

Laser safety instructions

These instructions are for Lasers in room A264 used by members in the groups of Peter Brzezinski and Pia Ädelroth at the Department of Biochemistry and Biophysics.

Safety instructions regarding Laser are stated in: *AFS 2009:7 Artificial optical radiation*. A copy of the provision is located in group folder and a on copy in Laser room, A264.

Definitions:

Laser	A technical device generating electromagnetic radiation in the wavelength rang 180 nm to 1 mm, generated through controlled stimulated emission.
Laser class	Lasers in room A264 belongs to class 4 ; <i>High power lasers capable of damaging the eye and skin even with indirect exposure, through diffusely reflected radiation. This type of laser can also cause exposed material to ignite.</i> Special instructions for work with class 4 lasers are stated in section 15-18 in AFS 2009:7.
User	Members of Brzezinski/Ädelroth/von Ballmoos groups using Laser in their research
Introduction	New users are introduced and supervised by old user; all users should read and understand instructions and legislation
Students/visitors	User is responsible to inform student/visitors about the danger working with Lasers in room A264 and where safety goggles are placed.

Special instructions for work with class 3B and 4 Lasers, adopted from AFS 2009:7

Section 15

The employer shall specially appoint a person to supervise laser safety at the workplace. That person shall be closely familiar with the manner in which the laser equipment is used and with applicable Provisions.

- Person appointed: Peter Brzezinski

Section 16

The danger area shall be determined with reference to reflections and use of beam collecting optics. It shall be demarcated with warning signs. The danger area may only

be entered by persons needing to be there in order to work with or service the laser or to assist with laser work.

This shall primarily be ensured by enclosure and, as a second recourse, enclosure not being suitable for practical reasons, by surveillance.

- Lasers are located in room A264
- Room is closed and marked with warning sign for Laser radiation
- Only members of Brzezinski/Ädelroh groups have access to the room

Section 17

The laser beam shall be encapsulated or screened off insofar as this is practically possible, having regard to the use of the laser. Indoors, a laser beam shall end with a beam stop of a material suitable for the purpose. This does not apply, however, to lasers in medical applications.

- Laser used for Flow-flash setup have a beam stop on top of the Stopped-flow unit
- Laser used for the Electrical setup have a beam stop in the box encapsulating the setup

Section 18

Laser protective goggles shall be used if there is a risk of an unprotected eye being exposed above MPE, as per Table I or II in Appendix 1. The goggles shall have a high enough optical attenuation at the wavelength concerned to eliminate this risk.

- Goggles are situated on the wall left of the electrical setup