LABORATORY INSTRUCTIONS, ROOM 4301		
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	Revised	-
	Maintained by	Laboratory responsible
	Version #.	000

Building	Room number	Name of laboratory	Telephone
Kristine Bonnevies hus, BL18	**4301**	**Lab for studies of "field material"**	
Unit:	**MERG, Department of Biology**		

Key contact details			
Role	Who	Phone	Office
Laboratory responsible	Kathrine Schou Cecilie Mathiesen	228 55196	4210
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Risk assessment summary

Biological Hazard

Due to handling of unknown microorganisms or microorganisms with unknown toxicity this labs are classified as Biosafety level 2 (BSL-2). This is to ensure the health and safety of all users. This means that work performed has to comply with the Norwegian Regulation FOR-1997-12-19-1322(not available in English, but is in accordance with Directive 2000/54/EC). Hence the risk assessment of this laboratory concludes that there is **MEDIUM** risk involved with use of this laboratory. However there are safety measures in place that limit the associated risk. It is very important to follow provided procedures and working guidelines. All user must act cautiously where and when is required.

BSL-2 differs from BSL-1 in that:

1. laboratory personnel have specific training in handling pathogenic agents and are directed by personell with advanced training;
2. access to the laboratory is limited
3. extreme precautions are taken with contaminated sharp items; and
4. all procedures in which infectious aerosols or splashes may be created are conducted in biological safety cabinets.

Activity

- Various materials taken from nature are studied in this laboratory.
- Extraction of microorganisms and cells from organisms or organs should be performed in this laboratory.
- Washing, trying facilities for material taken from nature
- Microorganisms are isolated from various substrates and cultured.
- Microscopy and photography of microorganisms
- Storage of microorganisms.
- Sampling of microorganisms for further investigation be e.g. RNA/DNA/protein analysis.

General rules for all laboratories at the department:

- The HSE handbook applies
- Lab coats and gloves should be used at all times
- Work according to issued SOP including a step-by-step risk assessment.
- If an issued SOP is not present, a risk assessment has to be performed and documented (i.e. lab journal) before work commences.

General rules for all laboratories at MERG:

Preparation before starting work - training and planning:

- All new users must take part in an introduction round arranged by room responsible before getting access.
- Documented training in use of Biological Safety cabinets-Class II and fume hoods is mandatory for all new users.
- All users must be approved before working in this laboratory. (See Appendix 3)
- New chemicals should be approved by lab responsible, who will ensure that the chemical is registered in ECOonline. The chemical has to be risk assessed in ECOonline. The chemical risk appendix 2 must be updated. New procedure including the new chemical must have a step-by-step risk assessment before using the new chemical in the lab.
- Always ensure that new chemicals including solutions are provided with a MSDSs.
- To make the laboratories easily accessible all key equipment has a booking log. Please check the booking log before using an instrument.

When working in the laboratory:

Handling of chemicals:

- All chemicals should be stored in the Media laboratory; except microscopy chemicals, which will be stored in the Microscopy lab. Working solutions in daily use will be stored in the various labs.
- A copy of all MSDS / “Sikkerhetsdatablad” will be present in the labs where the chemical is being used and stored. This also applies to kit MSDS.
- All “homemade” working solutions should have a batch ID. The batch records are kept in the Media or Microscopy laboratory. Solutions should be labelled with Name of solution (e.g. 2X CTAB), Batch ID (Axxx), Data, Expiry date, Initials (who made the solutions).

Working according to the class II classification of the lab:

- To minimise known and unknown health risks associated working with microorganisms please always

work in the Biological Safety cabinets-Class II.

