

AIR POLLUTANTS

classmate

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Any substance which causes undesirable change in the air is called air pollutants may be gas, dust, mist or aerosol.

The pollutants that remain in gaseous form at normal temperature and pressure and vapours of those pollutants whose boiling points are up to 20°C are called gaseous pollutants. Solid particles having a diameter of more than 1μ are called dust. While the liquid particles with the same range of size are known as mists.

Smoke and fumes of solid or liquid particles with a diameter less than 1μ are called aerosol.

These air pollutants are further divided into 3 types -

(1) PRIMARY AIR POLLUTANTS:- Pollutants released directly in the air are called primary air pollutants.

Ex- Carbon compound (carbon monoxide), Carbon dioxide, hydrocarbons), nitrogen compounds (peroxide, dioxide, ammonia), Sulphur compounds (dioxide, trioxide, hydrogen sulphide, mercaptans) and halogen compounds (hydrogen fluoride, hydrogen chloride).

(2) SECONDARY POLLUTANTS:- The pollutants produce as a result of reaction between primary pollutants in the presence of sunlight in the air are known as secondary air pollutants.

Nitrous compounds and ozone formed by reaction between nitrogen oxide, oxygen and hydrocarbons.

in the presence of sunlight are examples of secondary air pollutants.

Nitrogen oxide + hydrocarbons $\xrightarrow{\text{Sunlight}}$ peroxy acetyl nitrate (PAN) + Ozone.

Mixture of carbon monoxide, nitrogen, sulphur dioxide, sulphuric acid and PAN is known as Lethal Soup. It is another example of secondary air pollutant.

(3) BIOLOGICAL AIR POLLUTANTS: The air borne pollutants such as bacteria, virus, fungi, pollen grains are known as biological air pollutants. These are also called aero-allergens as most of them cause allergic reactions.