

Litmus Paper as an Indicator

In this experiment, you will be testing various acids and alkalis with litmus paper indicators. This experiment was first performed in 1664 by Robert Boyle, who from his work with plant juices developed litmus paper. Litmus paper is a form of plant juice indicator, and it still has applications today in the laboratory and in industry.

Boyle's work showed that acids change litmus paper from purple to red. Alkalis, on the other hand, change litmus paper bluish-green. Using this knowledge, determine whether some common everyday items are alkaline or acidic.

Procedure

1. Obtain a small amount of each sample listed on **Table 1** and place each in an individual dixie-cup.
2. Now using the litmus paper, touch the sample with the litmus paper.
3. Observe the effects of the sample on the litmus paper. Record your observations in **Table 1**.
4. Determine if the sample is an acid, a base, or neutral. Record your answer in **Table 1**.
5. Answer the questions below and draw the conclusion.

Table 1

#	SAMPLE	Change of Red Litmus Paper	Change of Blue Litmus Paper	Acid, Base, Neutral?
1.	Chalk water			
2.	vinegar			
3.	Coca cola			
4.	Toothpaste			
5.	Shampoo			
6.	hand soap			
7.	dish soap			
8.	tap water			
9.	Detergent			
10.	salt water			

Questions

1. From what you know about Boyle's characteristic properties of acids and alkalis, think about some of the characteristics of each sample in this lab. What do your determined acids have in common? What do your determined bases have in common?
2. What were the effects of neutral compounds on the litmus paper? Why was this observed?

Conclusion