Handbook

for

Health, Safety and Environment

at

Department of Clinical Science (K2)

**FIRE INSTRUCTIONS / EVACUATION PLAN**

 *1. If you observe fire or smoke*

• Trigger manual fire alarms (will initiate main alarm)

• Inform the Security department (Speakerphone 2222 or phone number 72222)

• Evaluate what is required to warn, extinguish, save and evacuate.

• Commence evacuation via clearly marked exit routes.

• Those responsible for fire evacuation (wearing YELLOW VEST) will delegate tasks according to the situation at hand.

*2. Announcements*

Automatic alarm:

Announcement: *" Et automatisk varsel om brann blir undersøkt. Avvent nærmere beskjed" (English translation: "An automatic fire alarm has been activated and is being investigated. Please await further instructions").*

**Actions:** Fire representatives will investigate if there is smoke development/fire on the floor. If visual confirmation of fire is confirmed the fire alarm will be triggered. All employees await further instructions.

If the danger ceases, the following announcement is given: *"Situasjonen er under kontroll. Vi beklager forstyrrelsen og alle er velkommen inn igjen. " (English translation: "The situation is under control. We apologise for any inconvenience and everyone is allowed back in again").*

Manual alarm:

Announcement: *"Det har brutt ut brann. Forlat bygningen gjennom nærmeste utgang eller*

*nødutgang. Bruk ikke heisen" (English translation: Fire has broken out. Please exit the building through your nearest exit or emergency exit. Do not use the elevators").*

**Actions:** The fire representative on the various floors will delegate tasks according to the situation at hand, and evaluate the efforts required to warn, extinguish, save and evacuate. All employees must ensure that their patients and visitors exit the building via exit routes to the assembly point outside.

On every floor there is an evacuation plan which provides information that each person is duty-bound to read and should familiarize themselves with.

*3. Assembly points*

• Outside the entrance on 8th floor (facing Ulriken). The assembly area is in the car park.

• Outside the 1st floor (facing A&E). Use staircase west down to the 1st floor assembly area.

• CHOOSE THE ASSEMBLY POINT NEAREST TO YOU.

*4. Return to work place after evacuation*

You should only return to your work place after an announcement from the loud speakers or from representatives from the security department. Announcement: "Situasjonen er under kontroll. Vi beklager forstyrrelsen og alle er velkommen inn igjen." (English translation: "The situation is under control. We apologise for any inconvenience and everyone is allowed back in again").

**Welcome as employee at Department of Clinical Science**

Our department has a strong focus on HSE. The reason for this is that we are located in a laboratory building, with close connection to hospital departments and patients. As an employee with us we want you to be happy and feel safe at your work place, but this requires that all of us to take responsibility of familiarizing ourselves with the routines applicable to our work tasks. We all have to conduct a risk assessment when our work tasks require us to do so. Do not hesitate to ask your colleagues for help if you have any questions.

We all have a responsibility to adhere to the HSE-rules – this contributes to a good working environment here at K2.

Best regards

Per S. Bakke

Head of Department

**Who the handbook is for**

The contents and guidelines of this handbook apply to:

* Employees at the Department of Clinical Science in all employment positions, students and other researchers/technicians using equipment and instruments related to activities of the department.
* Every employee/user has a duty to familiarize themselves with all relevant procedures.

The guidelines in this handbook are applicable for all laboratory areas utilized at Department of Clinical Science

* Key cards will not be issued until the individual user can document, with signature, that he/she has completed the training scheme.

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1. CONTACT PERSONS

There are designated contact persons for each floor. These have their work place at the laboratory and will have an overview of methods, use of equipment, etc., relevant for the laboratory in question.

|  |  |  |
| --- | --- | --- |
| Floor:  | 9 | Torunn Eide |
| Floor:  | 8 | Kari Helland Mortensen  |
| Floor:  | 7 | Student administration |
| Floor:  | 6 | Jorunn Bringsli |
| Floor: | 5 | Steinar Sørnes/Kjerstin Jacobsen |
|  |  |  |
| Floor:  | 3 | Kristin P. Rye |
|  |  |  |
| Floor:  | 1M | Beryl Leirvaag |
| PediatricsPediatrics |  | Anne Hammer Knudsen |
| Gynecology and Obstetrics strics | U | Britt Edvardsen |

# 2. THE PURPOSE OF THE HANDBOOK

This handbook is an aid to accessing information about rules/guidelines/routines etc. aimed at safety and improving the work environment:

- to promote communication between employees, as well as clarifying responsibility (line management)

- to promote quality assurance of HSE-work

- for the safety of the physical work environment

- to focus on HSE-work in the laboratory

- to protect the environment against pollutants through proper waste management.

