

Edexcel Biology IGCSE

3.5: Germination

Practical notes

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Germination

Aim

Investigate the conditions - water, oxygen, warm temperature - needed for seed germination.

Subtitle 2

- 4 boiling tubes
- Cress seeds
- Cotton wool
- Incubator
- Fridge

Method

1. Set up 4 boiling tubes as per the instructions below:
 - A: dry cotton wool
 - B: moist cotton wool
 - C: boiled and cooled water with a layer of oil on top
 - D: moist cotton wool
2. Place 10 cress seeds in each boiling tube.
3. Place A, B, and C in an incubator, and place D in a fridge.
4. Leave for a week to allow the seeds to germinate.
5. Count the number of seeds in each boiling tube that have germinated. Record in a table as seen below and compare results.

Controlled variables

- Species of seeds
- Number of seeds
- Time left for germination

Test tube	Factor missing	Number of seeds germinated
A	Lack of water	
B	Control (all factors present)	
C	Oxygen	
D	Warm temperature	

