**Disscution and solution for the four exp 4**

**1- What is the effect of ammonium hydroxide addition to the ferric salt solution? Explain with equations?**

**A \** Ammonium hydroxide is added to the ferric salt solution as a precipitating agent so that all ferric ions are precipitated as ferric oxide Fe2O3 .

**2- What is the chemical formula of precipitated and salt iron?**

**A\** Chemical formula of salt iron Fe+3  FeCl3 (Sample)

 Chemical formula of precipitate is Fe2O3 .XH2O OR FeO(OH).XH2O

 Gel

 600ₒC

Fe2O3  + XH2O

 PPt

**3- A sample of is magnetite, not pure Fe3O4 weighed 0.5g converted chemically reaction to the ferric oxide weight 0.41g What is the percentage of Fe3O4 in the magnetite? Fe = 56 , O= 16**

**Wt of Fe3O4 = G.F × Wt of Fe2O3**

 **M.Wt of Fe3O4 2**

 **= × × 0.41 g = 0.39 g**

 **M.Wt of Fe2O3  3**

 **Wt of Fe3O4**

**% Fe3O4 = × 100**

 **Wt of Sample**

 **0.39**

 **= × 100 = 78%**

 **0.5**

**4- What is the purpose of concentrated HNO3 addition the produced solution from the added of HCl to ferric salt?**

A\ To oxidize all remaining Fe+2 ions in the solution to Fe+3 ions .