

Acid & Base pH Lab

Name(s) _____

Date _____ Period _____

Q: Which household solutions are acids and which are bases?

Measuring pH indicates whether a solution is an acid or a base. A pH less than 7 indicates an acid and the lower the pH, the stronger the concentration of the acid. A pH more than 7 indicates a base and the higher the pH, the stronger the concentration of the base. If a solution's pH is 7, it is neutral which means it is neither an acid nor a base.

Try the experiment below and discover the pH of solutions of many common household items.

Collect these materials:

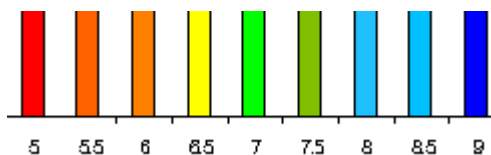
- 10 containers each containing an unknown solution (share amongst the class)
- Strip of pH indicator paper (tear each strip into 12 small pieces)
- pH color scale (share amongst the class)
- Lab sheet with data table (on back or next sheet)
- Forceps (looks like a tweezers)



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- **Be sure to wear your goggles at all times!**
 - **DO NOT TASTE ANY OF THE SOLUTIONS!**
 - **DO NOT Smell any of the solutions!**
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Procedure: Determine whether a solution is an acid or a base and rank the relative strength of the solutions according to pH?

- A. Take turns testing the solutions in the numbered plastic cups by dipping a pH strip into the liquid. Take the strip out and "read" the pH within 10 sec. by comparing the color of the strip to the pH color chart.



Be as accurate as possible (include decimal numbers)

- **Record the pH on your data chart for each of the numbered solutions.**
- B. Now determine if the solutions were **acids, neutral** or **bases**.
- **Record this information on your data chart beside each solution.**
- C. Clean up your lab area completely. Get the names of the solutions from your teacher and go to your seats to complete the rest of the lab.
- D. Take two of the small strips home with you and test two substances in your home.

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Data Table:

Solution #	pH # from test	Acid or Base?	Solution Name (from teacher after lab)
#1			
#2			
#3			
#4			
#5			
#6			
#7			
#8			
#9			
#10			
#11			<i>(Your Choice from home.)</i>
#12			<i>(Your Choice from home.)</i>

Lab “Report”: Create an *Educreations* Video to summarize your findings in this lab.

- Your video should include a pH scale with labels to indicate acids, bases, and neutral substances.
- Your pH scale should include pictures of each substance with a pH label.
- Your video should include your voice summarizing the results.
- Your video will be graded on accuracy and neatness.

Save the video with the following ID/password...

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chem2013