

Acid/Base Properties of Salts

Purpose

To show the properties of acids and bases through the use of different colors.

Materials

5 display glasses

0.1 M NaHSO_3

Universal Indicator

0.1 M $\text{NH}_4\text{C}_2\text{H}_3\text{O}_2$

0.1 M KI

1.0 M $\text{NaC}_2\text{H}_3\text{O}_2$

0.1 M NH_4Cl

Procedure

1. Set out the demo glasses in a line
2. Pour 60 mL of the first solution on the first demo glass, 60 mL of the second solution into the second demo glass, and so on
3. Write the following chart on the board:

Color	pH
Red	2
Red-Orange	3
Orange	4
Orange-Yellow	5
Yellow	6
Green	7
Green-Blue	8
Green-Violet	9
Violet	10

4. Add one dropper of Universal indicator into each of the beakers.

Additional Information

1. The solutions should be colored as follows:
KI – Green (pH = 7)
 NH_4Cl – Orange (pH = 4.6)
 NaHSO_3 – Red-Orange (pH = 4.5)
 $\text{NH}_4\text{C}_2\text{H}_3\text{O}_2$ – Green (pH = 7)
 $\text{NaC}_2\text{H}_3\text{O}_2$ – Blue-Green (pH = 8.9)

2. Before adding the Universal Indicator, you can have the students predict the color that each solution will change.

Disposal

Solutions should be put in a properly labelled waste container with UI# 203463.