

PROCEDURE:

1. Make a table like the one below.
2. Fill in the "Substance" column with the solutions from the materials list above.
3. There are 12 wells on the Chemtest Plate. Number each solution in the order in which you fill each well. **NOTE: It is important to keep track of each solution so you can make accurate measurements of the pH.**
4. Take your Chemtest Plate to the side bar and put three to four drops of each solution into the corresponding well.
5. Add one drop of Universal Indicator to each well.
6. Record the color change in your data table.
7. Determine the approximate pH of each solution using the pH color chart. (Consult your text if you are unsure of the pH.)

SAMPLE DATA TABLE

SUBSTANCE	COLOR OF SOLUTION WITH INDICATOR	APPROXIMATE pH OF SUBSTANCE
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

8. Rinse your Chemtest plate well and leave it in the proper area to dry.
9. Throw away all used pH papers, toothpicks, paper towels and return bottle of Universal Indicator to the side counter.

FOLLOW UP QUESTIONS

1. Which substances are acids?
2. Which substances are bases?
3. Which substances are neutral?
4. Which substance is probably the strongest acid? Explain.
5. Which substance is probably the strongest base? Explain.
6. Is litmus paper useful in determining the exact pH of a substance? Explain.
7. List in order from most acidic to most alkali the substances you tested.
8. What do acids have in common?
9. What do bases have in common?

APPLICATION

10. Describe three situations in which acid-base indicators might be useful in everyday life.
11. Suppose you are manufacturing a certain type of cosmetic. You know that it can be slightly acidic, but it should not be strongly acidic. Which indicator - Litmus Paper or Universal Indicator - should you use and why?