

Office of Occupational Health and Safety, Animal Welfare and Environmental Protection

**University of Würzburg**

# Safety Guidelines

**Lasers**

Last update:

Workplace/activity:

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|  **Safety, health, and environmental risks** |
| W10 | Class 1M and 2M laser products present a hazard of damage to the eye when viewed with optical instruments!Class 3R, 3B, and 4 laser products present a hazard of damage to the eye and injuries to the skin!When hit by a laser beam, some materials can release harmful substances, catch fire, or explode. |
| Safety practices |
|  M01P06 | All personnel must wear appropriate personal protective equipment when entering the laser controlled area while the warning light is on!All laser operators must have been trained in laser safety!When in the laser controlled area, always wear laser eyewear designed for the specific wavelength and power of the laser being used.When laser is not being used, place it on standby or turn it off!Personnel not directly involved in laser use and operation must stay clear of optical devices!Use matte-finish tools and instruments or mask them with black foil to avoid unwanted reflections! Setups with reflective components must be enclosed! Beams must be enclosed as much as is reasonably practicable! Beam paths at table/waist height must be enclosed or, when open, clearly identified! Beam paths at eye level must **always** be enclosed!Optical components must be securely fixed to prevent displacement!If you drop an object, always block the beam path before you pick it up. |
| What to do in the event of malfunction or emergency |
| W08 | **If laser is not functioning correctly, turn it off immediately.**Immediately notify laser safety officer and competent supervisor.All work performed on live equipment or on or near live parts must be performed by trained electricians or service technicians!All work performed on dead equipment or parts must be performed by qualified personnel!**What to do in the event of a fire: Remain calm! Call fire brigade at 112!**Alert others in the affected area! Notify competent supervisor, operate fire alarm!Attempt to extinguish fire with dry powder, C02, or foam extinguisher! Do not put yourself in danger! |
| **What to do after an accident** |
|   | **Call 112 to alert emergency responders.**First aider:     Turn off laser, help injured persons! Report accident to competent supervisor!Make sure persons with eye injuries are promptly taken to an ophthalmologist for treatment. |
| **Maintenance, waste disposal** |
|  | Products incorporating an embedded laser (e.g. laser microscopes) only present a hazard when maintenance work is being performed. Control access to hazard area and activate warning system!All maintenance work must be performed by qualified personnel! Always follow manufacturer’s maintenance instructions! |

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 Date Signature

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| June 2021 |