Identifying Acids and Bases

Objectives:

1. To use a variety of tests to identify if a **solution** is acidic or basic
2. To use the same tests to identify a series of **House Hold Products** as either acidic or basic.

Materials:

A. pH paper
B. phenol-phthalein
C. methyl orange
D. blue litmus
E. red litmus
F. Magnesium strips

Solutions:

1. NaOH solution
2. HCL solution
3. NH_3 solution
4. $Ca(OH)_2$ solution
5. H_2SO_4 solution
6. KOH solution

Common Household Products:

1. Vinegar
2. Easy off
3. Ammonia
4. Pop
5. Lime juice
6. Milk of Magnesia

Procedure:

Part 1 – Identify knowns solutions as acidic or basic

1. Collect 6 dropper plates and using a pencil label 5 wells A to F
2. Place the appropriate tester into the designated well (A=pH paper, B=1 drop phenolphthalein, C=1 drop methyl orange, D=blue litmus, E=red litmus, F=Magnesium strip
3. For each of the 6 trays place 3 drops of each solution into the wells with the testers
4. Observe and record the results in the data table

Part 2 –Identifying Common House Hold Products as acidic or basic

5. Collect 6 dropper plates and using a pencil label 5 wells A to F
6. Place the appropriate tester into the designated well (A=pH paper, B=1 drop phenolphthalein, C=1 drop methyl orange, D=blue litmus, E=red litmus, F=Magnesium strip
7. For each of the 6 trays place 3 drops of each House Hold Product into the wells with the testers
8. Observe and record the results in the data table

Data and Observations:

Part 1: KNOWN ACIDS or BASES

Solution	pH value (paper)	Colour in Phenolphthalein	Colour in Methyl Orange	Colour of Blue Litmus	Colour of Red Litmus	React with Mg?	**Acid or Base?**
NaOH							
HCl							
NH3							
Ca(OH)2							
HF							
KOH							

Part II: HOUSEHOLD PRODUCTS

Solution	pH value (paper)	Colour in Phenolphthalein	Colour in Methyl Orange	Colour of Blue Litmus	Colour of Red Litmus	React with Mg?	**Acid or Base?**
Vinegar							
Easy Off							
Ammonia							
Pop							
Lime Juice							
Milk of Magnesia							