Everyone working at K2 should familiarize themselves with the contents of this handbook. Responsibility lies with the head of department, who will delegate HSE-related work tasks to research group leaders.

# 3. GENERAL PROTECTION AND SAFETY RULES

According to the University and Polytechnic law, the head of department is responsible for the work environment in the department. Authority may be delegated to other personnel, such as the head of administration and research group leaders. Research group leaders are project leaders for PhD-candidates/students and other researchers conducting work in their laboratories.

Deviations should be reported to closest leader, or to the head of department or HSE-officer. Procedures for reporting accidents can be found in the HSE-handbook and at the HSE-portal. Here you will also find the deviation form

[http://www.uib.no/en/poa/hms-portalen/74355/non-conformities-near-accidents-and-accidents#](http://www.uib.no/en/poa/hms-portalen/74355/non-conformities-near-accidents-and-accidents)

Personal injury should, in addition, always be reported to the head of administration. This will then be forwarded with specific improvement suggestions to the central HSE-section at UiB.

Due to safety reasons, children under the age of 12 are not permitted in the laboratory areas.

The UiB HSE gateway website: <http://www.uib.no/poa/hms-portalen/en>

# Organisation chart



## The role of the Department HSE-representative

The HSE-representative has been elected by their work colleagues in order to ensure their interests in work environment issues. The HSE-representative should be aware of the work environment and has the authority to present problems to the head of department.

The HSE-representative has the authority to stop dangerous work practice.

HSE-representative should participate in regular HSE-checks, at least once a year, together with research group leader/head of adm. The checks will be concluded with the drafting of an action plan.

HSE-representative should be informed about the planning of changes in the work situation of the work personnel, and should be included in committees during the planning and execution of measures affecting the department's work environment. The names of HSE representative and Co-HSE representative should be clearly posted.

# 4. GENERAL INFORMATION

A general tour will be given new students and employees upon commencing their work at the department. Students and employees are encouraged to ask questions.

While working in a laboratory, one is in general exposed to various risks, such as chemicals, patient samples and infected materials. This means that work has to be conducted in a responsible way in accordance with the regulations that apply, as outlined in this handbook.

If any problems should arise in the laboratory they should be discussed with closest leader, and a solution should preferably be found within the group. Problems that cannot be solved within the group should be forwarded to the head of administration and/or HSE-representative.

Reporting accidents, near-accidents and deviances, see section 9 (Reporting accidents).

**Rules relating to all areas marked with Biohazard-signs:**

• Doors leading to the areas should be locked and only accessed by key code.

• Food and drink is strictly prohibited in the laboratory.

• Use safety glasses.

• Appropriate protective clothing and gloves should be worn when required.

• Solvents/buffers/chemicals not in their original packaging should be labelled.

• Always clean up spills.

• Maintain good hand hygiene.

**Important when handling chemicals:**

* Do not put a chemical back into its original container (to avoid contamination).
* Keep the container closed.
* Flasks/bottles should not be carried by the bottleneck or close to your body – use a bucket or trolley.
* When pouring, keep the bottle turned upwards.
* Working alone? Consider the risk!

# 5. RESPONSIBILITY

**All supervisors are responsible for their students and staff in the laboratory**. They must ensure that information about various risk factors related to laboratory work is provided, as well as provide proper training in general lab safety, work procedures and the use of equipment.

Research group leaders are responsible for ensuring that written procedures adapted to each work task are available. Staff should be trained in procedures so that work can be conducted without putting employee health and safety at risk, and without damaging the environment. Brief work instructions should be available upon request during inspections.

Each individual researcher/technician is responsible for keeping a journal. It is required that a standard research journal is be kept up to date in order to document work assignments carried out. The journal should be available upon request.

See the following

<http://www.uib.no/poa/hms-portalen/74177/metodar-risikovurdering>

(In Norwegian only)

# 6. VACCINES

Anyone working regularly with **biological materials** should be vaccinated against **Hepatitis-B.**

If you are working with **tuberculosis**, you should**, prior to commencing your work, have completed a lung examination and possible x-ray of the thorax**. You must also have the BCG vaccine, if not you must be vaccinated.

