

C1 Topics 3 and 4: Acids & Obtaining and Using Metals

Acids and Neutralisation

A base is a compound that can neutralise an acid.

Acid + base = salt + water

E.g. Hydrochloric acid + calcium carbonate = calcium chloride + water

Nitric acid + sodium carbonate = sodium nitrate + water

Sulphuric acid + calcium oxide = calcium sulphate + water

A specific example of this is antacids. We have hydrochloric acid in our stomachs naturally, but an excess of this can cause indigestion. An antacid is an indigestion remedy with a base to neutralise excess stomach acid.

Chemical Testing and Uses of Gases

Lighted splint + hydrogen gas = squeaky pop

Glowing splint + oxygen = relights

Litmus paper + chlorine gas = bleached

We use oxygen for breathing and combustion. We use hydrogen for ammonia, cryogenics and balloons. We use chlorine for bleach and disinfectant.

Reactivity Series and Extraction

Most metals are found in compounds with oxygen. They need to be extracted so they can be used.

POTASSIUM

SODIUM

CALCIUM

MAGNESIUM

ALUMINIUM

(CARBON GOES HERE)

ZINC

IRON

TIN

LEAD

COPPER

SILVER

GOLD

PLATINUM

Potassium- aluminium are extracted by electrolysis.

Zinc-copper are extracted by heating with carbon.

Silver, gold and platinum are extracted by various chemical reactions, or sometimes just found alone.