

Identifying Properties of Acids and Bases

List

- classify compounds as acids or bases based on their characteristics

Notes

Acids

- ★ Increase the hydrogen (hydronium) ion concentration of water
- ★ Have a pH below 7
- ★ Taste sour
- ★ Cause color changes in indicators (*indicator - something that reacts with an acid or base to show a definite color change*)
 - ☆ litmus → red
 - ☆ phenolphthalein → clear
 - ☆ bromthymol blue → yellow
 - ☆ methyl orange → red
- ★ Conduct electricity
- ★ react with active metals to release hydrogen (corrosive)
- ★ react with bases to form a salt and water

Bases

- ★ Increase the hydroxide ion concentration of water
- ★ Have a pH above 7
- ★ Taste bitter
- ★ Cause color changes in indicators
 - ☆ litmus → blue
 - ☆ phenolphthalein → pink
 - ☆ bromthymol blue → blue
 - ☆ methyl orange → yellow
- ★ Conduct electricity
- ★ feel slippery because bases dissolve skin (caustic)
- ★ react with acids to form a salt and water

Answer the questions below by circling the number of the correct response

For each of the phrases below (questions 1 -11), write the correct number in the appropriate place on the answer sheet to indicate whether the compound described is (1) AN ACID ONLY (2) A BASE ONLY, (3) AN ACID OR A BASE, or (4) NEITHER AN ACID NOR A BASE.

- | | |
|-------------------------------------------------------|-------------------------------------------------------|
| 1. Feels slippery to the touch | 5. Increases the hydronium ion concentration of water |
| 2. Tastes bitter | 6. Has a pH of 2 |
| 3. Contains some hydronium ions | 7. Product of a neutralization reaction |
| 4. Increases the hydroxide ion concentration of water | 8. Aqueous solution conducts electricity |
| | 9. C_2H_5OH |
| | 10. Turns phenolphthalein colorless |
| | 11. Has a hydronium ion concentration of $10^{-5} M$ |