If you are working with **animal models**, a tetanus vaccine is required and re-vaccination is recommended every 10 years.

Each individual is responsible for contacting the HSE-section in order to be vaccinated.

**Contact information for the HSE-section:**

*Phone: (47) 55 58 20 54*

*E-mail: post@hms.uib.no*

*Visiting address: Christiesgate 20 (entrance from Muséplass).*

*Post address: Postbox 7800, 5020 Bergen*

# 7. GENERAL WORK PROCEDURES

Everyone is responsible for maintaining a clean and organized work area, use bench paper! Your work area should be available for others to use when you are not present. The work area and equipment should be cleaned after use. Equipment brought from other areas should be returned, in a clean condition. Spills on benches, balances, etc., should be wiped away immediately with absorbent paper.

## Disinfection methods

Chemical disinfection:

• 70 % ethanol – disinfection of skin and equipment when spill involves bacteria or virus.

• Chlorhexidine or Pyricept – disinfection of skin and cuts/wounds.

• Hypochlorite ( ”chlorine”) – disinfection of equipment.

• Virkon – for disinfection of non-autoclavable equipment used for bacteria and viruses

**Autoclaving**

Follow the instructions for each individual autoclave.

**UV-light**

UV-light is used for disinfection of, for example, work benches as well as for destroying DNA/RNA. The UV-light must not be on when working!

10 min irradiation with UV-light on a flat surface should normally be sufficient to kill all microorganisms. If the UV-light has been on overnight, it is recommended to not use the room for approximately 30 minutes (in order to remove ozone) after the UV light has been switched off.

## Consumables and test tubes

Infected glassware and solutions/media should be destroyed through autoclaving.

Everyone is responsible for washing and replacing glassware according to the rules in effect in the lab where work is conducted. The same goes for equipment and solutions which are to be autoclaved or disinfected in another way.

NB: Refill shared buffers, test tubes, sterile glassware, pipettes, etc. when empty so that the equipment is ready for the next user.

## Use of gloves

[http://www.uib.no/en/poa/hms-portalen/80320/gloves#](http://www.uib.no/en/poa/hms-portalen/80320/gloves)

The use of gloves must have a clear purpose.

Use the appropriate type of glove according to use. Refer to the safety data sheet for information about which gloves to use.

If the use of hazardous materials cannot be avoided, and contact with the materials can lead to injury or disease, you must use protective gloves made with a fabric with a documented protective effect.

* Protect yourself against transfer of infectious matter from biological material.
* Protect samples against contamination from yourself.
* Use gloves as needed, and always take them off when you leave the work place, so that you do not transfer infectious matter, chemicals or other agents to "clean" areas (phones, door handles, socialization areas, etc).

## Cuts and puncture wounds

Immediately rinse for 5 minutes with copious amounts of running water. Use an eye rinser (by the sink) if a squirt gets in your eyes. If infectious matter is spilled onto skin, a skin disinfectant can be used for 3-4 minutes. With cuts and puncture wounds that may result in blood contamination, you should immediately contact the infectious medicine specialist on duty at Haukeland University Hospital – **phone 05300**.

**First aid with risk of blood contamination**
Definition: Blood contamination is infection which may transfer via blood, blood products, bodily fluids or tissue fluids. Contamination occurs through inoculation, transfusion or contact with contaminated fluids, tissue and mucous membranes. Blood contamination does not usually occur through intact and undamaged skin.

With a positive contamination source of Hepatitis B, vaccination of non-vaccinated personnel and vaccinated personnel with known low antibody Hepatitis B should be immediately initiated. In addition, Hepatitis B immunoglobulin may be administered in these instances. The HSE-centre may refund vaccines and Hepatitis B immunoglobulin from the Norwegian Institute of Public Health on free prescription (“Blåresept”).

(Source taken from Haukeland University Hospital HSE-websites).

**Action list:**

1. Perform first aid procedures.

2. Contact the person on duty at Section for Infection on **05300**

3. A risk assessment will be carried out by person on duty at Section for Infection, or another doctor.

4. Obtain a blood sample from the source of contamination (with consent).
6. Obtain a blood sample from the person(s) exposed.
7. Complete the injury form from the HSE-service. Also complete a non-conformity form.
8. Ensure follow-up at a medical outpatient clinic.

