chamois leather. It is then dropped into 5%  $HNO_3$ .

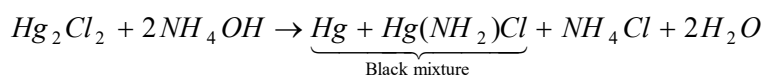
Compounds of Mercury

Mercuric chloride  $HgCl_2$  (Corrosive sublimate) : It is a colorless solid, sparingly soluble in water.

It forms red ppt. of  $HgI_2$  with  $KI$ :  $HgCl_2 + 2KI \rightarrow HgI_2 + 2KCl$  . With  $NH_4OH$  it gives white ppt. of  $Hg(NH_2)Cl$ .  $HgCl_2 + 2NH_4OH \rightarrow Hg(NH_2)Cl + NH_4Cl + 2H_2O$  .

white ppt.

Mercurous chloride  $Hg_2Cl_2$  (Calomel) : It is a white solid insoluble in water. With  $NH_4OH$  it forms a black mixture composed of black metallic mercury and white mercuric amino chloride,  $Hg(NH_2)Cl$ .



It is used as purgative in medicine and it sublimes on heating.

Mercuric iodide  $HgI_2$  : It is a yellow solid below 400K but changes to red solid above 400K.



It dissolves in excess of  $KI$  forming  $K_2HgI_4$ ;  $HgI_2 + 2KI \rightarrow K_2HgI_4$

Alkaline solution of  $K_2HgI_4$  is called Nessler's reagent.