

Allura Red Unknown Analysis Submission Form

Name _____

Lab2. Spectroscopic Determination of Allura Red
Chem 162 – K. Marr

Lab Section ____ Group No. ____ Date _____

Calibration Curve Data

1. Enter in table 1 the slope, y-intercept R^2 and the equation of the trendline for your calibration curve that you *plotted using Excel*.
2. *Staple to this sheet a copy of your Excel calibration curve*. Be sure graph has an informative title, label the axes fully, include units and use correct significant figures. Include on the graph the equation of the trendline and R^2 .

Table 1. Calibration curve results

Calibration Curve Data			
Slope (units?)	y-intercept (units?)	R^2	Equation of Trendline

Analysis of Allura Red Unknown

1. Enter your *unknown number* in the space provided in the *caption for table 2*.
2. Complete table 2 using correct significant figures.

Table 2. Data for the analysis of Allura Red Unknown *Number* _____ .

Allura Red Unknown Analysis		
Volume of Unknown Used (mL)	Total Volume after Diluting (mL)	Absorbance of Diluted Unknown

3. Calculate the *concentration of Allura in in mol/L in your diluted unknown solution*. Show your work using dimensional analysis using units and correct significant figures. *Circle your answer* and record the molarity of the diluted unknown in the space below.

Concentration Allura Red in the *diluted* unknown: _____*Show your work below and circle your answer:*

4. Calculate the *concentration of Allura in in mol/L in the original undiluted unknown solution*. Show your work using dimensional analysis using units and correct significant figures. *Circle your answer* and record the molarity of the unknown in the space below.

Concentration of Allura Red in the *undiluted* unknown: _____*Show your work below and circle your answer.*

Grade for Accuracy for the Determination of the Concentration of Allura Red in your Unknown

The following will be completed by your instructor!!

|% Error| = _____ Your Grade for Accuracy: 30

Source of Error (if applicable)

- a. _____ There is/are one or more errors in the calculations on the previous page or in making the calibration curve☹. If you suspect your calibration curve is inaccurate, then compare your slope and y-intercept with your classmates—they should be reasonably close to yours. *Review your work, find the mistake(s) and make the necessary correction(s) and resubmit on a new form. Staple this form to the back of the new form that you submit.*
- b. _____ Your calculations are correct☺, but something went wrong in the lab☹. Common mistakes include...
- An error making the standard Allura Red solutions and/or measuring their absorbance.
 - Something happened diluting the Allura red unknown and/or measuring the absorbance of the diluted unknown.
 - Something else involved in this lab went wrong☹!
- Find where you went wrong, correct the error(s) and resubmit on a new form. Staple this form to the back of the new form that you submit.*

Grading Scale

If your results have a percent error of...	... then your grade will be:		
	First Attempt	Second Attempt	Third Attempt
± 5.0%	100% (30 pts)	90% (27 pts)	80% (24pts)
± 7.5%	90%	80%	70%
± 10%	80%	70%	60%
± 15%	70%	60%	0%
± 20%	60%	0%	0%
> 20%	0%	0%	0%