## Emergency equipment

Familiarize yourself with the nearest location of emergency equipment in the lab where you will perform your work. The kits are located on the 1st, 3rd, 5th and 8th floor of the Lab Building, at Pediatrics and Gynecology & Obstetrics. Instructions are available on the box lid. Each kit contains:

* Face mask
* Full protective mask for protection against gas and particles.
* Mask filters (2).
* Fire blanket
* Protective goggles
* Hearing protection
* Rubber boots that withstand acids, chemicals, etc. 2 pairs, Men’s and Women’s sizes
* 4H Gloves that withstand most chemicals.
* Absorption cloth for chemicals

## Working with chemicals

All chemicals should be stored in designated chemical stores or cupboards. Chemicals with the following properties are stored separately: bases, acids, flammable, poisonous and coloured chemicals.

When working with chemicals it is important to have knowledge of the chemicals and their effects on health and environment so that they may be used in a responsible way. Chemicals have different risk levels depending on their inherent properties and the amount of exposure to them.

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**Work with hazardous materials (see EcoOnline) must be conducted in a fume hood. The fume hood is not be used for storage and is inspected annually by the HSE-section (we are presently awaiting a new contract between UiB and HUS regarding the HSE-agreement).**

Working with chemicals is regulated through “Kjemikalieforskriften” (Chemical Regulations). Everyone working at the laboratory must familiarize themselves with the EcoOnline database ([www.ecoonline.no](http://www.ecoonline.no))

Each laboratory/group has its own EcoOnline administrator who will provide you with an access code. Those who need to register the risk of exposure to dangerous chemicals will be able to access the database with their Feide/UiB user name and password (procedure under revision).

The UiB's HSE-gateway:

<http://www.uib.no/poa/hms-portalen/en>

Here you will find information on hazards, risk assessments, material safety datasheets, storing, handling, disposal, training, guidelines and statutes regarding the use of chemicals. When considering the purchase of new chemicals information should be sought from the supplier, through EcoOnline or via the HSE-gateway.

If you wish to "borrow" chemicals it is wise to ask first. Work in a fume hood with dangerous and foul smelling liquids. Solvents should only be used in fume hood!

Use safety equipment such as gloves, mask, safety glasses, shields, lead apron, warning signs, etc., when necessary. Use gloves with care. Do not touch door handles, phones etc., before first removing gloves. Do not use gloves in offices or common areas. When weighing out dangerous and volatile materials use a facemask and weigh out in a fume hood.

Safety glasses/mask/special gloves are also necessary when handling liquid nitrogen/dry ice.

**If alternative substances/ materials are available, the substitution rule applies.**

## EcoOnline:

Electronic database for chemicals

EcoOnline [www.ecoonline.no](http://www.ecoonline.no)

All purchased chemicals should be registered here.

The access code is for EcoOnline is:

* Company code: 803
* User name: Ask super user
* Password: Ask super user

Super user ECOonline: Aud Utheim, Beryl Leirvaag, Carol Cook, Karl Brokstad, Randi Sandvik,

**READ THE SAFETY DATA SHEET BEFORE HANDLING A CHEMICAL**

Data sheets containing information about the chemicals in the lab should be available in paper version in each laboratory. An updated version of each individual chemical can be obtained from <http://www.ecoonline.no>

Haukeland University Hospital is responsible for University of Bergen employees when they are working at hospital premises. Refer to the Working Environment Act" §2-2:

<https://lovdata.no/dokument/NL/lov/2005-06-17-62/KAPITTEL_2#KAPITTEL_2>

This also applies to registration of chemicals in the EcoOnline database. University employees must have full access to chemical datasheets and risk assessments where they are working. A university employee who is working in a HUS laboratory must have access to datasheets and risk assessments for that laboratory.

Every university employee must know of the risk assessment that has been carried out for each chemical they are working with. They must be given read-only access to the EcoOnline database for the laboratory where they are working, even if it is registered under Helse-Vest. Likewise, all HUS employees should be given corresponding read-only access to the EcoOnline database for university laboratories.

## Working with liquid nitrogen

Tanks containing liquid nitrogen are stored in the cold rooms. These rooms are equipped with an oxygen monitor. An alarm will sound if nitrogen gas displaces the oxygen in the room. Leave the room immediately!

Use a visor and solid, loose-fitting gloves when filling nitrogen and when removing tubes from the nitrogen tank. Wear shoes, not sandals. When removing a tube from nitrogen, immediately open the cryotube lid in order to ease any potential pressure. Transport in a closed polystyrene container. The danger of explosion is only present in the first few minutes subsequent to removing the tube from the nitrogen tank.

