

Name\_

# pH Measurements Using Indicators Worksheet

# Data Table A. Universal Indicator

pH	2	4	6	8	10	12
Color						
COIOI						

#### Data Table B. Phenolphthalein

pH	2	4	6	8	10	12
Color						
COIOI						

Transition:\_\_\_\_\_

## Data Table C. Methyl Orange

pH	2	4	6	8	10	12
Color						

Transition:\_\_\_\_\_

## Data Table D. Bromthymol Blue

pH	2	4	6	8	10	12
Color						

Transition:\_\_\_\_\_

#### Data Table E. Unknowns

Unknown Letter		
pH Color		
pH Number		
Red Cabbage Indicator Color Prediction		
Red Cabbage Test Observations		

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#### **Post-Lab Questions**

1. Predict the colors for the buffers, if a red cabbage indicator were used. Write the predictions in the table below:

	Red Cabbage Indicator						
pH	2	4	6	8	10	12	
Color							

- 2. How can phenolphthalein be used to tell whether a solution is an acid or a base? Be specific.
- 3. A colorless solution is tested with bromthymol blue, methyl orange, and phenolphthalein. It is colorless in phenolphthalein, yellow in bromthymol blue, and reddish orange in methyl orange. What is the pH of the solution?
- 4. Construct a table to summarize the properties of the unknown solutions observed in Part E. Include the following in the table.
  - a. An estimate of the pH value of each unknown
  - b. Whether the solution is acidic or basic

- 5. Use the data in the table from question 4 to complete the following:
  - a. Arrange the solutions in order from least acidic to most acidic.
  - *b*. Arrange the solutions in order from least basic to most basic.