35 Condensation polymerisation – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

Write each word three times. 把每个单词抄写三遍。

English	中文	Write it 3 times (English)
condensation polymerisation	缩合聚合	
polyester	聚酯	
polyamide	聚酰胺	

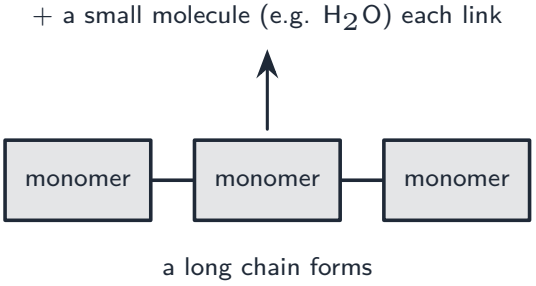
Recall

In **condensation polymerisation** 缩合聚合, monomers join into a chain *and* a small molecule (like water) is lost each time a bond forms.

New ideas

Read these first, then do the Practice.

■ 1 The idea



Each monomer needs *two* reactive groups, so the chain can grow at both ends. A small molecule leaves at every new bond.

■ 2 Two kinds of link

- a **polyester** 聚酯 has many ester links (−COO−);
- a **polyamide** 聚酰胺 has many amide links (−CONH−).

Watch out: condensation means the monomers join *and* a small molecule is lost (unlike addition, where nothing else forms). Each monomer needs *two* reactive groups so the chain can grow at both ends.

Practice

Try these in order.

35.1 What is lost each time a bond forms in *condensation polymerisation*? [1]

35.2 How many reactive groups does each monomer need? [1]

35.3 What kind of link does a *polyester* have? [1]

35.4 What kind of link does a *polyamide* have? [1]

35.5 Give one small molecule that might be lost. [1]

35.6 Challenge. Explain the key difference between *addition* and *condensation* polymerisation. [2]