

Acids and Bases Experiment Answer Key

Substance	Hypothesis (Predict and record base, acid, or neutral.)	Neutral Litmus Test (Record color red, blue, purple)	Base Litmus Test (Record base, acid, or neutral.)	Acid Litmus Test (Record base, acid, or neutral.)	pH Paper (Record the pH number for the matching color.)
Tap Water		<i>purple</i>	<i>neutral</i>	<i>neutral</i>	7
Coffee		<i>red</i>	<i>acid</i>	<i>acid</i>	5
Salt Water		<i>purple</i>	<i>neutral</i>	<i>neutral</i>	7
Pop		<i>red</i>	<i>acid</i>	<i>acid</i>	3
Baking Soda in Water		<i>blue</i>	<i>base</i>	<i>base</i>	9
Lemon Juice		<i>red</i>	<i>acid</i>	<i>acid</i>	2
Vinegar		<i>red</i>	<i>acid</i>	<i>acid</i>	2
Laundry Detergent		<i>blue</i>	<i>base</i>	<i>base</i>	10
Ivory Soap Water		<i>blue</i>	<i>base</i>	<i>base</i>	12

Questions:

1. What is a pH scale? *is a measurement of how acidic or basic a substance is ranging from 0 to 14.*
2. Share an example of an acid and its pH number. *See above for answers*
3. Share an example of a base and its pH number. *See above for answers*
4. Which method of pH testing is more useful- litmus or pH papers? Explain your answer. *pH papers are more specific. Litmus paper can only be used to indicate the presence of a base or acid, but the pH paper can tell you how strong the base or acid is.*
5. How are indicators considered a chemical change? *Yes- the indicator paper changes color due to the chemicals changing in the papers. It can never go back to its original state and is a new substance*

6. If you have mustard, sugar, lemon juice, and tomato juice, which substance is not an acid? *Sugar*
7. What do you think happens when an acid and a base come in contact with each other? *They neutralize each other*