

**Instruction Description:**

To use Hellma cells. These cells are expensive and fragile - we therefore ask you to be careful with them and return them to us clean ready for the next user. Cells are issued by the instrument scientists and a log book is kept. Failure to follow this protocol not only impacts on your fellow experimenters on Quokka but will also influence our decision as whether cells will be made available to you for any future experiments.

**INSTRUCTIONS**

**1. Safety Precautions**

Do not put a sample in a Hellma cell if you are not certain you will be able to completely remove the sample and clean the cell. We have demountable cells that can be more easily cleaned and are suitable for both liquids and gels/pastes.

Cells must be cleaned as soon as possible after use.

The internal and external cell surfaces scratch easily – do not use metal (e.g. syringe needles) or any abrasives.

Samples must be cleared by Health Physics before removal from B82. Samples may be decanted into a sample container before clearance.

Cell loading and cleaning should be performed in the lab on your workspace (ensure you have a worksheet on the area). Wear gloves when cleaning.

**2. Cell Loading Instructions**

2.1 Request cells from the instrument scientist. The cells you are issued will be logged.

2.2 Load cells using gel tip/syringe/plastic pipette.

2.3 Ensure the container holding the cells is labelled with sample labels.

**3. Cell Cleaning Instructions**

3.1 Remove your sample from the cell using a gel tip or a syringe. Do not use a metal needle. Collect your sample in a container for clearance, labelled with sample labels. Wear appropriate PPE for your sample and use the fume cupboard if necessary.

3.2 Rinse the cell twice using a syringe/gel tip/plastic pipette (no metal needles) with a solvent appropriate to your sample. Collect the waste in a labelled waste container or in your sample container if you intend for your sample to be disposed of.

3.3 Rinse the cell three times with deionised water and collect the waste in a labelled container.

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- 3.4 Don gloves if not already wearing. Fill the cell with 1% Hellmanex solution and leave for 30 minutes, ensuring the cell is kept upright and on absorbent material.
- 3.5 Use a syringe/plastic pipette to remove the solution to a labelled waste container. Do not mix waste with any other waste unless you know it is compatible with Hellmanex II solution.
- 3.6 Check if cell is clean. If not, repeat steps 3.4 and 3.5, leaving for 1 hour.
- 3.7 Rinse the cell 5 times with deionised water. Place waste in the Hellmanex solution waste container.
- 3.8 Place cells in a petri dish or beaker and place in the oven. Beware of hot surfaces.
- 3.9 Return cells to an instrument scientist. Contact the laboratory manager to dispose of waste. If taking samples out of the building, ensure you have a clearance certificate.

**END OF USER INSTRUCTION**

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