

Examples of Grav. Procedures

I. Determination of Cl^-

A. Reaction:

B. Crude Colloid

C. Wash with HNO_3

D. Keep in dark

E. Filtration-

F. Other Applications

II. Determination of Sulfate

A. R x n:

B. Precipitate from Acidic Solution- 0.01 M
HCl

C. Coprecipitation Problem

1. Anion PPT- Ignite BaSO_4



2. Cation PPT-

D. Filtration

E. Other Applications

III. Determination of Iron

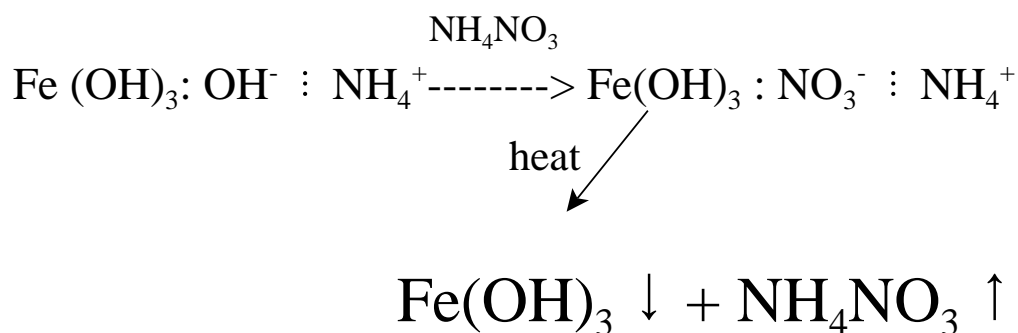
A. R x n:

B. Separation of Cu^{+2} from Fe^{+3}



C. Filtration Through Hardened Filter Paper

D. Wash with dilute NH_4NO_3

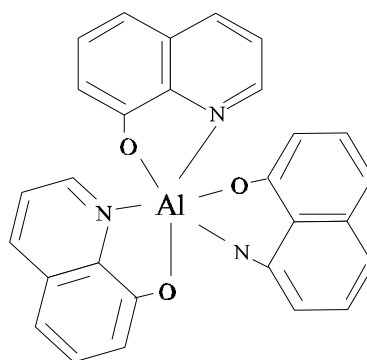
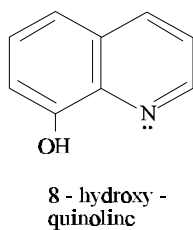
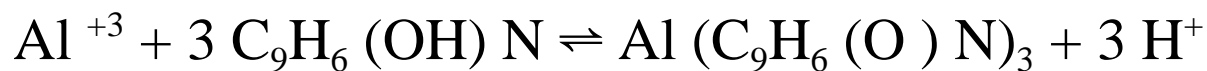


E. Sources of Error

F. Other Applications

IV. Determination of Aluminum

A. R x n:



B. Keep pH above 4.5

C. Homogeneous Precipitation

1. Solubility Information

a. 8-hydroxyquinoline

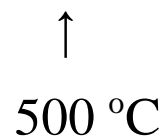
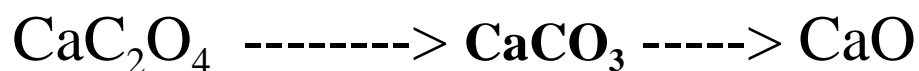
b. 8-hydroxyquinoline Chelate of Al^{+3}

2. Consequence of Evaporating Acetone
from Acetone-H₂O

3. Danger of evaporating too much
Acetone from the mix

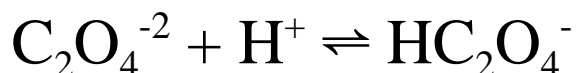
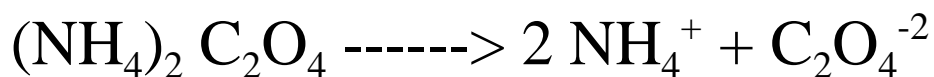
V. Determination of Calcium

A. R x n: (Simplified)



B. Comments

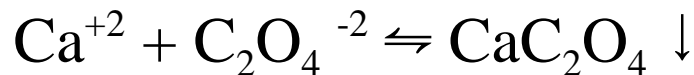
1. In Acid $\text{Ca}^{+2} - (\text{NH}_4)_2\text{C}_2\text{O}_4 - \text{Acid}$



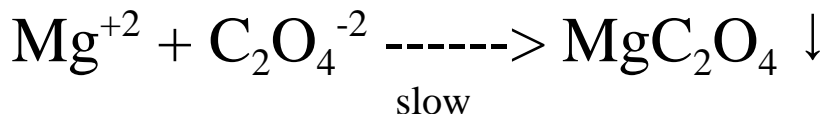
2. As neutralize the acid to a methyl red endpoint with the weak base NH_4OH ($\text{NH}_3(\text{aq})$)



3. When $[\text{C}_2\text{O}_4^{-2}] \uparrow$ so K_{sp} of CaC_2O_4 is exceeded, ppt forms



4. Mg^{+2} is an interferent ion



VI. Silica Determination

A. R x n:



B. Use of Perchloric Acid - HClO_4

1. Supplies H^+ for dehydration R x n
2. Metal Ions Form Soluble Perchlorate Salts That Are Very Soluble in Water