

Different Types of Coal

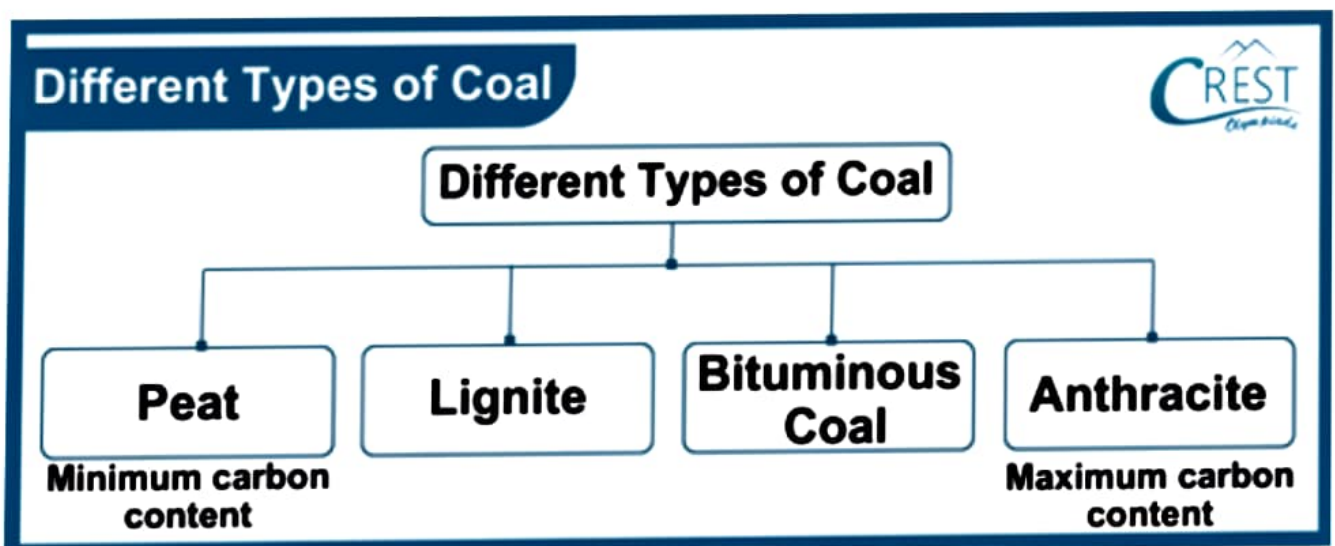
There are different types of coal based on their carbon content and properties. The main types of coal are:

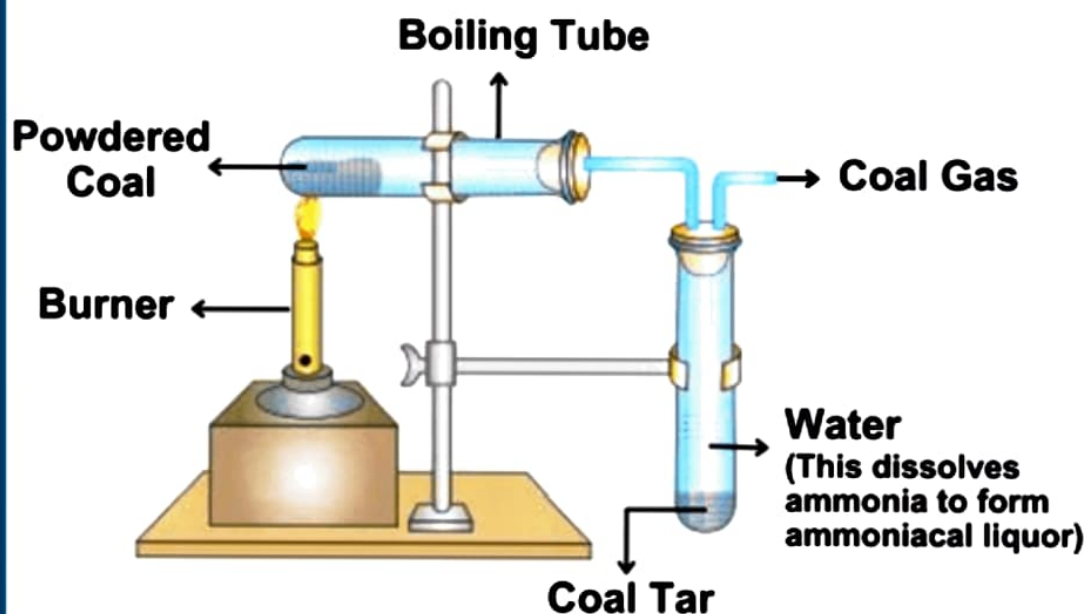
a) Peat: This is the earliest stage of coal formation. It has a lot of moisture and is not fully transformed into coal yet.

b) Lignite: Also known as "brown coal," it has more carbon than peat and is a bit harder.

c) Bituminous Coal: This is a type of coal that has even more carbon and is commonly used for producing electricity.

d) Anthracite: This is the highest grade of coal, with the most carbon content and the hardest form.





