

6 Plants produce a variety of material useful to humans, such as starch, cellulose and fibres.

(a) Starch can be used to form packaging.

Explain why it may be better to make packaging from starch rather than from oil-based products.

(2)

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(b) The table below gives three statements about starch and cellulose.

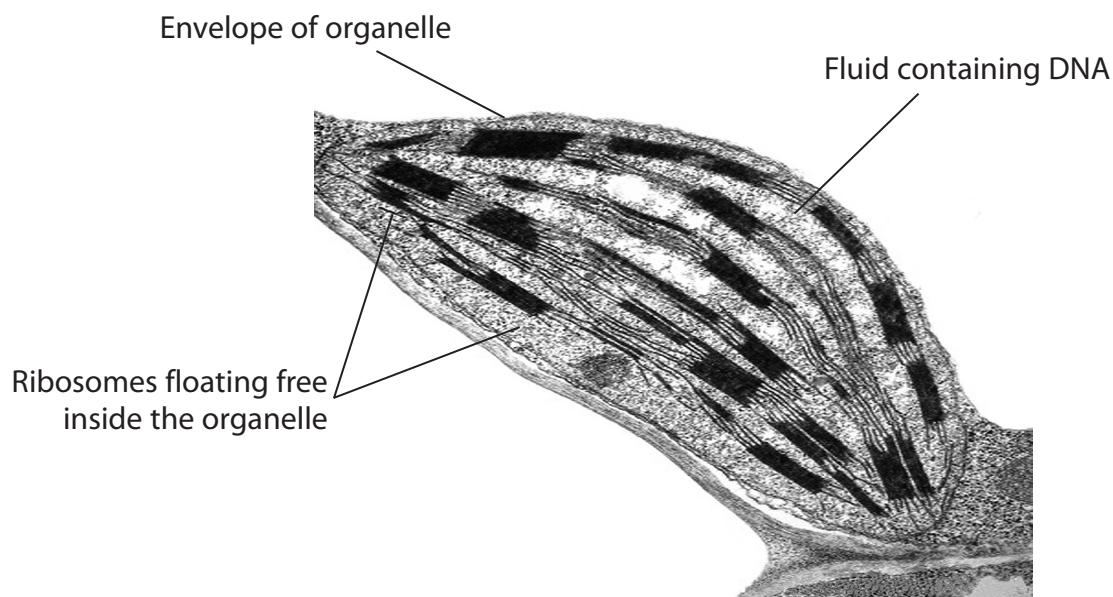
Complete the table by placing a tick (✓) in the box, if the statement is correct, and if the statement is incorrect, place a cross (✗) in the appropriate box.

(3)

Statement	Starch	Cellulose
Consists of microfibrils held together by hydrogen bonds		
Found in amyloplasts		
Made up of β -glucose monomers		



- (c) The organelle, shown in the electron microscope image below, contains the monomers of starch.



Magnification x10 000

Dr. Jeremy Burgess / Science Photo Library

A student incorrectly identified this organelle as rough endoplasmic reticulum because it had ribosomes inside it.

- (i) Name this organelle.

(1)

- (ii) Using the labels on the diagram and your own knowledge, give **two** reasons why it is **not** rough endoplasmic reticulum.

(2)

Reason 1

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Reason 2

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- (d) The stem of a plant contains xylem vessels and sclerenchyma fibres.
Compare the functions of xylem vessels with the functions of sclerenchyma fibres.

(3)

(Total for Question 6 = 11 marks)

