

TENDER HEART HIGH SCHOOL, SEC-33B, CHD.

CLASS- X

SUBJECT- CHEMISTRY

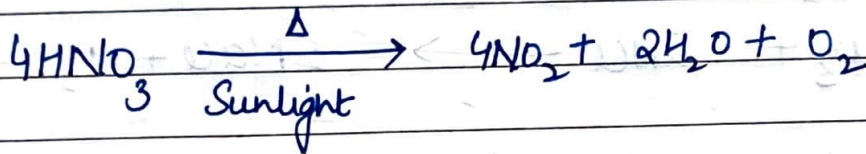
CHAPTER- 10

TEACHER- ANAMIKA

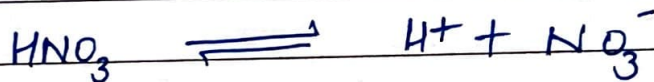
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## Chemical properties

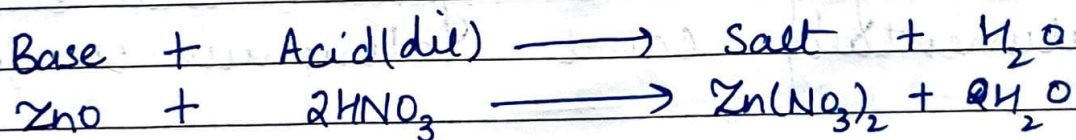
- 1) Stability:- Pure  $\text{HNO}_3$  is unstable to heat or sunlight. It decomposes to give yellow solution.



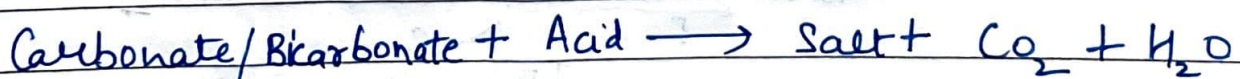
- 2) Acidic properties:-  $\text{HNO}_3$  ionises almost completely in aq. solution produces hydrogen ion & nitrate ion.



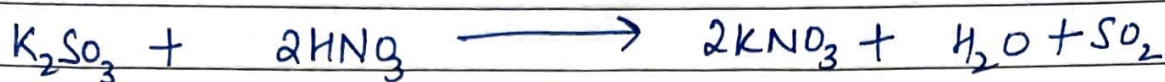
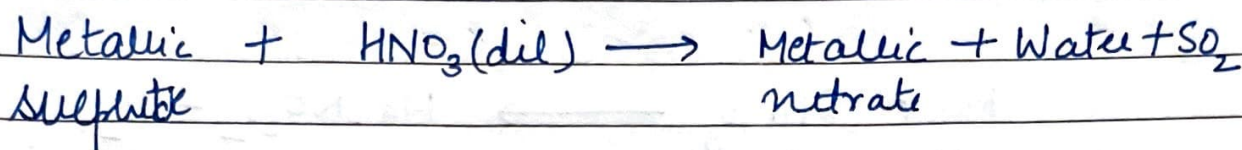
- 3) Reaction with alkali



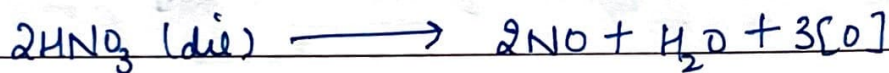
- 4) Reaction with Carbonate & Bicarbonates



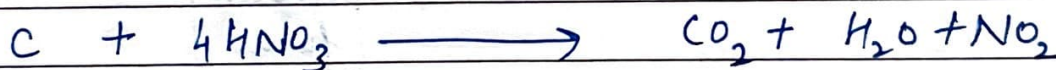
### 5) Action with metallic sulphites & bisulphites



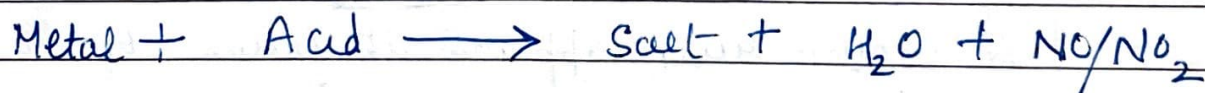
### 6) Oxidising prop:- $\text{HNO}_3$ vigorously oxidises non metals, metals, inorganic compound. $\text{HNO}_3$ itself undergoes reduction products like $\text{NO}$ , $\text{NO}_2$ , $\text{N}_2\text{O}$ etc.



