

Laboratory risk classification

Within the buildings of the Faculty of Science and Engineering (FSE) the risks in laboratories are identified by a classification system visualized by door signs for this specific purpose. The basic design of these door signs represent: the risk level by a colour, a description of risk aspects - including the corresponding hazard symbols - and the names and functions of people who are responsible.

The risk level and its colour are assessed by the criteria in the following table

| | Low risk | Medium risk | High risk |
|----------------|---|---|---|
| Chemical | <ul style="list-style-type: none"> < 25 kg / L dangerous chemicals | <ul style="list-style-type: none"> > 25 kg / L chemicals goods Toxic and Oxidizing chemicals Gas cylinders | <ul style="list-style-type: none"> Relevant amounts of extremely dangerous chemicals Explosive goods |
| Biological | <ul style="list-style-type: none"> Group 1 Biological agents¹⁾. | <ul style="list-style-type: none"> Group 2 and 3 Biological agents¹⁾. ML-I or ML-II GMO activities Animal experimentation rooms (group 1 or 2 infected animals¹⁾.) | <ul style="list-style-type: none"> Group 4 Biological agents¹⁾. ML-III GMO activities Animal experimentation rooms (group 3 infected animals¹⁾.) |
| Physical | <ul style="list-style-type: none"> Low power equipment with little danger for the direct environment | <ul style="list-style-type: none"> NMR laboratories Class 3B Laser labs²⁾. Pressure equipment containing > 100 L*bar High voltage equipment (> 1000 V) | <ul style="list-style-type: none"> High power equipment that, in critical situations, can lead to serious danger for the direct environment. Class 4 laser labs²⁾. |
| Radio activity | | <ul style="list-style-type: none"> Radionuclide laboratories, levels D and C X-ray laboratories | <ul style="list-style-type: none"> Radionuclide laboratories, levels B and A |

1).

Biological hazard group definitions

| | Group 1 | Group 2 | Group 3 | Group 4 |
|---------------------------------------|---------|---------|---------|---------|
| Danger of disease | - | + | + | + |
| Danger of spreading | - | - | + | + |
| No effective prophylaxis or treatment | - | - | - | + |

Group 1 biological agents

Unlikely to cause human disease

Group 2 biological agents

Can cause human disease and may be a hazard to employees; it is unlikely to spread to the community and there is usually effective prophylaxis or treatment available.

Group 3 biological agents

Can cause severe human disease and may be a serious hazard to employees; it may spread to the community, but there is usually effective prophylaxis or treatment available

Group 4 biological agents

Causes severe human disease and is a serious hazard to employees; it is likely to spread to the community and there is usually no effective prophylaxis or treatment available

2).

Laser classification

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| Class 3B | Class 3B is applicable to visible as well as invisible radiation. Direct observation of the beam is always dangerous. Diffuse reflections are normally eye-safe, provided that the eye is no closer than 13 cm from the reflecting surface and the exposure is less than 10 seconds. The maximum power of a class 3B laser is 500 mW. |
| Class 4 | Class 4 lasers are dangerous. Both direct observation of the beam as well as reflected beam is always dangerous and the probability of injury as a result is high. Damage (fire) to the facilities is also a serious hazard. Diffuse reflections can be dangerous and can result in eye and skin injury or the ignition of flammable material. |