

## Operation Directive

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Position: A2, Lab, R. 1.40.1  
Experiments in Laser Lab

### HAZARDOUS SUBSTANCE

## Bromomethane $\text{CH}_3\text{Br}$

Methyl bromid, colourless gas, smells sweet and like chloroform (in lower concentration inodorous)

### DANGERS FOR HUMANS AND THE ENVIRONMENT



Strong exothermic reactions (ignition and explosion hazard) are expected with alkali or alkaline earth metals, light metals (aluminium) and zinc

Danger



Bromomethane is toxic (contact and inhalation) and it damages the central nervous system. The inhalation of higher concentrations, that don't cause immediate narcosis and apnoea, causes over latency of several hours an oedema of the lungs, often followed by a strong pneumonia after some days. The liquid causes strong inflammation on the skin. In the atmosphere it damages the ozone layer. It is very toxic to aquatic organisms.

### PRECAUTIONARY MEASURES AND RULES OF CONDUCT



During the whole experimental period the gas bottle has to be stored in the ventilated gas bottle storage box; when the pressure regulator has to be connected or changed, a breathing mask with **filter AX** has to be used; the bottle has to be stored cool and locked. In lower concentration the gas is inodorous. Avoid any contact with eyes, skin or clothing. **Gloves** (fluorocarbon) have to be worn (also when transporting N2 trap to the fume hood). The N2 trap has to be stored under a specially labelled fume hood.



The gas and vapors are heavier than air and may accumulate in closed rooms, esp. on the ground floor and lower areas.

### RULES OF CONDUCT IN CASE OF MALFUNCTIONS

**Keep calm!**

In the case of fire: call 0-112 and activate fire alarm; inform responsible persons.

Try to cool container with water (self protection first!), formation of hazardous gases is possible.

**Escape of gas:** leave the area immediately. Use self contained breathing masks to rescue injured people.

**Environmental precautions:** Do not allow to reach sewage system or waters. Contain contaminated water/firefighting water.

### FIRST AID



**After inhalation:** Bring injured people to safe place outside the lab. Call a doctor! Administration of Corticoid-Spray, e.g. Ventolair-, Pulmicort-aerosol. Ventilation with a bag.

**After skin contact:** instantly wash with water and soap! Immediately remove all contaminated clothing! Self protection of first aider! Call a doctor!

**After eye contact:** flush eyes with plenty of water (for approx. 10 minutes), protecting uninjured eye and with eyelids open. Remove contact lenses, if present; continue flushing! Call an eye doctor immediately!

### PROPER DISPOSAL

For the disposal of pressure gases contact chemicals officer.

Gases from the experimental chamber have to be completely collected in a N2 trap. The N2 trap has to be placed in a collecting tray and evaporated in a specially labelled fume hood

Pay attention to the maximum amount of methyl bromide in the exhaust air of 20ml/m<sup>3</sup>

Date: 18.11.15 Signature Division Head:

Prof. Dr. Marc Vrakking  
DIREKTOR