Nitrogen tanks should be transported alone in the elevator, as suffocation is possible. Label during transport.

## Working with radioactive material

Work with tritium, thymidine and beta radiation should be carried out in designated laboratory areas labelled with the radioactivity symbol.

Any other radioactive work should be conducted in the isotope lab.

Contact person: Torbjørn Hansen torbjorn.hansen@uib.no

Kari Williams kari.williams@uib.no

**The isotope lab must be reserved for radioactive work, and you must have approved training before you may work with isotopes**

<http://www.uib.no/poa/hms-portalen/sikkerhet/straaling-og-straalevern> (In Norwegian)

## Working with genetically modified organisms (GMO)

In regard to work involving GMO we must adhere to the Gene Technology Law <http://www.lovdata.no/all/hl-19930402-038.html>

and its statutes, which requires reports/approval for both the project and laboratory areas. The law also outlines the requirements for how work should be conducted. Transport of GMM between laboratory units is also described. Below you will find the guidelines for conducting work with genetically modified microorganisms (GMM) in the laboratory (so-called contained use). Work involving GMM in combination with animals or with any other types of GMO (such as plants, animals) is not described here. It is important to note that not all molecular biological work is subject to the Gene Technology Law. This only becomes relevant when the genes are injected into an organism which may breed/multiply. For instance, the isolation of DNA or PCR is not necessarily subject to the law.

Genetically modified microorganisms are classified into risk class 1-4

|  |  |
| --- | --- |
| Class 1:  | Work that does not involve risk or only negligible risk, ie. activities where containment measures at containment level 1 is appropriate to protect human and animal health and the environment.   |
| Class 2:  | Work that involves little risk, ie. activities where containment measures at containment level 2 is appropriate to protect human and animal health and the environment.  |
| Class 3:  | Work that involves moderate risk, ie. activities where containment measures at containment level 3 is appropriate to protect human and animal health and the environment.  |
| Class 4:  | Work that involves great risk, ie. activities where containment measures at containment level 4 is appropriate to protect human and animal health and the environment. |

When conducting day-to-day GMO work in the laboratory there are four things one must adhere to:

1. That the laboratories and facilities are approved for work with GMO. At present K2 has approved laboratories for working with GMM up to and including contained use level 2. Approved areas are marked with the yellow Biohazard signs informing of this.
2. That there exists reports/approval for the work you shall carry out. The leader of the relevant project is responsible for this. The project leader is also responsible for ensuring that those working on the project are informed that the work contains GMM and what precautions and work routines to follow. In the report/approval there should be attached a preliminary assessment of use with regard to risk of disease/injury to humans, animals, plants or damage to the environment.
3. That work is conducted in an appropriate manner according to safety guidelines (see below).
4. That a work journal is kept. Document applications regarding use of GMO and GMM and record procedures so that they may be produced upon request/for inspection.

For all activities involving GMM, the principles for good microbiological practice regarding good safety and hygiene in the work place should be followed.

In addition there are some actions that are mandatory by law with contained use of GMM:

**Prevention of emissions:** GMM should be inactivated through the use of recognized methods for waste disposal and emissions, including waste water. If necessary, check whether or not viable organisms outside the primary physical encasing come into being. Here one has to use incineration, autoclaving or other disinfection methods as outlined on page 10.

**Antibiotic resistance genes** should be handled so that these genes are destroyed, for example through fragmenting prior to emission into the surroundings. Incineration is one way of ensuring this, but autoclaving also causes gene inactivation and is best for large volumes.

**Transport**: For GMM in risk class 1 and 2, transport and import (shipments) of up to 10 liters is permitted without any special approval as long as the regulations for labelling and packaging are followed. However, such transport should be registered in a protocol.

Transport of GMM in higher risk classes, and more than 10 liters in risk class 2 will require more substantial approval and is not covered here.

When transporting GMM between different approved units/rooms make sure that this is carried out in a way that minimizes the probability for accidents/spills. For example, containers with GMM should be transported on trolleys with high sides to limit spills.

**Reporting accidents**: In case of serious accidents/emissions one should immediately notify the supervisory authority (The Norwegian Directory of Health, section Biotechnology and Health Laws **phone 24 16 39 00**).

The following information should be given:

1) Circumstances related to the accident

2) The identity and amount of released GMM

3) All information necessary in order to evaluate the effect on the accident to health and the environment

 4) Which actions have been affectuated

The incident report should be given to the project or group leader.

