University of Regensburg

Institute of Biochemistry, Microbiology and Genetics
Biochemistry III

Safety Guidelines and Instructions for Laboratory Work in Genetic Engineering

According to section 2 Paragraph 12 GenTSV

CONTAINMENT LEVEL 1

Effective in Area: University of Regensburg, Biochemistry III, VKL 50.12A, VKL 50.12B, VKL 50.13, VKL 50.14, VKL 50.20, VKL 50.21, VKL 50.22, VKL 50.23, VKL 50.24, VKL 10.10 A-D, VKL 20.56, VKL 10.11, VKL 10.13

Rooms are labeled with a sign indicating an installation to conduct genetic engineering and biotechnology laboratory work.

Project Supervisor:	**Prof. Dr. Herbert. Tschochner**	**phone:**	**943-2472**
BSO:	Prof. Dr. Gunter Meister	phone:	943-2847

Dangers for Laboratory workers, Population and Environment

Biological material: E. coli K12 (Host)
S. cerevisiae (Donor and host), Haloferax volcanii (Donor and host),
Sulfolobus acidocaldarius (Donor and host)
Baculovirus, SF9 insect cells, HEK293 cells
HeLa-cells, Mouse MB3- cells
SW613S- cells, HCT116- cells
MEF- cells, LS147T- cells
Bacterial vectors and expressions vectors
Nucleic acids isolated from donor
DNA-fragments generated by PCR
shuttle vectors, E. coli, S. cerevisiae, Haloferax volcanii, Sulfolobus acidocaldarius, expression vectors Hela cells

Containment Level 1 is relating to laboratory work in genetic engineering which, according to the current knowledge of science, does not constitute any risk for human health and environment.

Precautions and Safety Instructions

Lab Coats Mandatory

Eating and Drinking prohibited

Smoking prohibited

Personnel performing genetic engineering procedures must be qualified and adequately instructed by the project supervisor. Personnel must be lectured on possible hazards of the respective work place on an annual basis. Participation in such instruction sessions requires written confirmation.

The rules of good microbiological laboratory practice are to be adhered to:

- When work is in progress, laboratory doors and windows must be closed.
- Use personal protective equipment! Wear laboratory coats or gowns, disposable gloves where required, and always protective goggles at the remotest risk for the eyes.
- Eating, drinking, smoking, snuffing, applying of cosmetics and storing of food, drinks and tobacco are absolutely prohibited in the laboratory!
- Mouth pipetting is prohibited! Mechanical pipetting instruments must be used instead.
- Minimize the generation of aerosols.
- Use syringes, cannulas and sharps only if absolutely necessary.
- Personnel wash their hands after finishing work.
- Keep laboratory tidy and clean; only instruments and material actually required in the work process are to be placed on work benches. Keep stocks of regulated material in separate storage rooms or cabinets, if possible.

Laboratory work in genetic engineering is subject to the keeping of appropriate records.

Transport and Waste Disposal

Genetically modified organisms (GMO) have to be transported between genetic engineering installations in break- and leakproof containers only. This concerns also contaminated waste. All microbiological waste must be autoclaved or properly inactivated before disposal. Observe autoclave operating instructions!

Incident Regulations

- Disinfect contaminated work surfaces and instruments (e.g. Pursept FD (1%) or with a solution of 80% ethanol). Remove more substantial spills with cellulose or similar material prior to disinfecting, and autoclave wiping material subsequently.
- Disinfect contaminated clothing or skin with alcoholic disinfectant.
- Rinse eyes and mucous membranes profusely under running water.
- Treat injuries immediately under first aid conditions, if possible (if required, apply disinfectant). See a physician and inform him on the handled biological agents.
- Report all injuries to the laboratory supervisor without delay and, if GMO are involved, to the BSO.
- Observe fire protection rules and evacuation plans; familiarize with these manuals to prevent unnecessary delays in incidents of emergency.

First-Aid: **Elisabeth Silberhorn VKL 10.13 Tel: 1848**
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Emergency call **0-19 222 or 33 33**