



Providing Excellence in Science Education

IPC Irwin Charles Law Refilling User Instructions

Part Number L1018RF



CONTENTS OF THE KIT:

- 1 x Bottle of Biodegradable Oil.
- 1 x 1ml Syringe.
- 1 x 0.8 x 120mm Hypodermic Needle.

FILLING THE CAPILLARY TUBE:

1. Carefully remove the needle from its case, keep the case for storage when the needle is not in use.
2. Fit the hypodermic needle to the syringe, **PLEASE NOTE THE FOLLOWING: -**
 - Please use extreme care when handling needles.
 - These needles are for non-medical purposes and can be reused.
 - Ensure the needle is stored safely making sure no accidental needle stick injuries can occur when storing or retrieving it for future use.
 - Make sure the needle is not accessible to unauthorised personal or students.
 - When disposing of the needle, please conform to all guidelines for the disposal of hypodermic syringes in a properly marked bin.
3. Remove the top from the bottle of oil and draw a small amount of oil into the syringe. **Please note:-** the oil is olive oil and can be disposed of by pouring it down the sink with a little washing-up liquid.
4. Run the syringe with the oil in it under a hot tap or place in a beaker of warm water to increase the fluidity of the oil.
5. Carefully, place the needle into the capillary tube and slowly press the plunger to express the oil into the tube.
6. The bead of oil should be approximately 1cm in length and positioned as shown in the image above.

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ADDITION INFORMATION:

Should the bead of oil become separated into two or more beads through shaking, it means that a gap of air has been allowed to divide the bead. This can be overcome by removing the capillary tube from the holder and placing it into a beaker filled with warm water. Allow the capillary tube to lean at an angle simply by resting it on the side of the beaker.

The heat reduces the viscosity of the oil and allows the air to escape; this normally takes between 10 to 20 minutes depending on the temperature of the water.

NOTE: Do not use boiling water as this reduces the viscosity too much and the bead will disintegrate.

Please Note: This Equipment is for Education, Training, or research Purposes Only.

Thank you for choosing this IPC Irwin product, which has specifically been designed for education and we know it will bring you good service long into the future. This is just one product of a wide range of UK designed and manufactured products to enhance a STEM education. Please see www.ipcirwin.com website for more details on the products and service we provide to support teaching and learning in science and technology.

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