

AS and A-level Biology practicals: Equipment set up

Practical 8: Investigation into the effect of a named factor on the rate of dehydrogenase activity in extracts of chloroplasts

Starting equipment

All items should be kept cold and removed from the fridge as required.



Muslin in beaker



Muslin in beaker

- A small beaker is placed in a larger beaker containing ice.
- A square of muslin can be folded to give three layers or three separate small pieces can be used.
- Wet the muslin with cold isolation medium.

Blending the spinach



Blending the spinach

- A hand blender can be used to blend the spinach in a beaker or the cold mixture can be poured into a blender.
- If these are not available a large pestle and mortar (cold) can be used to grind the spinach.

Filtering the chloroplast suspension

A dark green filtrate should be obtained which must be kept cold.



Chloroplast suspension

The suspension can be kept on ice in a small beaker until it is required.



Tubes in ice



Tubes in ice

- The tubes are prepared and put into ice in a beaker.
- A glass beaker is essential and the light should be adjusted so it shines directly on the tubes, ideally through the side of the beaker.
- Use a bright lamp, not a low energy bulb.

Tubes being illuminated by light

Ice water in the beaker should prevent any temperature rise during the experiment.



Example colour changes

