

Handling of gas bottles

SJA

Name of Unit: Department of Chemistry

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Subtask	What may cause an undesired event	Possible precautions
Transport and storage of bottles	Gas bottles toppling, leading to uncontrolled release of gas.	All gas bottles should be securely fastened to a wall or other immovable objects to avoid toppling. If transported for longer distances, appropriate trolleys should be used
Opening of gas bottles after connecting them	Sudden high pressure could cause connections to fail or explode.	Stand a bit to the side of the connection when opening a bottle. Always take care to ensure leak-free connections before opening.
General use of compressed gas	Release of some gases may be a fire or health hazard.	Always take care to ensure leak-free connections in all parts of a gas system. Always know the hazards of the specific gas you are using Check the possible leakage after changing the reduction valve of the gas bottle.

SOP

General

- 1. General information:** All gases are used for instruments and experiments .
- 2. Specific precautions:** Read SJA and SOP before handling the gases .Gas cylinders should be handled and used only by skilled personnel.
- 3. Operating procedure:** There is a procedure when you withdraw full gas bottle from central store or return the empty bottle to central store. The bottles, both empty and full bottles should be registered and scanned. The empty bottles should return as soon as possible.
 - a) When cylinders are being moved, the regulator valve must be removed (any valve protection should be put on).
 - b) Gas cylinders should be transported only by means of a hand truck made for this purpose. Do not leave the bottle trolley on the ramp when you are picking up gas bottle from the gas bottle room. The ramp slopes slightly towards the yard.
 - c) In the laboratory the cylinder should be secured to a wall, a bench or some other firm support.
 - d) Make yourself familiar with the content in the HMS for the gas you are going to use.
 - f) Make sure that the gas bottle is closed when you remove the reduction valve.
 - g) Every time leak test should be done after replacing the new bottle.