

Haloalkanes



The key areas of study in this topic are:

- Substitution reactions of haloalkanes
- Environmental concerns from use of organohalogen compounds

By the end of this topic I should be able to:

	Start	End
Describe and write equations for the hydrolysis of haloalkanes in a substitution reaction: <ul style="list-style-type: none"> • by aqueous alkali • by water in the presence of AgNO_3 and ethanol to compare experimentally the rates of hydrolysis of different carbon-halogen bonds 		
Define and use the term nucleophile (an electron pair donor)		
Draw the mechanism of nucleophilic substitution in the hydrolysis of primary haloalkanes with aqueous alkali		
Explain the trend in the rates of hydrolysis of primary haloalkanes in terms of the bond enthalpies of carbon-halogen bonds (C-F, C-Cl, C-Br and C-I)		
Describe the production of halogen radicals by the action of ultraviolet (UV) radiation on CFCs in the upper atmosphere and the resulting catalysed breakdown of the Earth's protective ozone layer, including equations to represent: <ul style="list-style-type: none"> • the production of halogen radicals • the catalysed breakdown of ozone by $\text{Cl}\cdot$ and other radicals e.g. $\cdot\text{NO}$ 		

In all topic areas you should be able to demonstrate and apply your knowledge and understanding.

