



Name: _____

Partner's Name(s): _____

Lab Date: _____ Lab Instructor's Name: _____

QUANTITATIVE CHARACTERIZATION OF HARD CANDIES LAB NOTEBOOK PAGES

All procedure(s) and data/observations must be recorded in the lab notebook in pen with permanent, waterproof ink (black or blue). Pencils, markers, highlighters, and correction fluid (white-out) are not permitted. No information can be recorded elsewhere and transferred after leaving the lab. Lab notebooks can be digital or paper; you may write directly on the lab notebook pages in your lab manual or download a digital copy onto your electronic device and then write in it. Refer to the Guide for Success in the General Chemistry Laboratory section in the front of this lab manual for more detailed instructions.

- ⦿ **Before Lab:** Make sure to complete the Procedure section in your lab notebook pages.
- ⦿ **After Lab:** Upload your notebook pages to the appropriate Carmen assignment within 48 hours after the start time of your in-person lab session. If you used the notebook pages in your paper copy of your lab manual, you should scan or take photos of the pages. Do not remove them from your lab manual. Refer to the SGR Notebook upload assignment in Carmen for more detailed instructions.

PROCEDURE CITATION _____

Chemistry 1110: Elementary Chemistry Laboratory Manual, Fall 2025–Summer 2026.; Weaver, T. A., Opoku-Agyeman, B., Fontes N. Da Silva, C., Welch, A. N., Rundell, S. R., Stern, J. E., Wroblewski, R. A., Walter, C., van Helmond, A. Eds.; Van-Griner Learning: Cincinnati, OH; pp. 133–143.

PROCEDURE

PART A. DISSOLVING THE CANDIES AND SETTING UP THE SPECTROMETER

Write a summary or step-by-step procedure for this part of the experiment in the space below.

PART B. PREPARATION OF ALLURA RED CALIBRATION CURVE

Write a summary or step-by-step procedure for this part of the experiment in the space below.

PART C. UV-Vis ANALYSIS OF HARD CANDIES

Write a summary or step-by-step procedure for this part of the experiment in the space below.

PART D. PREPARATION OF SUCROSE CALIBRATION CURVE

Write a summary or step-by-step procedure for this part of the experiment in the space below.

PART E. DENSITY ANALYSIS OF CANDY SOLUTIONS

Write a summary or step-by-step procedure for this part of the experiment in the space below.

CLEAN UP AND WASTE DISPOSAL

All solutions may be rinsed down the drain with a large amount of running water. Rinse all glassware and the cuvette thoroughly with warm water to remove sucrose and candy residue. Return all glassware and the cuvette to its proper storage location. After cleaning up, wipe down your work area with 70% ethanol spray and a paper towel. Wash your hands thoroughly after completing this experiment.

DATA AND OBSERVATIONS

QUANTITATIVE CHARACTERIZATION OF HARD CANDIES

PART A. DISSOLVING THE CANDIES AND SETTING UP THE SPECTROMETER

CANDY FLAVOR	DESCRIPTION OF CANDY BEFORE DISSOLVING	MASS OF EMPTY BEAKER (g)	MASS OF BEAKER + CANDY (g)	*MASS OF CANDY (g) EQUATION SGR.A
Cherry				
Watermelon				
Grape				

PART B. PREPARATION OF ALLURA RED CALIBRATION CURVE

TUBE	*CALCULATED CONCENTRATION OF ALLURA RED (ppm) EQUATION SGR.B	ABSORBANCE
A1		
A2		
A3		
A4		
A5		

PART C. UV-Vis ANALYSIS OF CANDY SOLUTIONS

CANDY FLAVOR	DESCRIPTION OF SOLUTION AFTER DISSOLVING CANDY	FINAL VOLUME OF DILUTED SOLUTION (mL)	ABSORBANCE OF DILUTED SOLUTION
Cherry		50.00	
Watermelon		50.00	
Grape		50.00	

PART D. PREPARATION OF SUCROSE CALIBRATION CURVE

TUBE LABEL	VOLUME OF 0.480 M SUCROSE STOCK (mL)	VOLUME OF DISTILLED WATER (mL)
S1	80.00	0.00
S2	30.00	10.00
S3	20.00	20.00
S4	10.00	30.00

TUBE	MASS OF EMPTY BEAKER (g)	VOLUME OF SOLUTION WEIGHED (mL)	MASS OF BEAKER + SOLUTION (g)	*MASS OF SOLUTION (g) EQUATION SGR.D	*CALCULATED DENSITY (g/mL) EQUATION SGR.E
S1					
S2					
S3					
S4					
Distilled water					

*Indicates value is calculated.

PART E. DENSITY ANALYSIS OF CANDY SOLUTIONS

CANDY FLAVOR	MASS OF EMPTY BEAKER (g)	VOLUME OF SOLUTION WEIGHED (mL)	MASS OF BEAKER + SOLUTION (g)	*MASS OF SOLUTION (g) EQUATION SGR.D	*CALCULATED DENSITY (g/mL) EQUATION SGR.E
Cherry					
Watermelon					
Grape					

CALCULATIONS

CALCULATIONS (CONT.)
