

CHEMISTRY

Air Around Us

Air is an invisible and colourless form of matter. It is a mixture of several gases—oxygen, nitrogen, carbon dioxide, rare gases and water. Air occurs in the atmosphere above the Earth's surface and in the water on the Earth's surface. No living thing can exist without air. Air is present everywhere around us.

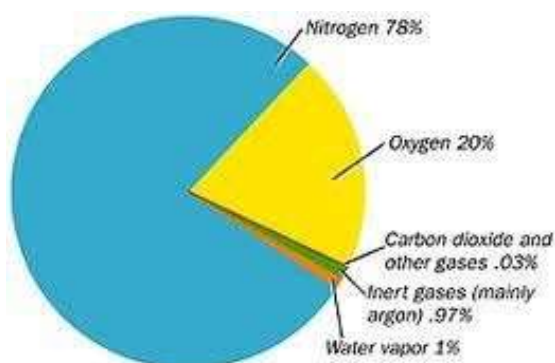
Properties of Air

Important Properties of Air:

- Air is a colourless, tasteless and odourless gaseous substance.
- It has mass.
- It occupies space.
- It dissolves in water.
- It can be compressed.

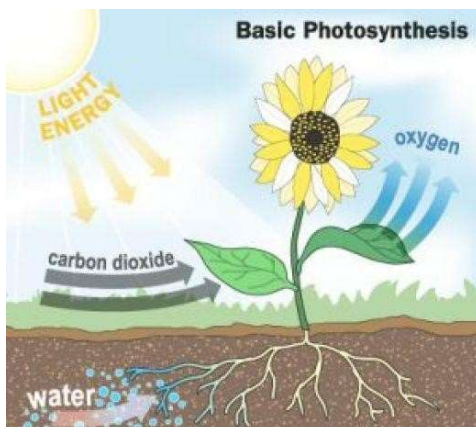
Constituents of Air

- Air and some other components form a very thin layer (when compared to the radius of the Earth) over the Earth's surface. This layer is called the atmosphere.
- Gases such as hydrogen, oxygen, nitrogen, carbon dioxide and others along with dust particles together form a mixture called air. In air, all the gases have their original properties and can be recovered separately.



- The different gases present in the air have unique properties. Along with the composition of air, they play a vital role in the creation and evolution of life.
- Nitrogen makes up the major part of air (almost four-fifths). It is not required by us directly but in the form of compounds. It is essential for plant and animal growth and has various other uses.
- About one-fifth of the air is made of oxygen. It is required by all living things. Plants release oxygen into the air through **photosynthesis**. Compressed oxygen in cylinders is used by mountaineers and deep sea divers. Oxygen is essential for burning.
- The other important constituents of air are carbon dioxide, water vapour and inert gases.

- Carbon dioxide is required by plants to prepare their food during photosynthesis.



- Water vapour plays an important role in the water cycle. The amount of water vapour in the air is a measure of the humidity of that place.

Uses of Air

Brings out changes in weather

Helps in the drying of wet clothes and evaporation of sweat from the body

Helps in the movement of yachts, parachutes, gliders and aeroplanes

Helps birds, bats and insects in flying

To make food by plants

Plays an important role in the water cycle