Section 5.1
Acids and Bases
Check Your Understanding

Checking Concepts

1. (a) List three solutions commonly found in a kitchen or in a home that are acids.

   (b) List three solutions that are bases.

2. Use the pH scale to help you define the following terms.

   (a) acid

   (b) base

   (c) neutral

3. Why should you never taste a solution to determine whether it is an acid or a base?

4. Solution A has a pH of 3. Solution B has a pH of 6.

   (a) Which solution is more acidic?

   (b) How many times more acidic is it?

5. Complete the following chart.

Indicator	Colour at PH 1	Colour at PH 7	Color at PH 10
Red Litmus Paper			
Blue Litmus Paper			

6. Refer to Figure 5.6 (textbook page 224) to find the colour of the following indicators.

(a) phenolphthalein indicator when placed in a solution that is pH 8

(b) bromothymol blue when placed in a solution that is pH 7

(c) indigo carmine when placed in a solution that is pH 13

7. Describe the following properties of acids.

(a) taste

(b) reaction to metals

(c) electrical conductivity

8. Describe the following properties of bases.

(a) taste

(b) reaction to metals

(c) electrical conductivity

9. (a) What is the chemical name of the acid present in vinegar?

(b) What is its chemical formula?

10. (a) What is the chemical name of the acid present in automobile batteries?

    (b) What is its chemical formula?

11. (a) What is the chemical name of the base used as an antacid?

    (b) What is its chemical formula?

12. (a) What is the chemical name of the base used to clean drains?

    (b) What is its chemical formula?

Understanding Key Ideas

13. For each of the following compounds, give what its formula name can be changed to when it is present in an aqueous solution.

    (a) $HClO_4$

    (b) H_2SO_4

    (c) HF

14. For each of the following compounds, give what its formula name can be changed to when it is present in an aqueous solution.

    (a) hydrogen chloride

    (b) hydrogen nitrate

    (c) hydrogen acetate

    (d) hydrogen sulphate

15. The pH of a solution is 8.5. Describe each of its following properties.

(a) taste

(b) touch

(c) colour of red litmus

(d) reaction to magnesium metal

Pause and Reflect

You have learned that acids can be corrosive to metals and human tissue and must be handled with care. What gentle acids have you used? How did you use them? In what situations might it be beneficial to apply a gentle acid directly to skin or hair?