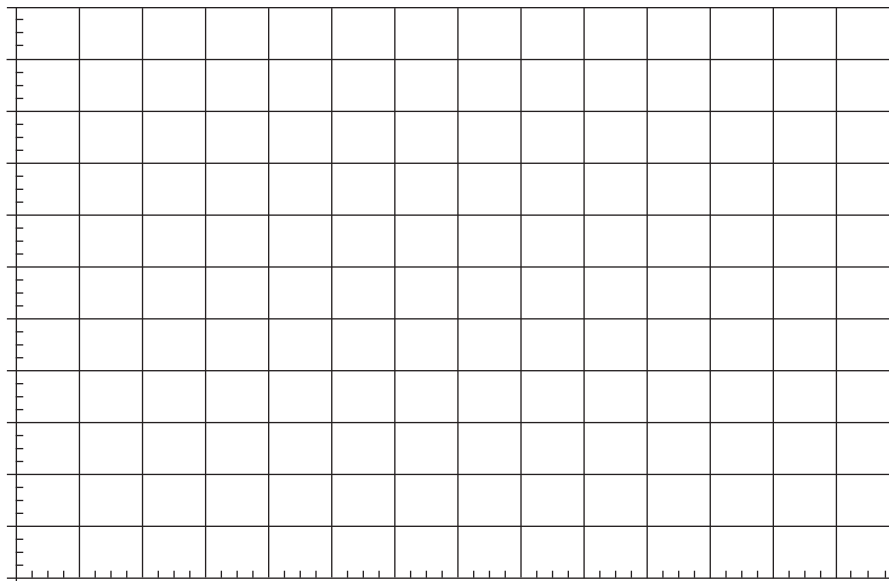


Laboratory Report

Sample	Number of Drops of DCIP Added		
	Trial 1	Trial 2	Average
Ascorbic Acid Reference A			
Ascorbic Acid Reference B			
Ascorbic Acid Reference C			
Ascorbic Acid Reference D			
Juice:			
Juice:			

1. Calculate the average number of drops of DCIP needed to titrate each reference solution and the juices. Record the results in the data table.
2. Plot the average number of drops of DCIP required to titrate each reference solution A–D (y -axis) versus the known amount of Vitamin C (x -axis) in the sample (see the *Materials* section).



3. Draw a best-fit straight line through the points, including the origin. Use the resulting calibration curve to determine the amount of Vitamin C in each juice that you tested. Report the results in mg of Vitamin C per 100 mL of juice.

4. Consult the **Nutrition Facts** label for one of the juices tested, if available, and report the known Vitamin C content. Convert the reported amount of Vitamin C to the units mg per 100 mL.

5. Calculate the percent error in the analysis of Vitamin C in this juice.
$$\text{Percent error} = \frac{|\text{Experimental value} - \text{Known value}|}{\text{Known value}} \times 100\%$$

6. Briefly describe sources of experimental error that might have affected the accuracy.

7. Compare class results for all the juices tested and rank the juices tested in terms of their Vitamin C content, from highest to lowest.

8. (*Optional*) Compare the amount of Vitamin C in a packaged juice versus fresh fruit juice. What factors may account for the difference in results, if any?