

# School of Chemistry SOP For Filling 25L Liquid Nitrogen Belly Dewars

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## SOP for the filling of 25L liquid nitrogen belly dewars from 250L liquid nitrogen vessels in S0.88:

*Please note: Only researchers trained by Stores personnel may fill 25L belly dewars.  
This task must be done in pairs.*

- Wheel the belly dewar beside the 250L vessel. Please close the door to enable the emergency extraction system to function properly in the event of an emergency.
- Ensure you are wearing a lab coat, face shield and thermally insulating gloves.
- Remove the cap from the belly dewar.
- Carefully insert the transfer line from the 250L vessel into the belly dewar.
- **Slowly** turn the tap labelled “LIQUID FILL/DECANT” with the transfer line attached (see photograph below). Allow sufficient time for the N<sub>2</sub> vapour to cool the pipe and belly dewar before liquid N<sub>2</sub> begins to flow. Ignoring this can lead to excessive N<sub>2</sub> vapour generated by immediate contact between liquid N<sub>2</sub> and the warm pipe/dewar, and will trigger the O<sub>2</sub> depletion alarm.
- **Do not, under any circumstances, cover or obstruct the O<sub>2</sub> depletion alarm!**
- Fill the belly dewar to approximately 90%.
- Close the tap labelled “LIQUID FILL/DECANT” firmly.
- Carefully remove the transfer line from the belly dewar and rest it against the 250L vessel.
- Place the cap back on the belly dewar.
- Inform a Stores Officer you are finished.

