

Activity 7.3

A model of absorption

Skills

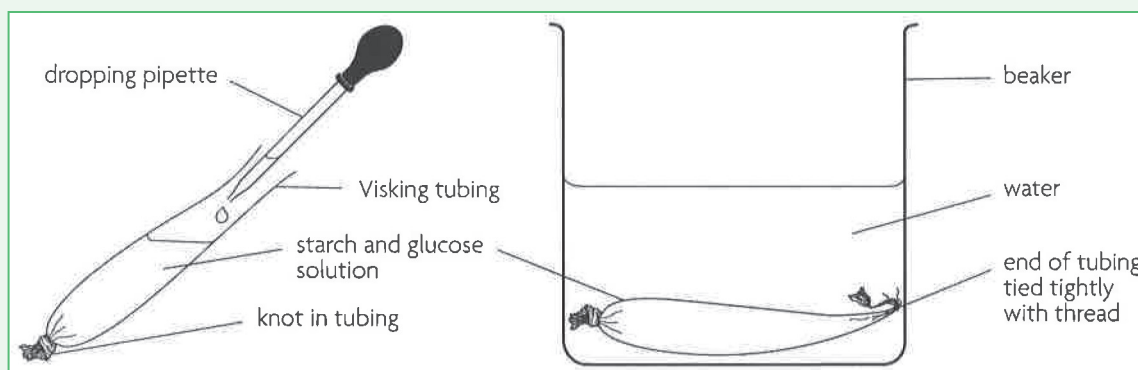
A03.1 Using techniques, apparatus and materials

A03.3 Observing, measuring and recording

When food has been broken down into small molecules in the alimentary canal, the small molecules are absorbed into the blood through the walls of the small intestine.

In this experiment, you are going to use some Visking tubing to represent the walls of the alimentary canal.

- 1 Collect a piece of Visking tubing. Wet it and then rub it between your fingers until you can open it out. Carefully tie a knot in one end.
- 2 Using a dropping pipette, almost fill the tubing with a starch and glucose solution.
- 3 Tie cotton tightly around the top of the tubing.
- 4 Gently rinse the tubing, to remove any starch or glucose that may have got onto the outside of it.
- 5 Put the tubing into a beaker. Add just enough water to cover it. Leave your apparatus for about 20 minutes.



- 6 Take a sample of the water outside the tubing, and test it for starch. Copy the table below and write in your result and conclusion.
- 7 Take a second sample of the water outside the tubing, and test it for reducing sugar. Record your result and conclusion as before.
- 8 Repeat steps 6 and 7, this time testing the liquid inside the tubing.

	Starch test		Reducing sugar test	
	Result	Conclusion	Result	Conclusion
Liquid in the beaker				
Liquid in the tubing				

Questions

- A1 In this experiment, which part of your apparatus represented:
- a the wall of the alimentary canal?
 - b the contents of the alimentary canal?
 - c the blood?
- A2
- a Was starch able to move through the Visking tubing?
 - b Was glucose able to move through the Visking tubing?
 - c Suggest a reason for these results.
- A3 Name the process by which substances moved through the Visking tubing.
- A4 Explain how your results demonstrate the need for starch to be digested before it can enter your blood from your digestive system.