

Filling up with liquid nitrogen

Written October 2001

It is very important the X-ray dewars are not left to run dry. There is an alarm that goes off and you have a few hours then to fill the dewars.

To be on the safe side, it is best to fill them every Monday, Wednesday and Friday.

To Fill

Use the 2litre container to decant liquid nitrogen from the 10litre dewar. Remove the detector from the top of the dewar and carefully pour in the liquid nitrogen. When filling the 1200EX dewar cover the digital camera and monitor with the tea towels provided.

It will take between 2 and 3 dewar re-fills to fill the X-ray dewar.

Wipe the frost from the detector cover before you replace it in the X-ray dewar.

When filling the 5600LV dewar you can stand on the floor, the 1200EX dewar you will have to stand on a stable chair, and for the 6330F and the 2010 there are little step ladders provided. Be careful when climbing on the steps and chair – it is easy to lose your balance.

Holidays

If there is no one available to fill the dewars over bank holidays, Christmas and Easter please shut down the X-ray analysis and warm up the dewars. To do this, go into Link ISIS software and at the front page go to the dewar icon. Go to Detector and click on Dewar Warm Up. This will allow the X-ray detector to go into a protected state.

To reverse this after the holiday, click on Detector Cool Down. This will take one hour and 15 minutes to cool down. Ten minutes after you start this procedure you will have to fill the dewar with liquid nitrogen.

The 50litre dewar needs to be filled from the nitrogen store – see Adrian Stevenson for training. Then the 10litre dewar must be kept filled as this is used up rapidly if the TEM's are in constant use (for filling the ACD).

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