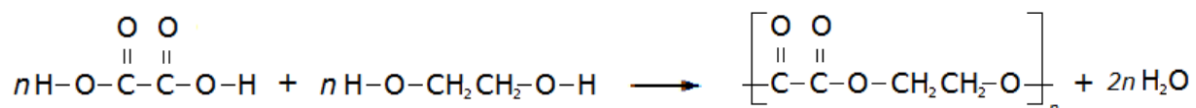


## IGCSE Chemistry (9-1) Specification 4(h)

### (h) Synthetic polymers

**Students should:**

- 4.44** know that an addition polymer is formed by joining up many small molecules called monomers
- 4.45** understand how to draw the repeat unit of an addition polymer, including poly(ethene), poly(propene), poly(chloroethene) and (poly)tetrafluoroethene
- 4.46** understand how to deduce the structure of a monomer from the repeat unit of an addition polymer and vice versa
- 4.47** explain problems in the disposal of addition polymers, including:  
 their inertness and inability to biodegrade  
 the production of toxic gases when they are burned.
- 4.48C** know that condensation polymerisation, in which a dicarboxylic acid reacts with a diol, produces a polyester and water
- 4.49C** understand how to write the structural and displayed formula of a polyester, showing the repeat unit, given the formulae of the monomers from which it is formed including the reaction of ethanedioic acid and ethanediol:



- 4.50C** know that some polyesters, known as biopolyesters, are biodegradable