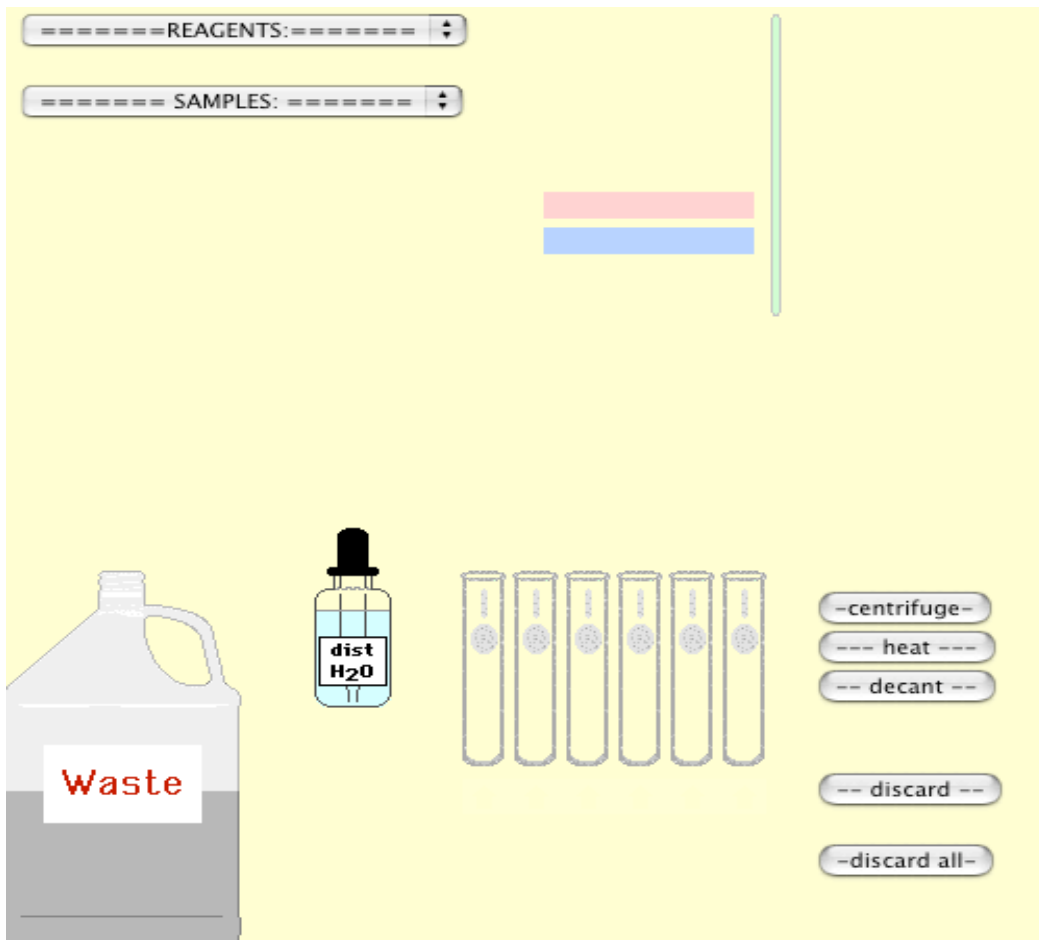


Name----- Lab Section-----

How can you test the effect of different chemicals on the color change of a litmus paper.

1. Data collection:

A. Go to <http://web.umr.edu/~gbert/qual/qual.html> and open the simulation page. The simulation page should look like this page.



- B. On the left part of the page there is a reagent drop down menu, and samples drop down menu. to set the contents of the dropper bottle.
- C. The page shows a dropper bottle that can be filled with any of the reagent solution by selecting the solution from the reagents drop down menu.

- D. The reagents solutions are (3M Hydrochloric acid, 3M Potassium Hydroxide, 3M Nitric acid, 3M Ammonia, 1M sodium chromate, distilled water.)
- E. Select 3M Hydrochloric acid from the reagents drop down menu. So the dropper bottle is filled with 3M HCl.
- F. Click on the dropper bottle to fill the dropper with the selected solution.
- G. Click on the selected test tube to place the dropper above the selected tube.
- H. Click on the dropper to fill the test tube with the required amount of the Hcl.
- I. To test the selected reagent (HCl) with litmus paper , click on the stirring rod . Record your observations.
- J. Fill one of the test tubes with one of the following reagents. click on the stirring rod to test the effect of litmus paper on these chemicals. Record your observations in the table below.

Reagent	Change in the red litmus paper	Change in the blue litmus paper
3 M Hydrochloric acid		
3M Potassium Hydroxide		
3M Nitric acid		
3M Ammonia		
1M Sodium Chromate		
Distilled water		

II. Data Analysis Interpretation and conclusion.

- A. What chemical substance changes the color of the red litmus paper to blue.? What chemical substance changes the color of the blue litmus paper to red? What chemical substance has no effect on the color change of the litmus paper? What is your conclusion about this change?