### 7) Action On non metal



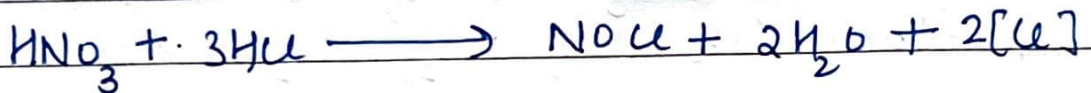
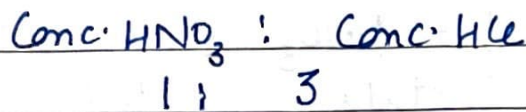
### 8) Action on Metal



- 9) Very dilute (1%) acid react with Mg & Mn at room temperature



Reaction <sup>as</sup> ~~with~~ aqua regia:-

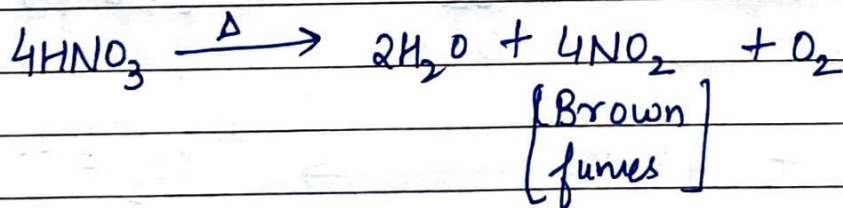


It attacks on Pt, Au, Ag Metals

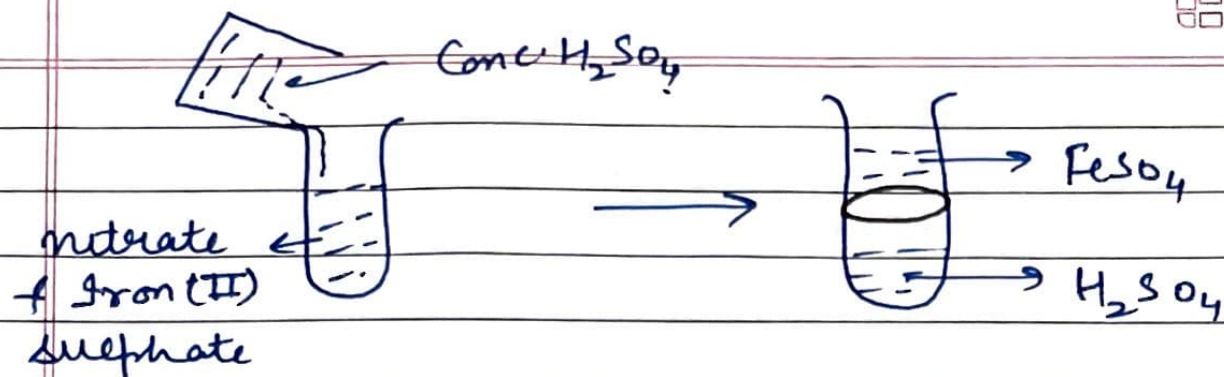


TEST FOR  $\text{HNO}_3$ :-

1. Conc  $\text{HNO}_3$  produces brown fumes on heating



2. Brown Ring Test Add  $\text{Fe}_2\text{SO}_4$  in test tube and then  $\text{H}_2\text{SO}_4$  from walls of the test tube and cool it in water. A brown ring appears at junction of two liquids



Effect of heat on nitrates

