

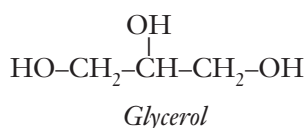
Activity A. Synthesis of a Polymer

Data Table

	Observations
Appearance and Properties of Reactants	
Observations During Heating	
Appearance and Properties of Product(s)	

Post-Lab Questions *(Use a separate sheet of paper to answer the following questions.)*

1. Polymer solutions or polymer “melts” are generally viscous—thick and slow to pour. Why do polymers have higher viscosities than monomers or smaller molecules?
2. Glycerol reacts with phthalic anhydride to form a *cross-linked* polyester—several polymer “chains” are tied together into a three-dimensional network. Draw a diagram that shows why using glycerol instead of ethylene glycol produces a cross-linked polyester.



Activity B. Polyurethane

Data Table

Observations	Type of Change (Circle One)
	Chemical or Physical
	Chemical or Physical
	Chemical or Physical
	Chemical or Physical
	Chemical or Physical
	Chemical or Physical

Activity C. Synthesis of Nylon 6, 10

Post-Lab Questions *(Use a separate sheet of paper to answer the following questions.)*

1. Describe what happened in this experiment. Include all observations you made about the substance produced.
2. Why does the nylon form only at the interface of the two solutions?