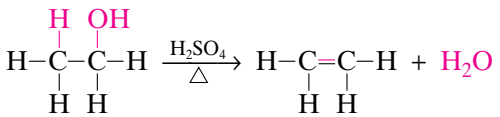
FIGURE 17 Sucrose is dehydrated when it reacts with concentrated sulfuric acid. Elimination of water produces a compound that is mostly carbon.

Elimination Reactions

An **elimination reaction** *is one in which a simple molecule, such as water or ammonia, is formed from adjacent carbon atoms of a larger molecule.* A simple example of an elimination reaction is the heating of ethanol in the presence of concentrated sulfuric acid. Under these conditions, a hydrogen atom bonded to one carbon atom and a hydroxyl group bonded to the second carbon atom are removed from the ethanol molecule. A molecule of water is formed as a result.



ethanol ethene water

Another example of an elimination reaction is the dehydration of sucrose with concentrated sulfuric acid, shown in **Figure 17.**

Polymers

Polymers *are large molecules made of many small units joined to each other through organic reactions. The small units are* **monomers.** A polymer can be made from identical or different monomers. *A polymer made from two or more different monomers is a* **copolymer.**

Polymers are all around us. The foods we eat and clothes we wear are made of polymers. Some of the most common natural polymers include starch, cellulose, and proteins. Some synthetic polymers may be familiar to you as plastics and synthetic fibers.