EXERCISE 8B - Postlab

1. Prepare a clearly labeled table which shows the names of the 11 **diluted** milk fractions (cuvettes 10-15 and A - E), the A595 values for the 11 **diluted** milk fractions, and the calculated protein concentrations for the 11 **diluted** milk fractions. **Make sure you include appropriate units of measurement.** NOTE: If the A595 value for a given diluted milk fraction lies outside the linear region of your BSA standard curve, then leave the calculated protein concentration for that dilution blank.

2. Prepare a clearly labeled table which shows the names of the 8 **undiluted** milk fractions along with the calculated protein concentrations of the 8 **undiluted** milk fractions. **Make sure you include appropriate units of measurement.**

3. The nutritional label on a container of nonfat milk indicates that it contains 9 g of protein per cup (240 mL). Express the protein concentration of nonfat milk in terms of mg/mL. How does this value compare with the protein concentration of nonfat milk that you calculated using the Bradford assay?

4. Describe the purpose of protein assays in protein purification and characterization procedures.

5. List the advantages and disadvantages of each of the following types of protein assays: A280 measurements, the biuret assay, the Lowry assay, and the Bradford assay.

6. Describe the effects of each step of protein purification on the concentration of protein in the fractions that you saved. Which step had the most radical effect on protein concentration? Which step had the smallest effect on protein concentration?

7. What might you do to improve the precision of your Bradford assay?