 **Relevant definitions:**

**Genetically modified organisms**

Genetically modified organisms are defined as microorganisms, plants and animals where the genetic composition has been changed through the use of gene- or cell technology.

**Microorganisms**

Microorganisms are defined as any cellular or non-cellular microbiological unit capable of multiplying itself or of transferring genetic material. The definition of microorganisms includes: Viruses, bacteria, unicellular plants and animals, plant- and animal cells (including human cells) in cultures and microscopic yeast- and mold. The definition does not cover plasmids or other DNA outside of the cell.

**Contained use** Contained use is defined as any work operation where genetically modified organisms are created, cultured, stored, destroyed or used in other ways, in a closed system where physical barriers are used in order to limit the organisms' contact with humans and the environment. Transport of genetically modified organisms between approved laboratories within the same institution, for example, other laboratories within a university area, is also considered encased use.

**Deliberate release**

Deliberate release is defined as any creation and use of genetically modified organisms not classified as contained use.

## Waste Disposal

University employees working in areas owned by Helse-Bergen should follow hospital guidelines for waste disposal.

In the waste rooms there are cardboard boxes, inserts, red plastic bags, wires and labels. The cardboard boxes should, as a safety measure, be labeled with the appropriate label prior to use. When they are ¾ full they should be closed and placed in the waste room for collection.

For work in the laboratory, the following labels are often used:

* **Cytostatica:** Here smaller amounts of cytostatica, antibiotics and materials which may be cancerous, mutagens, poisonous, health damaging or damaging to the environment should be discarded.
* **Test tubes/agar plates:** Contagious waste such as used agar plates and test tubes which contain blood or tissue fluids. As well disposable equipment and gloves which may be contaminated or have been in contact with organic test material.
* **Sharps**: Yellow plastic boxes with lids for hypodermic needles, scalpel blades, microscope slides and other glass/sharp objects. These yellow plastic boxes should be purchased by each group.

**Bacterial waste:**

After growing bacteria the contaminated flasks/media should be autoclaved. Put the flasks to soak to help with washing later.

Spills of materials containing genetically modified or other living microorganisms should be wiped immediately with absorbent paper, which should later be disposed for incineration. The area should be disinfected with 70% ethanol or treated with virkon/chloramine. Gloves and other appropriate protective equipment should be used at all times. If it is not possible to disinfect the area immediately, the areas affected by the spill should be cordoned off in order to avoid further contamination. If necessary call for assistance. Commence disinfection with 70% ethanol or disinfection solution. Report the incident to your supervisor (group leader and/or HSE representative) and log the biological factor used.

**Chemicals are special waste!**First, check the material safety data sheet for how the chemical should be handled

Label with:

• Name of substance//substances. Use the material safety data sheet or kit attachment to find out if the chemical(s) cannot be identified in their original container/bottle.

• Supplier

• Chemical formula if possible

NB: Avoid mixing different substances– use a new bottle instead!

There are separate regulations for the isotope lab for radioactive work

<https://lovdata.no/dokument/SF/forskrift/2010-10-29-1380?q=2012>

 (in Norwegian)

The waste is deposited at Miljøhallen, Haukeland University Hospital (HUS), where it will be treated and destroyed according to rules and procedures determined by HUS.

## Treatment of dangerous waste

**Treatment of waste from the Lab building according to Helse-Bergen procedures.**

Waste producer: The section/unit who owns/produces the waste.

Dangerous waste: “waste that cannot be suitably treated together with household or industrial waste as it may result in serious pollution or lead to the injury of people or animals”

For Helse-Bergen: Chemical, electronic and radioactive waste.

**Responsiblility:**

* All dangerous waste shall be treated and packed according to the rules and regulations.
* Waste should be packed securely so it is not damaged in transit. eg, use a supportive absorbent material between bottles.
* Waste should be placed in **room 9092** for collection**.**

**Packaging:**

**Red waste box**: Dangerous waste should be packaged in its original packaging or some other suitable packaging and labelled with the declaration number.

**Clear plastic container**: Solvent without halogen, not in its original packaging, should be put in the clear container and labelled with the declaration number.

**Blue plastic container**: Solvent with halogen, not in its original packaging, should be put in the blue container and labelled with the declaration number.

The red boxes and plastic containers may be obtained from the hospital porters **tel.7-7898**. They are on level 1M by the goods delivery entrance (by the lift, east).

