

pH Universal Indicator Lab

A. Preparation

1. Obtain a rack and 9 test tubes from your instructor.
2. Label seven of the test tubes "A" - "G". These will be your seven "known" chemicals. Choose two letters for your unknowns. The unknowns (available at the front table) will be labeled "W", "X", "Y" and "Z". Make sure you record which two unknowns you chose in the table below next to where it says "unknown #1" and "unknown #2".
3. Have **one** person from your group go up to the front table and obtain 4 mls of each known solution, 4 mls of each of the unknowns that your group chose, and a small beaker of cabbage juice.

B. Taking pH readings

1. Add 2 mls of cabbage juice to each test tube. Mix the solution gently.
2. Note the color change and record it in the table below.
3. Using the scale listed here, record the approximate pH value in the table as well.

color:	red	rose	purple	blue	green	yellow								
pH :	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	-----acid-----					↑	-----base-----							
						neutral								

C. Analyzing your data

1. Construct a bar graph with each of your nine tubes represented. Use the bar graph to help determine the identity of your unknowns.

Test Solution	Color (after cabbage juice is added)	apx. pH
A		
B		
C		
D		
E		
F		
G		
unknown #1 ()		
unknown #2 ()		