## **Exercise 12.4 More Weak Acid Calculations**

- 1. Calculate the approximate pH of each solution at 25 °C.
- (a) 1.25 g hydrazoic acid ( $HN_3$ ,  $pK_a = 4.72$ ) is dissolved in 1.000 L water.

(b) 1.25 g chlorous acid (*HClO*<sub>2</sub>,  $pK_a = 1.96$ ) is dissolved in 1.000 *L* water.

(c) 1.25 g nitrous acid ( $HNO_3$ ,  $pK_a = 3.39$ ) is dissolved in 1.000 L water.

2. What must the concentration be for a solution of nitrous acid ( $HNO_3$ ,  $pK_a = 3.39$ ) to have a pH of 2.00 at 25 °C?

3. What mass of hydrazoic acid ( $HN_3$ ,  $pK_a = 4.72$ ) would you have to dissolve in 250. mL water to give a solution with a pH of 2.72 at 25 °C?