**The Declaration form “Felles deklarasjonsskjema for farlig avfall og radioaktivt avfall” must be completed.**

****This contains information about the waste producer, type of waste and can be used to trace the waste during transport.

Use a ballpoint pen and write on a hard surface.

All the copies (1-5) of the declaration form are to be sent with the waste. (Make a copy for your own records).

Forms can be found in **room 9092**.

Fill out the form for each declaration number in the fields above the black line. Label the waste container with the declaration number (to the top right)

Only **Part A** of the form is required:

Organisation (“Organisasjonsnr“): **983974724**

Name (“Navn“): **HELSE BERGEN HF**

Address (“Adresse“): **Jonas Lies vei 87, 5021 Bergen.**

On the back of the form there are instructions as to how to fill out the form. Also the datasheet for the chemical may have some information required to help fill out the form.

Or refer to the guide from NFFA

[Veileder fra NFFA](http://www.nffa.no/Medlemstilbud/Forhandsbestilling.aspx) http://www.nffa.no/Medlemstilbud/Forhandsbestilling.aspx( in Norwegian)

which may be used as a reference for the correct sorting and declaration of chemical waste.

Or the Norwegian website for dangerous waste

<http://www.norsas.no/Farlig-avfall/Farlig-avfallsveileder>

EWC (European Waste Catalogue, EAL in Norwegian) codes are the EUs standard for the classification of dangerous waste and are a 6-figure code to characterize the type of waste.

The Waste number is the Norwegian classification of dangerous waste.

**Transport classification.**

Not to be filled out for the declaration of radioactive waste

Only the ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road) data needs to be filled out. This applies to transport by road. Remember to tick the correct box (symbol) for ADR classification.

If the waste is not classified as Dangerous goods it is feasible to tick the box “not classified” (“ikke klassifiseringspliktig”)

Note that the **UN-number** is the same as **FN-number.**

Packaging groups:

There are three types of packaging groups:

* I – Very dangerous chemicals
* II – Medium dangerous chemicals
* III – Less dangerous chemicals

## Pregnancy

When an employee is pregnant, the employer has a duty to ensure that the employee will not be exposed to hazards by providing alternative work tasks, and if necessary, relocation of work place.

For the form, see: <http://www.arbeidstilsynet.no/skjema.html?tid=78135> (In Norwegian)

If you plan a pregnancy, or you are already pregnant, reflect on your work/research. Talk to your supervisor as soon as possible. Consider, together with your supervisor, if should avoid working with isotopes, cytostatica or other chemicals which may be hazardous to the foetus and which may lead to unsafe working conditions. Other co-workers may be able to perform more hazardous tasks on your behalf.

Please find more information at <http://www.arbeidstilsynet.no>

”Graviditet og arbeidsmiljø” (in Norwegian)

# 8. ROOM RESPONSIBLE

The following persons may be contacted for use of rooms/equipment on the 5th floor:

|  |  |  |  |
| --- | --- | --- | --- |
| Room | Responsible | Phone | E-mail |
| Electrophoresis room 5129 | Christel Gill HaansuusMarit G. Tellevik | 55975543 | *christel.gill.haanshuus@helse-bergen.no**marit.gjerde.tellevik@helse-bergen.no* |
| Pre-PCR 5130 | Marit G. TellevikMarianne Eidsheim | 5597554355974647 | *marit.gjerde.tellevik@helse-bergen.no**marianne.eidsheim@uib.no*  |
| Mid-lab 5015 | Marianne Eidsheim | 5597464755974652 | *marianne.eidsheim@uib.no*  |
| Chemical room 5090 | Kjerstin Jakobsen | 55974647 | *kjerstin.jakobsen@.uib.no* |
| Cold room 5100 | Kjerstin JakobsenBeth Johannesen | 5597464755585554 | *kjerstin.jakobsen@uib.no* *beth.johannessen@uib.no* |
| Noise room 5065 | Beth JohannessenCecilie Kohler | 5597472055974652 | *beth.johannessen@uib.no**cecilie.kohler@uib.no* |
| Stock room 5085 | Marianne Eidsheim | 55974647 | *marianne.eidsheim@uib.no* |
| Instrument room Imm. 5020 | Marianne Eidsheim, Karl A. Brokstad | 5597464755974622 | *marianne.eidsheim@uib.no**karl.brokstad@uib.no* |
| Instrument room Virus 5080 | Hoang My Hua | 55975554 | *hoang.hua@uib.no* |
| Instrument room Bact. 5105 | Heidi Haraldsen | 55977981 | *heidi.haraldsen@uib.no* |
| Instrument room Oral 5095 | Vidar Bakken | 55974652 | *vidar.bakken@uib.no* |
| Flow 5110 | Marianne Enger | 55586844 | *marianne.enger@uib.no* |

