

## Measuring pH of Common Substances Data Sheet

You have 10 cups with different substances. First, predict the pH value of each substance. Next, test each substance with litmus paper. *Remember: Acids turn the litmus paper red and bases turn the litmus paper blue.* Calculate the average pH. Indicate whether the substance is an acid or base.

Substance	Predict the pH	pH <sub>1</sub>	pH <sub>2</sub>	pH <sub>3</sub>	Average pH	Acid or Base?
Vinegar						
Lemon Juice						
Tomato/Apple Juice						
Distilled Water						
Salt Water						

### Calculating Averages Example:

Turn over for more →

If pH<sub>1</sub> = 5, pH<sub>2</sub> = 6 and pH<sub>3</sub> = 5, then, the average pH =  $(5 + 6 + 5) \div 3 = 16 \div 3 = 5.3$

**Measuring pH of Common Substances Data Sheet, continued**

<b>Substance</b>	<b>Predict the pH</b>	<b>pH<sub>1</sub></b>	<b>pH<sub>2</sub></b>	<b>pH<sub>3</sub></b>	<b>Average pH</b>	<b>Acid or Base?</b>
Bleach (ammonia)						
Milk of Magnesia						
Baking Soda						
Alka-Seltzer in Distilled Water						
Alka-Seltzer in Vinegar						

**Calculating Averages Example:**

If  $\text{pH}_1 = 5$ ,  $\text{pH}_2 = 6$  and  $\text{pH}_3 = 5$ , then, the average  $\text{pH} = (5 + 6 + 5) \div 3 = 16 \div 3 = 5.3$