



16.2 Families of Compounds



Certain compounds have common characteristics, so we place them into groups or families. The group called “enzymes” contains thousands of representative chemicals, but all share certain critical features that allow them to be placed into this group.

The name of a compound often identifies the family of chemical to which it belongs. The clue is usually found in the suffix for the compound's name. The table below lists suffixes for some common chemical families.

Chemical Family	Suffix
Sugars	<i>-ose</i>
Alcohols	<i>-ol</i>
Enzymes	<i>-ase</i>
Ketones	<i>-one</i>
Organic acids	<i>-oic</i> or <i>-ic acid</i>
Alkanes	<i>-ane</i>

Glucose, the compound used by your brain as its primary fuel, is a sugar. The suffix *-ose* indicates its membership in the sugar family. Propane, the compound used to operate your gas barbecue grill, is an alkane, a compound formed from carbon and hydrogen atoms that are covalently bonded with single pairs of electrons. We know this from the suffix *-ane*.

Knowing such information about a compound can be very useful when you are reading the labels of consumer products. Compound names can be found in the ingredients list on the label. If you are purchasing a hand lotion to alleviate dry skin, you should avoid one that lists a compound with an *-ol* suffix early in the ingredients list.

The ingredients are listed from largest amount to smallest amount. The earlier a compound is listed, the greater the amount of that compound in the product. A compound with an *-ol* suffix is an alcohol. Hand lotions with high percentages of alcohols are less effective since alcohols tend to dry out rather than moisturize the skin!

In later chemistry courses, you will learn more about the names and characteristics of “families” of compounds. This knowledge will provide you with a powerful tool for making informed consumer decisions.

**PRACTICE** 

Using the information in the table on the previous page to predict the chemical family to which the following compounds are members:

Compound Name	Chemical Family
Lipase	
Methanol	
Formic Acid	
Butane	
Sucrose	
Acetone	
Acetic Acid	