**Checklist, gas cylinders**

Read through "User instructions for the handling of gases and gas cylinders", which can be found on the university's intranet.

Acquire information about the gas from the supplier's information sheet. This contains information about the physical and chemical properties of the gas, information on the risk of fire or explosion, health risks, special properties and general instructions and material recommendations.

Utilise the existing central gas system (LPG, hydrogen, helium, argon, carbon dioxide, oxygen and nitrogen) as far as possible. If this does not meet your gas requirement, loose gas cylinders may be ordered and collected from the ChemStore.

Be restrictive when assessing your need for gas. If a gas cylinder is utilised, use as small a cylinder as possible.

Secure the gas cylinder in the prescribed manner in an appropriate place next to the location where it will be used. If you are working with flammable gases, it is necessary to establish how great a safety zone is to be applied between the opening of the outlet point and non-explosion-proof electrical equipment. See general classification plans on the university's intranet in the document "Information documentation, handling of flammable products", or any specific classification plan compiled for the fixed installation at the lab.

Put up the prescribed warning signs indicating that gas cylinders are stored in the room. Signs are available to purchase from the ChemStore. Remember to remove the sign when the gas cylinder is moved to the gas store.

Check that the equipment (pressure regulators, couplings, pipes, valves, hoses, etc.) connected is made of such materials and to such standards that it is compliant with the manufacturer's material recommendations and is approved by the manufacturer to be subjected to the overpressure required. Incorrect installation may help to impair the quality of the gas and could make the installation lethal.

Check that there are functioning safety valves to protect you and your equipment from excessively high pressures if any of the pressure regulators fails.

If you have equipment which allows different gases to be mixed in distribution blocks, pressure chambers or suchlike, insert non-return valves in the connecting pipes to prevent the gas mixture passing backwards into the gas system or gas cylinder.

Carry out and document a risk assessment of what could happen if any part of the equipment were to fail or not operate as intended, if gas were to leak out, if the ventilation were to stop, if fire were to break out, etc. A risk assessment form with instructions can be found on the university's intranet. Undertake preventive measures if necessary.

When you have finished using the gas cylinders or after a long interruption, the gas cylinders are returned to a separate approved gas store or the ChemStore.