What Are the Properties of Acids and Bases?

Worksheet

Key acid properties: sour taste, pH < 7, turn blue litmus red, react with metals and bases. Key base properties: bitter taste, slippery, pH > 7, turn red litmus blue, neutralize acids.

Questions

1. Which property is NOT true for acids?

A) Sour taste
B) Turn blue litmus red
C) Slippery feel
D) React with metals

2. A substance has pH 3. Is it

A) Neutral
B) Acidic
C) Basic
D) Cannot tell

3. What happens when acid and base mix?

A) Nothing
B) Neutralization - form salt + water
C) Explosion
D) Separate into layers

4. Which indicator turns blue in bases?

A) Phenolphthalein
B) Methyl orange
C) Red litmus
D) All of above

5. A substance turns blue litmus paper red. Is it an acid or base?

6. A solution has pH 9 and feels slippery. Is it acidic or basic?

7. Vinegar (pH 2.4) and ammonia (pH 11) - identify each.

8. Define: What is the pH range of acids?

9. Define: What is the pH range of bases?

10. Define: Do acids and bases conduct electricity?

Answer Key

1. C) Slippery feel - Slippery feel is a property of bases, not acids.
2. B) Acidic - pH 3 < 7, so it is acidic.
3. B) Neutralization - form salt + water - Acid + Base salt + water (neutralization).
4. A) Phenolphthalein - Phenolphthalein is colorless in acid, pink/red in base. Red litmus turns blue in base.
5. Litmus paper changes color: blue red is a characteristic of acids. The substance is an acid.
6. pH > 7 indicates a base. Slippery feeling is a property of bases. It is basic.
7. Vinegar: pH < 7 and sour taste acid. Ammonia: pH > 7 and bitter smell base.
8. pH < 7 (below 7).
9. pH > 7 (above 7).
10. Yes, both ionize in solution, allowing ion flow.