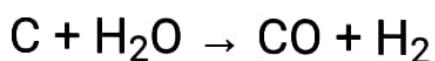
1. Coke

a) Coke is a black, porous, and tough substance that looks like a hard sponge.

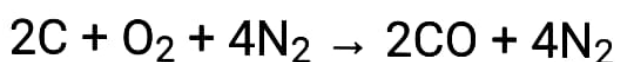
b) It is the purest form of coal, and we get it as a residue after heating coal without air (destructive distillation).

c) Coke has many uses, especially in industries like steel manufacturing and metal extraction.

d) When we heat coke with steam (water vapour), it reacts to produce water gas (a mixture of carbon monoxide and hydrogen).



e) Also, when we burn coke with air (oxygen and nitrogen), it reacts to form producer gas (a mixture of carbon monoxide and nitrogen).

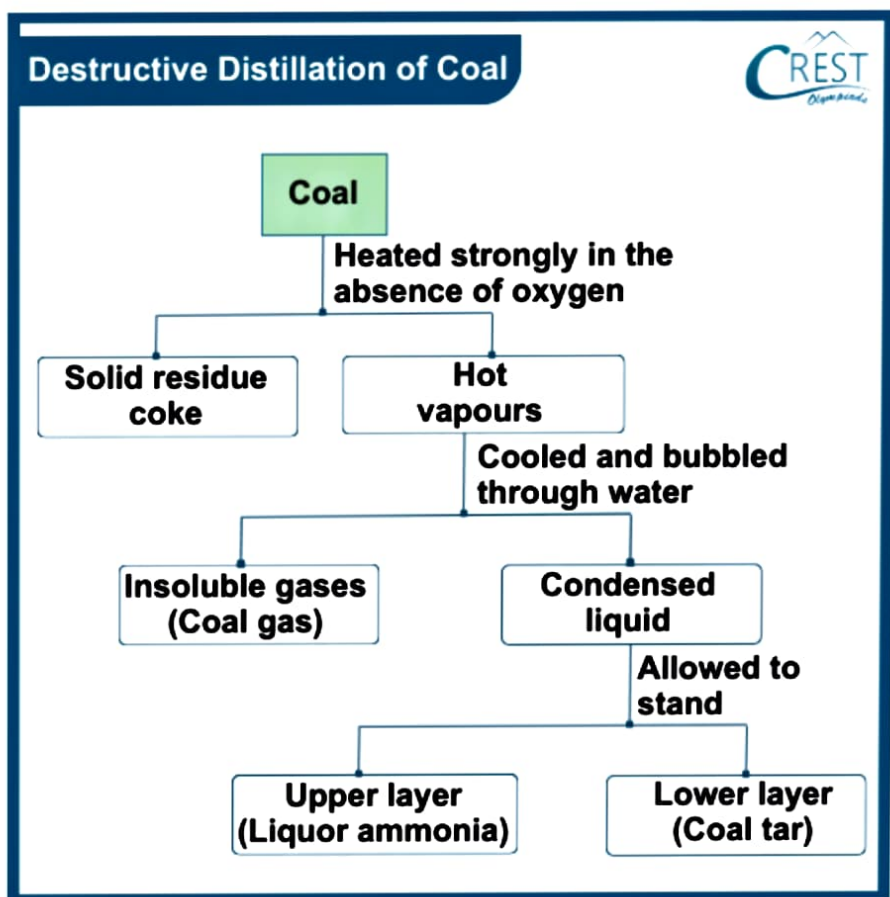


2. Coal Tar

- a) Coal tar is a thick, black liquid with a strong and unpleasant smell.
- b) We obtain coal tar through fractional distillation of coal tar, which means we separate it into different components based on their boiling points.
- c) Coal tar is valuable because it serves as a starting material for making various products, including medicines, explosives, naphthalene balls, and more.

3. Coal Gas

- a) Coal gas is a mixture of gases, including hydrogen, carbon monoxide, methane, and others.
- b) It is a fuel with a high calorific value, which means it releases a lot of heat when burned.
- c) In the past, coal gas was widely used for street lighting, but now it is primarily used as a source of heat in industries.



Uses of Natural Gas

1. Cooking: Natural gas is used in many homes for cooking. It provides a clean and efficient flame to cook our food quickly and easily.

2. Heating: It's also used for heating homes and buildings during colder months. Natural gas furnaces and heaters keep us warm and cosy.

3. Electricity: Natural gas plays a big role in generating electricity. It's used in power plants to produce electricity that lights up our homes and powers our electronic devices.

4. Transportation: Some vehicles, like buses and trucks, use natural gas as fuel. It's considered a cleaner alternative to gasoline and diesel, as it produces fewer harmful emissions.

5. Industry: Many industries use natural gas as a source of energy for their operations. It helps power machines and equipment used in manufacturing and production.

In conclusion, natural gas is a versatile and valuable resource that powers our homes, industries, and transportation. It's essential to use it wisely and look for ways to balance our energy needs with environmental conservation for a better and greener future.