

CHAPTER 23 LEARNING OBJECTIVES

Learning Objectives

You should be able to:

1. Explain how polymers are different from small molecules.
2. Recognize an addition polymerization reaction and which types of polymers are formed by addition reactions.
3. Recognize a condensation polymerization reaction and which types of polymers are formed by condensation reactions.
4. Describe the basic amino acid structure and distinguish polar from non-polar side groups.
5. Explain the nature of polypeptide polymerization reaction.
6. Write the structural formula of an ester or an amide formed from the condensation reaction of a given carboxylic acid and a given alcohol or amine.
7. Predict the type of polymer that a given monomer can form and identify monomers, given the repeating unit of a polymer and distinguish various types of copolymers
8. Explain the role of chain length, crystallinity, network formation, cross-linking, and intermolecular forces in determining the physical properties of polymers.
9. Identify the protein (polypeptide) structure, and distinguish from other important types of biopolymer structure such as polysaccharides and nucleic acids.