Demountable IR cell holders – types 6500 and 6500C

Description

The 6500 and 6500C cell holders fulfill most of the requirements usually met by precision amalgam cells, whilst offering the advantages of being demountable. They are sufficiently tight to contain fairly volatile solvents, but can also be used with liquids that are too viscous to be cleaned from amalgam cells.

They can be used without a spacer to run either unsupported films, capillary films or solid materials that can be melted between windows.

Interchangeable spacers enable a variety of cell thicknesses, nominally from 0.015mm to 1.0mm.

The cells are filled via two Luer lock ports using a standard syringe. PTFE plugs are provided to seal the ports.

Handling

Back and front plates

The stainless steel plates should be cleaned and dried before use.

Spacers

Clean the spacers by rinsing them in alcohol or chloroform. Allow them to dry by evaporation or by placing them between layers of tissue or paper towels. Handle them carefully – they can be easily stretched or torn. The thinner they are, the more susceptible they are to damage.

Windows – are not included. You will need one each non-drilled and drilled 38 x 19 x 4 mm window. Click here to view our range of windows.

Do not allow windows made of water soluble materials such as KBr, KCl or NaCl to come into contact with water. Similarly, avoid humid conditions as far as possible. Don't use CaF2 windows with solutions containing ammonium salts. In general, windows should be handled with dry hands, rubber gloves, finger cots or forceps. Always grip the windows by the edges – never on the face.

Assembly

Assemble the cell as described and as illustrated in Figure 1:

1. Lay the back plate on a flat surface.
2. Place the neoprene gasket on the back plate followed by an undrilled window.
3. Place the appropriate spacer for the required cell thickness on the undrilled window
4. Add the drilled window.
5. Add the PTFE gasket and then the front plate.
6. Ensure the holes in the drilled window, PTFE gasket and front plate are aligned.
7. When fastening the knurled thumb screws, be sure to tighten them evenly, one after another and in small increments as shown in Figure 2. Continue doing this until they're just tight enough to prevent the cell leaking. Avoid overtightening or tightening them unevenly as this may cause the window to break.

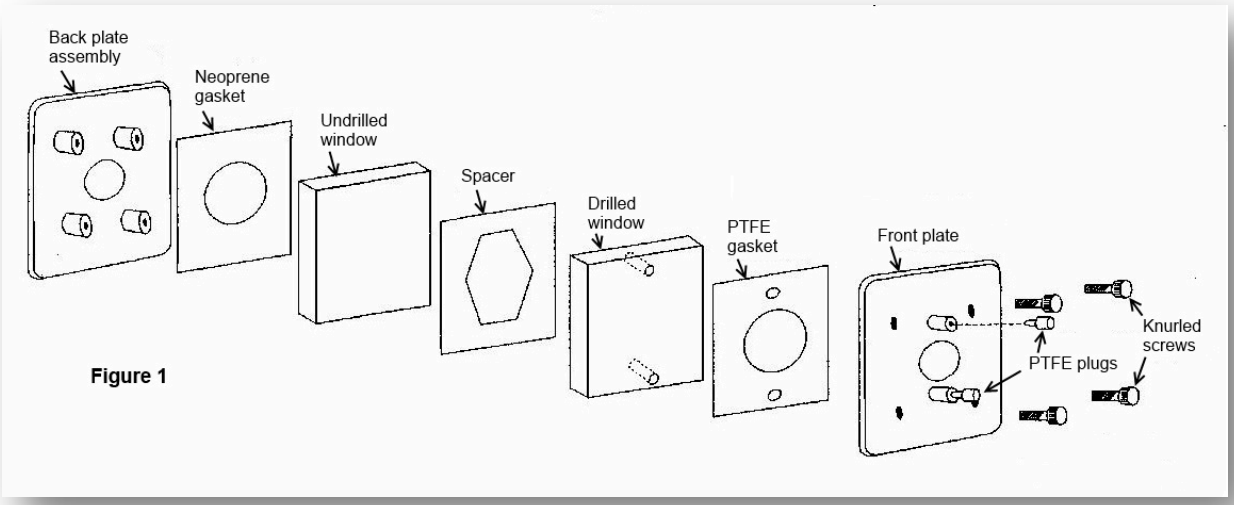

Figure 1

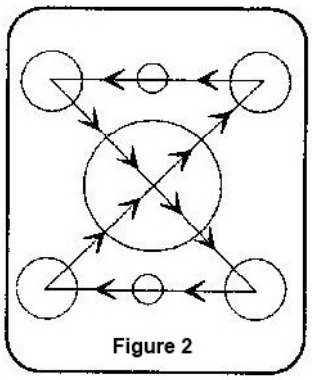

Figure 2

Filling the cell

1. Remove the PTFE plugs from the Luer ports on the front plate.
2. Tilt the cell to approximately 45° so that air bubbles can escape easily.
3. Using very light pressure, inject the sample into the lower port with a hypodermic syringe.

CAUTION: Do not force the sample into the cell. If cells thinner than 0.10mm are used, it's suggested that the syringe with the sample be placed in the lower port and, at the same time, an empty syringe be placed in the upper one. Then, draw the sample into the cell by applying a vacuum with the empty syringe.

4. Replace the PTFE stoppers in the ports. The cell is now ready for analysis.

Cleaning and storing the cell

Dismantle the cell and clean each part – with the exception of the windows – individually with an appropriate solvent. A final cleaning with chloroform or anhydrous isopropanol is suggested. Store the cell in a sealed container with a drying agent or desiccant.

Windows should be stored in accordance with their properties – hygroscopic materials must be kept in a completely dry atmosphere.