

Saturated Hydrocarbons

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Crude oil (petroleum) constitutes the largest and most important natural source for saturated hydrocarbons, the simplest type of organic compound. Here is shown a pump and towers associated with obtaining crude oil from underground deposits.

This chapter is the first of six that deal with the subject of organic chemistry and organic compounds. Organic compounds are the chemical basis for life itself, as well as an important component of the basis for our current high standard of living. Proteins, carbohydrates, enzymes, and hormones are organic molecules. Organic compounds also include natural gas, petroleum, coal, gasoline, and many synthetic materials such as dyes, plastics, and clothing fibers.

12.1 ORGANIC AND INORGANIC COMPOUNDS

During the latter part of the eighteenth century and the early part of the nineteenth century, chemists began to categorize compounds into two types: organic and inorganic. Compounds obtained from living organisms were called *organic* compounds, and compounds obtained from mineral constituents of the earth were called *inorganic* compounds.

During this early period, chemists believed that a special “vital force” supplied by a living organism was necessary for the formation of an organic compound. This concept was proved incorrect in 1828 by the German chemist Friedrich Wöhler. Wöhler heated an aqueous solution of two inorganic compounds, ammonium chloride and silver cyanate, and obtained urea (a component of urine).

