**CHEM525 HPLC Depolymerization Kinetics Prelab Questions**

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

1. (4 points) In the HPLC analysis of the products formed during the pectate lyase catalyzed depolymerization of polygalacturonic acid, what type of column will you use? How does this column separate the different oligomers? What is the purpose of the tetrabutyl ammonium hydroxide (TBAH) present in the mobile phase?
2. (3 points) Draw the substrate and products formed during the pectate lyase catalyzed depolymerization of polygalacturonic acid. Start with a trimer of galacturonic acid and make a single cleavage of the trimer anywhere in the oligomer. Use Haworth projections for all sugar hexoses.

1. (1 point) What is the basis of detection for both the spectrophotometric and HPLC based kinetic methods we will use in the lab?
2. (2 points) How can the kinetic HPLC data be used to get an idea of the structure and function of your enzyme? In other words, what inferences can you make about the manner in which your enzyme functions based upon your analysis of the depolymerization products it generates?