

Acid. Base, or Neutral?

1. Label your spot plate with the names of the solutions.
2. Fill the first two spots with NaOH, fill the second two spots with HCl, and fill the third two spots with distilled water.
3. Dip a small piece of pH paper in the first spot and place two drops of bromothymol blue in the second spot.
4. Record your observations (color changes or not), then indicate whether the solution is acidic, basic, or neutral.

Solutions	Record Any Color Change		Is this an Acid, Base, or Neutral Solution?
	Universal Indicator	Bromothymol Blue	
NaOH			
HCl			
Distilled Water			

Analysis

How did you know which solutions were acidic?

What solution is neutral? How do you know?

What solutions was basic? How do you know?

pH Indicators

pH	Solution #1	Solution #2	Solution #3	Solution #4	Solution #5	Solution #6	Solution #7
bromothymol blue							
universal indicator solution							
phenolphthalein							
methyl red							
orange (IV)							
alizarin yellow							
methyl orange							
pH - universal indicator paper							
ACID or BASE?							

Acids & Bases (Pg. 168 - 169)

What is a neutralization reaction?

What are the two categories of acids?

What are some examples of common acids and their uses?

What is a base according to the text?

Give an example of a base solution and explain why it is considered to be a base.

What is an acid-base indicator and how does it help in identifying acids and bases?

Properties of Indicator Solutions (Pg. 178)

The chart on page 178 indicates the colour changes of some common acid-base indicators.

1. Methyl orange turns from red to orange to yellow between pH 3.2 – pH 4.4. What type of solution (acid, neutral, or base) would turn red were methyl orange added?
2. Methyl red turns from red to orange to yellow between pH 3.2 – pH 4.4. What type of solution (acid, neutral, or base) would turn yellow were methyl red added?
3. Bromothymol blue turns from yellow to green to blue between pH 6.0 – pH 7.6. What type of solution (acid, neutral, or base) would turn green were bromothymol blue added?
4. Phenolphthalein turns from colorless to pink between pH 8.1 – pH 10.0. What type of solution (acid, neutral, or base) would turn pink were phenolphthalein added?
5. Indigo carmine turns from blue to yellow between pH 11.2 – pH 13.0. What type of solution (acid, neutral, or base) would turn yellow were indigo carmine added?