

2024-05-16

Signature:

Operating Instructions

According to the
Betriebsicherheitsverordnung

UNIVERSITÄT
DUISBURG
ESSEN

Offen im Denken

Faculty of Chemistry

Institute: AAC

Work place: AAC Labs

EQUIPMENT

Agilent and Shimadzu GC Systems

DANGERS FOR HUMANS AND ENVIRONMENT



- High temperature in the GC oven, the jet port of the flame ionisation detector (FID) and the transfer line (connected to mass spectrometry).
- The capillary can easily break if it is adjusted or cut.
- Sharp and fast-moving needle of the syringe of the automatic sample feeder.
- High pressure possible in liquid nitrogen tank. Monitor pressure relief valve for proper operation.
- High voltage applied to open cables.
- Gases, such as highly explosive mixtures of hydrogen and large amounts of nitrogen.
- Use of volatile components.

PROTECTIVE MEASURES AND RULES OF CONDUCT



- As long as the system is running, do not touch the FID part, the transmission line or the interface to the GC.
- When handling the capillary, protection such as wearing goggles, gloves and a lab coat is necessary. The splitting stone for cutting capillaries must be held securely because of its sharpness.
- While the autosampler is taking samples from the vials, the needle of the syringe must not be touched under any circumstances.
- While filling, installing or checking the liquid nitrogen tank, protective goggles, cold gloves and a lab coat must be worn.
- It is not allowed to touch electrical lines without disconnecting them from the voltage.
- Check the safety instructions in the safety manual before using gases such as hydrogen, nitrogen or helium.
- Before using chemicals, especially volatile or toxic compounds, check the safety regulations of chemical register systems such as Damaris, or the GESTIS substance database.

RESPONSE TO MALFUNCTIONS



Shut down device immediately, faults must be reported to:

- Constanze Dietrich Tel.: 1834559
- Dr. Sven Meckelmann Tel.: 1833295
- Prof. Dr. Oliver Schmitz Tel.: 1833950

BEHAVIOR IN CASE OF ACCIDENT / FIRST AID



- Keep calm.
- Call first responders.
- Emergency call: 0112
- Report accident.

INSTANDHALTUNG / ENTSORGUNG

- Maintenance only by authorized, competent persons.
- Switch off the device and disconnect it from the mains.
- Regular inspection of wearing parts.