OCR (B) Chemistry A-Level

PL6 - Polymers

Flashcards

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What are the differences between condensation and addition polymerisation?

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What are the differences between condensation and addition polymerisation?

Condensation polymerisation	Addition polymerisation
Monomers must have two different functional groups.	Monomers can be the same, as long as they have a double bond.
Two monomers react, forming a bond between them and releasing a small molecule, usually water.	The π bond breaks and each electron goes to forming a σ bond with the adjacent monomer.
Can have by-products, usually water or HCl.	No by-products; atom economy is 100%.

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What is the relationship between the structural formula of a condensation polymer and that of its monomer(s)?

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What is the relationship between the structural formula of a condensation polymer and that of its monomer(s)?

- A water molecule is released in esterification for every ester link formed.
- A single repeat unit will have lost the equivalent of 2 water molecules and hence the difference in structural formula between two monomers and a repeat unit is 2 x H_2O.

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