

# BAR

Name: \_\_\_\_\_

Partner's Name(s): \_\_\_\_\_

Lab Date: \_\_\_\_\_ Lab Instructor Name: \_\_\_\_\_

## DETERMINING THE KINETICS FOR THE BLEACHING OF ALLURA RED DYE LAB NOTEBOOK PAGES

All purpose, 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 Purpose and Procedure sections 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 BAR Notebook upload assignment in Carmen for more detailed instructions.

## PURPOSE \_\_\_\_\_

Describe the what, why, and how of the experiment in bullet points or a few sentences. Consult the Expected Learning Outcomes and the procedure for the experiment to develop the purpose.

## PROCEDURE CITATION \_\_\_\_\_

*Chemistry 1220: General Chemistry Laboratory Manual*, Fall 2025–Summer 2026.; Weaver, T. A., Opoku-Agyeman, B., Fontes N. Da Silva, C., Welch, A. N., Stern, J. E., Wroblewski, R. A., Walter, C., van Helmond, A. Eds.; Van-Griner Learning: Cincinnati, OH; pp. 53–67.

## PROCEDURE

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### PART A. PREPARING THE SOLUTIONS AND THE SPECTROPHOTOMETER

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

## PART B. MEASUREMENT OF ABSORBANCE AS A FUNCTION OF TIME

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

## PART C. CREATING A DILUTION SERIES AND BEER'S LAW PLOT

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

## CLEAN UP AND WASTE DISPOSAL

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This experiment was designed with the tenets of green chemistry in mind. All solutions can be poured down the drain with a large amount of running water. 50-mL test tubes, flip thermometers, and the timer should be cleaned and returned to your drawers. Remove all markings from the volumetric flasks with a paper towel and 70% ethanol spray. Return the cuvette and volumetric flasks after rinsing them thoroughly. After removing the yellow bulb, dispose of used Pasteur pipets in the Orange Glass Waste bucket. 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

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### PART A. PREPARING THE SOLUTIONS AND THE SPECTROPHOTOMETER

Concentration of Allura Red from stock bottle (M) \_\_\_\_\_

Concentration of bleach from stock bottle (M) \_\_\_\_\_

SOLUTION	VOLUME OF ALLURA RED STOCK ADDED (mL)	VOLUME OF DI H <sub>2</sub> O ADDED TO ALLURA RED (mL)	VOLUME OF BLEACH ADDED (mL)
1			
2			
3			
4			









**PART C. CREATING A DILUTION SERIES AND BEER'S LAW PLOT**

Absorbance of water "blank" solution at 505 nm (Step 13)

0.000

	VOLUME OF ALLURA RED STOCK (mL)	VOLUME OF WATER ADDED (mL)	TOTAL VOLUME OF DILUTED SOLUTION (mL)	ABSORBANCE
Dilution 1				

SOLUTION	VOLUME OF DILUTION 1 (mL)	TOTAL VOLUME OF DILUTED SOLUTION (mL)	ABSORBANCE
Dilution 2			
Dilution 3			
Dilution 4			