

EXPERIMENT NO. 4.

AIM: TO study the tests for identification of gases (basic viz.: ammonia)

APPARATUS: Test tubes, glass rod, Bunsen's burner, filter papers, delivery tube

CHEMICALS: Given substance, litmus paper, phenolphthalein solution, concentrated hydrochloric acid, copper sulphate solution, and nessler's reagent.

PROCEDURE:

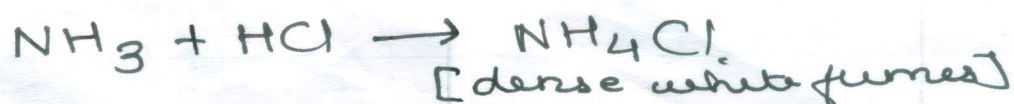
1. Tests for the evolved gases are carried out as given in the table.
2. Observations are recorded.

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Ammonia Gas

S.No.	Tests	Observation	Inference
1.	Take a small portion of the given substance in a clean and dry test tube. Add a few drops of sodium hydroxide to it and heat it.	Fumes of a colourless gas with a pungent odour	Gas evolved may be ammonia.
2.	Bring moist blue and red litmus paper one by one in contact with the gas.	Moist red litmus paper turns red ^{blue} , blue remains blue.	Gas evolved is basic in nature.
3.	Pass the gas through dil. soln. of phenolphthalein.	Colourless phenolphthalein soln. turns pink	Gas evolved is basic in nature
4.	Pass the gas through the copper sulphate soln. Pass excess gas through copper sulphate solution.	i) A pale blue ppt. is formed. ii) A dark, clear blue solution is obtained	The gas evolved is ammonia
5.	Bring a glass rod dipped in conc. hydrochloric acid soln. near the mouth of test tube.	Dense white fumes are observed.	Gas evolved is ammonia.
6.	Pass the gas through Nessler's reagent.	Colourless Nessler's reagent turns brown.	Gas evolved is ammonia.

Chemical Equations:-



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