



Name \_\_\_\_\_

Date \_\_\_\_\_ Section \_\_\_\_\_

Mass of solid Caffeine \_\_\_\_\_ g Weighed by \_\_\_\_\_  
*Last name only*

Sample Calculation of Stock Caffeine Molarity

Calculation of Molarity of your caffeine working standard

Standards: Data	Actual caffeine Concentration	Prepared by <i>Last name :</i>	Time min	Peak Area, $\mu\text{V}\cdot\text{min}$
Blank	_____ M	_____	_____	_____
0.00100 M	_____	_____	_____	_____
0.00060	_____	_____	_____	_____
0.00020	_____	_____	_____	_____
<i>Use the following only if there are additional group members</i>				
0.00040	_____	_____	_____	_____
0.00080	_____	_____	_____	_____
0.00010	_____	_____	_____	_____
0.00050	_____	_____	_____	_____

Your Samples: - raw data	Identification	Time [ Min ]	(Peak) Area, [ $\mu\text{V}\cdot\text{min}$ ]
Quality Control	_____	_____	_____
Student supplied	_____	_____	_____

Name \_\_\_\_\_

Date \_\_\_\_\_ Section \_\_\_\_\_

Sample calculation of the caffeine-containing beverage Molarity as injected into the instrument.

- If you obtained a trendline with Excel, show the concentration calculation here.
- If you obtained the concentration graphically, show your work on the calibration curve and record the number here. (*check one box*).

Calculation of the molarity in the original student supplied sample.

Student Sample Serving Size (& unit) \_\_\_\_\_ converted to metric units \_\_\_\_\_

Calculation of the mass of caffeine (mg) per serving

Manufacture reported value \_\_\_\_\_ mg/serving

Source of this information \_\_\_\_\_

Calculate the percent relative error in your caffeine determination assuming that the reported Manufacturer's value is correct.

Calculation of the molarity of the Quality Control Sample.

- If you obtained a trendline with Excel, show the concentration calculation here.
- If you obtained the concentration graphically, show your work on the calibration curve and record the number here. (*check one box*).