

2.MM: MOLECULAR MODELS

OBJECTIVE

After completing this section, you should be able to

- use ball-and-stick molecular models to make models of simple organic compounds (e.g., ethane, ethylene, acetylene, ethanol, formaldehyde, acetone, acetic acid), given their Kekulé structures or molecular formulas.

STUDY NOTES

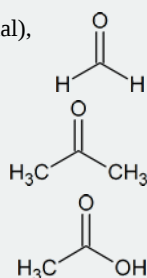
You will have noticed that we have given two names for most of the compounds discussed up to this point. In general we shall be using systematic (i.e., IUPAC—International Union of Pure and Applied Chemistry) names throughout the course. However, simple compounds are often known by their common names, which may be more familiar than their IUPAC counterparts. We shall address the subject of nomenclature (naming) in Chapter 3.

ethanol 

formaldehyde (methanal),

acetone (propanone),

acetic (ethanoic) acid,



If your instructor is having you work with molecular models in class, they may use this section for you to practice creating specific structures.

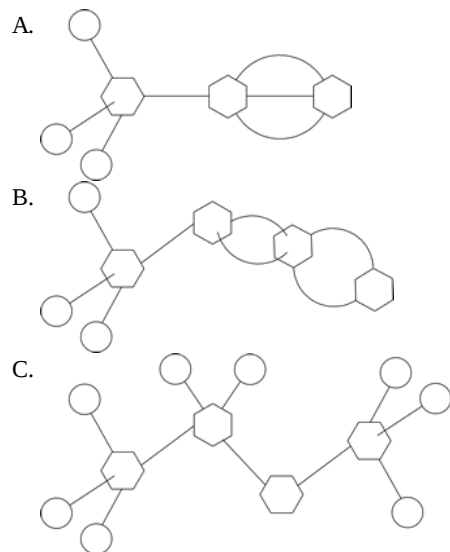
EXERCISES

1. Construct a molecular model of each of the compounds listed below.

- $\text{CH}_3\text{-CN}$
- $\text{CH}_3\text{-N=C=O}$
- $\text{CH}_3\text{-CH}_2\text{-O-CH}_3$

Hint: Use the curved sticks to form the multiple bonds and the straight sticks for single bonds.

ANSWERS:



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