

Guidelines for Work With Class 1 Organisms (Genetically Modified *Escherichia coli* and Yeast Laboratory Strains)

(updated by P. Kast, December 13, 2010)

(According to Federal Ordinances ESV 814.912 and SAMV 832.321, both of Aug. 25, 1999)

Specific Biosafety Concept and Instructions

In our laboratories C343, E305, F322, F324, F326, F328, F330, F332, F334, F336, F338, F340, F341 and F343, work will be carried out with non-pathogenic, genetically modified *E. coli* bacteria and yeast laboratory strains (all Class 1 organisms). Any spills or waste must be inactivated by treatment with 70% ethanol or any commercially available disinfecting agent, by soaking in 1% detergent, or by autoclaving (in C343) to minimize release of Class 1 organisms into the environment.

Relevant General and Specific Safety Measures (ESV, Appendix 4)

- a. comply with the installation's biosafety concept and the associated instructions and codes of behavior (see above);
- d. comply with the principles of good microbiological practice as given in Appendix 3 of the Ordinance on Occupational Safety in Biotechnology (SAMV) (see below);
- f. as necessary, test for the presence of viable representatives of the applied organism outside of the primary physical barriers;
- h. have effective disinfectant agents and methods ready for use in case of contamination.

Additional measures for Class 1 organisms:

- i. work on surfaces (benches) resistant to acid, alkali, solvents and disinfectants
- ii. have an autoclave available
- iii. minimize contamination and release into the environment, e.g. by wearing laboratory clothing (gloves are not required)
- iv. harmless disposal of biowaste (e.g. autoclaving, 70% ethanol, soap, etc.)

Principles of Good Microbiological Practice (SAMV, Appendix 3)

- a. keep windows and doors closed while working with microorganisms;
- b. no food in working areas;
- c. wear appropriate laboratory clothing when working with bacteria;
- d. no pipetting by mouth;
- e. minimize the use of injection needles and dispose off properly;
- f. minimize generation of aerosols;
- g. wash hands carefully after completing an experiment or when leaving the lab;
- h. always keep working areas clean and in good order;
- i. check identity of used organisms on a regular basis;
- j. request instruction before starting to work with microorganisms;
- k. instruct coworkers unfamiliar with microorganisms about the safe handling procedures;
- l. control and contain any bug infestations.