

Edexcel Biology

International A-level

CP 08 - Tensile strength of plant fibres

Flashcards



What is tensile strength?



What is tensile strength?

The maximum stretching force that can be applied to a tissue before it breaks.



What fibres are found in plants?



What fibres are found in plants?

Vascular tissues (xylem and phloem),
sclerenchyma fibres (lignified support
tissues)



Outline the procedure to test the tensile strength of plant fibres.



Outline the procedure to test the tensile strength of plant fibres.

1. Use forceps to separate the fibres.
2. Cut fibres into equal lengths with equal diameters.
3. Hold the fibre rigid using 2 clamps
4. Add weights to the fibre, 10g at a time until the fibre breaks. Record the mass added before the fibre broke.
5. Repeat steps 3-4 and take a mean of the mass.



What are the controlled variables of this practical?



What are the controlled variables of this practical?

Number of fibrous strings tested per plant

Diameter/length of fibrous strings



What is the tensile strength of fibres determined by?



What is the tensile strength of fibres determined by?

The chemical composition of the plant
eg. cellulose and lignin content.

