

A compound made up of hydrogen and carbon only is called hydrocarbon. Methane (CH_4), ethane (C_2H_6), ethene (C_2H_4) and ethyne (C_2H_2) are all hydrocarbon because they are made up of only two elements carbon and hydrogen. The most important natural source of hydrocarbon is petroleum, which is obtained from underground oil deposits by drilling oil wells. The natural gas which occurs above petroleum deposits also contains hydrocarbons.

Types of Hydrocarbon

Hydrocarbon are of two types: + Saturated hydrocarbons and unsaturated hydrocarbons.

1 Saturated Hydrocarbons (Alkanes) → A hydrocarbon in which the carbon atoms are connected by only

Single bond is called a saturated hydrocarbon.
Saturated hydrocarbon are also called alkanes.
we can now say that an alkane is a hydrocarbon
in which the carbon atoms are connected by only
single bonds covalent bonds. The names of all
these saturated hydrocarbon end with ane.

Methane (CH_4) ethane (C_2H_6) propane (C_3H_8) is the
example of saturated hydrocarbon.

The general formula of saturated hydrocarbons or alkanes is $\text{C}_n\text{H}_{2n+2}$ where n is the number of carbon atoms in one molecule of the alkane.

(i) If an alkane has 1 carbon atom in its molecule then $n=1$, and its molecular formula will be $\text{C}_1\text{H}_{2 \times 1 + 2}$ or CH_4 .