

How to transfer liquid Nitrogen

This gives a brief description for N₂ transfers. If you observe a deviation from this description, contact an instrument or lab responsible person.

- Open the N₂ filling ports on the cryostat. Wear gloves because there could be overpressure.
- Check the N₂ vessel. Moving it a bit will tell if it is full or empty – just feel the mass of the liquid. Make sure that the filling line is tightly connected on the vessel (M24 key). Check the overpressure on the N₂ vessel. A pressure of 0.5 Bar is perfect.
- Insert the end of the filling line into one filling port of the cryostat. Tighten the connection.
- Open the filling valve on the vessel. You should now see cold gas coming from the other open slot, you may also hear a sound from the backstream valve. That should stop after a minute or less.
- Observe the filling procedure in a distance. Cold gas will come out of the open port. Do not leave the room. If the pressure on the vessel drops a lot, there is a valve on the vessel to increase the pressure. Use it with care.
- When completely full, liquid will come out of the open port. Close the filling valve immediately. If the pressure regulation valve on the vessel is open, close it. After that, there may still be liquid coming out of the open port for a minute. Wait for that to stop.
- Use a fan to heat up the (likely) frozen port with the filling line. Wear gloves. Remove the filling line when it is unfrozen. Wear gloves, because parts of the filling line may still be cold.
- Close both filling lines with the safety valve plugs. Use the fan if needed. Do not overheat the surrounding. Make sure that everything is warm and tight.

Make sure that the N₂ can pressure valve is closed and put it to the storage place.