- To prevent cross-contamination between cultures please always work in the Biological Safety cabinets-Class II. Even when working with known, non-hazardous organisms.
- There are provided designated lab coats in each room. Make sure that lab coats are left in the lab before you leave the room.
- Biological Safety cabinets-Class II and Fume hoods should be cleaned IMMEDIATELY after use.
- All spaces are shared between users. Please make sure that the workbenches are free from clutter. The workbenches are not to be used as storage space.
- Preparation of samples for DNA isolation should be performed in fume hoods or Biological Safety cabinets-Class II.
- Label your belonging with name or projects. All labelled items are private.
- Do not move laboratory equipment from or between rooms.
- **Hands MUST be washed in designated sink before leaving the room.**

Risk limitation

- All new protocols must be risk assessed and approved by laboratory responsible before work commences. Special precautions have to be made to prevent contamination and to ensure a safe working environment for people, samples and scientific experiments.
- Risk assessment of laboratory is to be performed annually or if new procedures and chemicals make this necessary. Please see appendix.

Specific room – specific rules: Lab for cultural studies of protists and eukaryotes

- As a precaution to prevent cross contamination working in more than one “cleanroom” per day is prohibited. Cell-Eukaryotic lab, Fungi Lab and Bacteria lab are defined as cleanroom.
- As a precaution to prevent cross contamination from the Environmental-lab. Cell-Eukaryotic lab or Single cell lab in the same day as working the Environmental lab is prohibited.

Health and safety equipment

- Nitrile and latex gloves
- Safety goggles
- Lab coats
- First aid kit
- Eye wash
- MSDS for all chemicals
- Folder with relevant HSE documentation (HSE handbook,SOP’s)
- PigHaz™ mats for chemical absorption
- Shower head is present on main taps.

Waste disposal

Organisms:

- Agar plates should be disposed in Hazardous waste receptacles/boxes for incineration.
- Hazardous waste receptacles/boxes for used tips, tubes etc.
- For adherent cells use VacumSAFE, the medium should be autoclave before disposal.

Material:

- Glass receptacles for broken glass

Chemical:

- Please dispose of your surplus waste in correct container labelled as follows;
  - **Hydrocarbons** (unsubstituted, such as toluene, xylene, benzene, paraffin and cyclohexane):
  - **Halogens** (carbon tetrachloride, chloroform, methylene chloride, trichlorethylene, nitrobenzene, chlorbenzene).
  - **Alcohols, ketones and other water-soluble agents** (acetone, methanol, acetonitrile, dimethyl formamide, dimethyl sulfoxide, dioxane). Waste flasks must be clearly labelled to indicate the department/building and the contents.
- PigHaz™ mats are desposed in hazardous waste receptacle (after vapourisation is complete)

Instruments/equipment overview

Name/type Serial number	Purchased year and supplier	Service agreement Calibration frequency	Responsible
Fume hood, EnergySaver fume hood Serial#: 09362-15459720	2011, Labflex		
Incubator Termaks KB8400 (950W, 230V) Serial#:	? Houm	NA	
Incubator Termaks KB8400 (950W, 230V) Serial#:	?, Houm	NA	
Nikon, Stereoscope, C-LEDS Serial#: 211488	2011, Inter Instrument	NA	
Nikon, Microscope, Eclipse 50i Serial#: 117186	2011, Inter Instrument	NA	
Camera, Idea, for above Serial#: 257534	2011, Inter Instrument	NA	
Frdge/freeze, Electrolux Serial #: 03450092	2010, Elkjøp	NA	
Biological Safety Cabinets Cl. II, ESCO Serial #: 2010-54083	2010, Medinor	Annually, May-2011 Next time May 2012	

Fireboy, Serial#: 101035	2010, Fischer Scientific		
Eppendorf, 1000, Serial# 1854035	VWR	Last calibrated summer 2010, next calibration summer 2012	
Eppendorf, 200, Serial# 1847135	VWR	Last calibrated summer 2010, next calibration summer 2012	
Eppendorf, 100, Serial# 3058503	VWR	Last calibrated summer 2010, next calibration summer 2012	
Eppendorf, 10, Serial# 3017033	VWR	Last calibrated summer 2010, next calibration summer 2012	

Attachments:

1. Risk assessment (1 page)
2. ECOonline chemical overview (4 pages)
3. Approved Users (2 pages)