

Solutions

2.1 $\text{C}=\text{C}$, a carbon-carbon double bond.

2.2 Poly(propene).

2.3 Water (usually).

3.1 Repeating unit drawn with the backbone from two carbons that were double-bonded; side groups $-\text{H}$ and $-\text{CH}_2\text{CH}_3$ attached; bond lines extending left and right, showing continuation.

3.2 Each diol molecule has two $-\text{OH}$ groups and each acid two $-\text{COOH}$ groups; ester links form between an $-\text{OH}$ of one monomer and a $-\text{COOH}$ of the other; releasing a molecule of water at each link; the alternating chain is a polyester with ester linkages.

3.3 DNA – two polymer chains made of four different nucleotides wound as a double helix; proteins from amino acids; starch and cellulose from sugars.