

WorksheetCloud: WORKSHEET

Grade 9

Subject: Natural Sciences

Topic: Acids and Bases Indicators

Activity 1

1. Something which shows whether a substance is an acid or a base, by changing colour when we add it to that substance, is called an _____.

2. The pH scale ranges between the values _____ and _____.

3. ... have pH values less than 7.

Acids

4. Bases have pH values ranging between _____.

5. ... substances have pH values approximately equal to 7

Activity 2

Imagine we start with a beaker of clean, distilled water. Answer the following questions.

2.1 What will be the pH of the clean, distilled water?

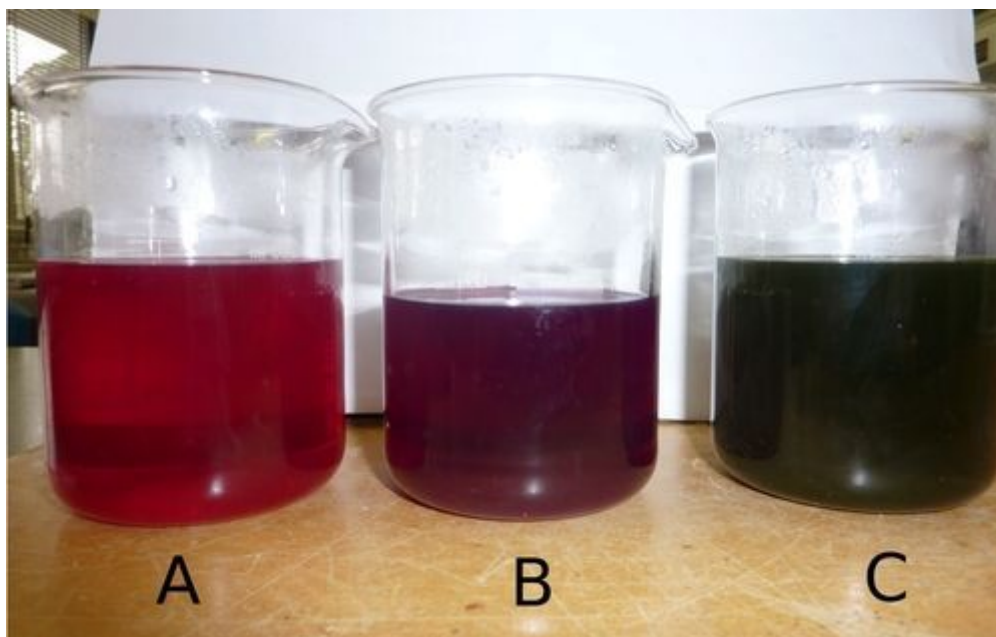
2.2 How will the pH change if we add a small amount of acid to the water?

2.3 How could we get the pH to increase?

2.4 How could we get the pH to increase to a higher value, for example 13?

Activity 3

In the following picture, the three beakers contain three different solutions. Red cabbage water was added to each of the beakers. Answer the following questions



3.1 Which solution, A, B or C, is the most acidic? Motivate your answer.

3.2 Which solution, A, B or C, is the most basic? Motivate your answer.

3.3 Which solution, A, B or C, is neutral? Motivate your answer.

3.4 What do you think would happen to the colour of solution A if we mixed it with solution B? Motivate your answer