Physical properties of Chlorine
- it is \textbf{Group VII}          - is a \textbf{non-metal}          - it is poor conductor
- it is \textbf{gas state}        - the melting and boiling points is often low
- it is a \textbf{yellow-green gas} that has its distinctive strong smell, the smell of bleach

Chemical properties of Chlorine
- it belongs to \textbf{Group VII ~ halogens}
- it react with metals to form compounds called salt
- reacts with most \textbf{organic compounds}, and will even sluggishly support the combustion of hydrocarbon.

Isotopes of Chlorine
Chlorine has a wide range of isotopes. The two stable isotopes are $^{35}\text{Cl}$ (75.77\%) and $^{37}\text{Cl}$ (24.23\%). Together they give chlorine an atomic weight of 35.4527 g/mol.
Use Chlorine in our daily life

Laboratory method
-Small amounts of chlorine gas can be made in the laboratory by combining hydrochloric acid and manganese dioxide.

Production of industrial and consumer products
-can produce a wide range of industrial and consumer products
-used in making plastics, solvents for dry cleaning and metal degreasing
-textiles, agrochemicals(農藥) and pharmaceuticals(藥物), insecticides dyestuffs

-household cleaning products e.g bleach.

Use in swimming pool
-used (in the form of hypochorous acid) to kill bacteria and other microbes in drinking water supplies and public swimming pools.
-sodium hypochlorite* formed from chlorine and sodium hydroxide, or solid tablets of chlorinated isocyanurates, in most private swimming.

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