INVESTIGATING THE LIGHT DEPENDENT REACTIONIN PHOTOSYNTHESIS AIM: The aim for this practical is to find out if hydrogen ions are made faster in the presence of light (light dependent reaction), or without light (light independent reaction). For this experiment I hypothesise that the tube that has light would lighter, because more hydrogen ions are faster, this is due to water splitting by photolysis. The hydrogen ions join onto NADP, which makes reduced NADPH.

## **EQUIPMENT:**

- Measuring Cylinder
- Pipette filler
- Stopwatch
- Test tubes (x2)
- Pester mortar
- Lamp
- Foil
- Test tube rack
- Waterproof pen

## **PRODUCTS**:

DCPIP – (2,6- dichlorophenol-indophenol), is a blue liquid the Laxidised (at pH 7.0), which, acts as an electron acceptor (NADP) and become coorders when reduced (reduced NADPH).
Isolation medium
Spinach
PROCEDURE/ METHOD

1. Take some spinach and cut them up into small pieces, however, get rid of the vein of the leaf. Put them into the pester mortar.

2. Measure out 20cm<sup>3</sup> of isolation medium, using your measuring cylinder. Pour the measured out isolation medium into the pester mortar which already contains the cut up pieces of spinach.

3. Gring vigorously and rapidly. It helps grinding the spinach in a circular motion to make sure that all the solution remains in the pester mortar and not escapes.

4. After grinding the solution, use a pipette filler, and suction 2ml of the solution (spinach and isolation medium) placing it directly into each test tube.

5. Using 5ml of DCPIP put it into the solution.