

History of Organic Chemistry

Organic chemistry is an important area of overall chemistry that involves the chemicals, including drugs, mostly based on carbon and related elements found in periodic table. Carbon is now known to form a seemingly unlimited number of compounds. Therefore, our life is based on carbon instead of the other elements similar to carbon, etc., silicon. The uses of organic compounds effect our lives daily in pharmacy, medicine, agriculture, and all other aspects of general life.

Organic chemistry is assumed with a happening occurred in time when beginnings with the big bang when the components of ammonia, nitrogen, carbon dioxide and methane combined to form amino acids, an experiment that has been verified in the laboratory (Miller, 1953). Organic chemicals were used in ancient times by Romans and Egyptians as dyes, medicines and poisons from natural sources, but normally, the chemical arrangements of that substances were unknown.

In the 16th century organic compounds were isolated from nature in the wholesome composition (Raubenheimer, 1927), along with several analytical techniques then were developed for resolving of molecular structures (Lavoisier, 1784). Scientists like Berzelius in around 1807's believed that organic chemicals originated in nature may contain a special "vital force" that directed their natural synthesis (Adams, 1923), and therefore, it would be very difficult to achieve synthesis of the chemicals in the laboratory conditions.

Later in 19th century Frederich Wöhler discovered that urea, a natural component in urine, could be synthesized in the laboratory by heating ammonium cyanate (Wöhler, 1844). His discovery meant that the natural "vital force" was not required to synthesis organic compounds, and covered the way for many chemists to further synthesise of millions and millions organic compounds, including medicinal drugs and industrial chemicals.

The importance of vital and supportive aspects about the structures of organic chemistry initiated with a theory of bonding called valence theory developed by Kekule and colleauges around late 1850's (Herndon, 1974). Organic chemistry advanced into a dynamic and stimulating science in the nineteenth century. Many new synthetic methods, reaction mechanisms, analytical techniques and structural theories have been developed. Concerning to the end of the 19th century, much of the information of organic chemistry have been prolonged to the study of macromolecular biological systems such as proteins (enzymes), carbohydrates, lipids and DNA. Many new of developments were published monthly and/or more or less in

journals, books and still continuing to published the research achievements in organic chemistry on technology-based electronic media. The vast information available today means that for new students of organic chemistry a great deal of study is required. Students must learn about organic reactions, mechanism, synthesis, analysis, and biological function. The study of organic chemistry, although complex, is very interesting, and begins here with an introduction of the theory of chemical bonding.

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