

GRAPHING ACTIVITY

Copyright: Department of Chemistry, University of Idaho, Moscow, ID 83844-2343; 2013.

INTRODUCTION

This is an experiment that is concerned with developing and evaluating your understanding of graphs. Be sure that you grasp the concepts and skills in this lab because you will be using them in other labs. If necessary, review graphs in section 0.7 of your textbook. In doing this lab you will become familiar with working with a buret (also spelled burette) and the graphing features of Logger Pro.

Make sure that you clearly label all graphs produced throughout this semester. Always print a copy of each graph to attach to your own lab report. The printout should include a title, axis labels, the curve fit information (when appropriate), the names of you and your lab partner, and the date.

PROCEDURE

Obtain a straight-walled tube, a round bottom flask, a meter stick, and a buret from Lab Services.

PART 1.

Using the straight-walled tube and other available equipment, design an experiment that will allow you to produce a graph of Height (%) vs. Volume (mL) of water. The Height (%) is the percent of the total vertical tube length that is filled when it contains the stated volume of water. You want the best data you can obtain in the allotted time.

Manually inputting data on Logger Pro.

1. Start Logger Pro on the computer by double clicking on the Logger Pro icon.
2. Right click on the graph. Choose: Column Options ; Data Set|X. Label and enter units for the x axes. Clear "Short Name". Done. Repeat for Data Set|Y.
3. Right click on the graph. Choose: Graph Options; Graph Options tab. Enter a title for the graph. Be sure the title is specific enough so you will know which run of the experiment the printout goes with. In Graph Options, on the right hand side, the Point Symbols box is the only box that should be checked for this lab.
4. Enter your "X" and "Y" data into the appropriate columns.
5. After completing your data entry click: Analyze ; Autoscale ; Autoscale.

PART 2.

Obtain a small, round bottom flask.

Follow the same procedure as in Part 1 creating a new data table and new graph. Print out a copy of the graph for each lab partner. Be sure that a title and the names of all lab partners are entered and that the date box is checked.

PART 3.

Obtain a graph from your lab instructor.

Be sure to write down the identification letter/number of your assigned graph.

Determine which unknown bottle produced your assigned graph.

2. Draw the shape of the bottle that was used to generate the graph shown below.