Responsible persons for joint facilities on 5th floor (FFL):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Room |  | Responsible | Telephone | E-mail |
| Cell labs | 5280 | Silke Appel | 55974633 | *silke.appel@uib.no* |
| 5280 | Marie Karlsen | 55974669 | *marie.karlsen@uib.no* |
|  | Beth Johannessen | 55585554 | *beth.johannessen@uib.no* |
| 5270 | Karl-Henning Kalland | 55584506 | *kalland@uib.no* |
| Bact. lab | 5285 | Audun Nerland | 55974653 | *audun.nerland@uib.no* |
| Isotope lab | 5265 | Torbjørn Hansen | 55974637 | *torbjorn.hansen@uib.no* |
| Virus labs | 52755270 | Åsne Jul-LarsenJane Kristin Nøstbakken | 55975545 | *asne.jul-larsen@uib.no**jane.nostbakken@uib.no* |
| Flow lab | 5175 | Steinar Sørnes | 55585415 | *steinar.sornes@uib.no* |
| Ultrafreezers/ centrifuges | 5235 | Karl A. Brokstad | 55974622 | *karl.brokstad@uib.no* |
| Microscopy  | 5245 | Karl A. Brokstad | 55974622 | *karl.brokstad@uib.no* |
| Hightech instrument room | 5249 | Karl-Henning Kalland | 55584506 | *kalland@uib.no* |
| Autoclave room | 5250 | Tove Folkestad |  | *tove.folkestad@uib.no* |
| Waste | 5704 | Cecilie Kohler | 55974652 | *cecilie.kohler@uib.no* |
| Safety lab BSL3 |  | Harleen Grewal | 55974631 | *harleen.grewal@uib.no* |

## Responsible persons for K2 joint facilities (FFL):

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | ***Room nr.*** | ***Room responsible*** | ***E-mail*** | ***Fl*** | ***Conten*** |
| *UFL 052* | ***3170*** | *Siv Lise Bedringaas* | *siv.bedringaas@uib.no* | *3* | *GMO* |
| *UFL 072* | ***3250*** | *Siv Lise Bedringaas* | *siv.bedringaas@uib.no* | *3* | *"Nielsen-lab"* |
| *UFL 073* | ***3165*** | *Siv Lise Bedringaas* | *siv.bedringaas@uib.no* | *3* | *Sluice* |
| *UFL 101* | ***3252*** | *Siv Lise Bedringaas* | *siv.bedringaas@uib.no* | *3* | *Dark room* |
| *UFL 019* | ***4203*** | *Heidi Haraldsen* | *heidi.haraldsen@uib.no* | *4* | *P3.006. Lab* |
| *UFL 0XX* | ***4201*** | *Heidi Haraldsen* | *heidi.haraldsen@uib.no* | *4* | *P3.008 Sluice* |
| *UFL 0XX* | ***4202*** |  |  | *4* | *P3.007. Lab 2* |
| *UFL 0XX* | ***4204*** | *Heidi Haraldsen* | *heidi.haraldsen@uib.no* | *4* | *P3.005. Anteroom* |
| *UFL 001* | ***5275*** | *Åsne Jul-Larsen**Jane Kristin Nøstbakken* | *asne.jul-larsen@uib.no**jane.nostbakken@uib.no* | *5* | *BSL2-virus* |
| *UFL 004* | ***5240*** | *Karl-Henning Kalland* | *kalland@uib.no* | *5* | *High-tech* |
| *UFL 009* | ***5129*** |  |  | *5* | *Elph. Chromatogr.* |
| *UFL 012* | ***5175*** | *Steinar Sørnes* | *steinar.sornes@uib.no* | *5* | *Flow cytometry* |
| *UFL 028* | ***5245*** | *Karl A. Brokstad* | *karl.brokstad@uib.no* | *5* | *Microscopy* |
| *UFL 032* | ***5270*** | *Beth Johannessen* | *beth.johannessen@uib.no* | *5* | *Cell lab / BSL-1* |
| *UFL 038* | ***5250*** | *Tove Folkestad* | *tove.folkestad@uib.no* | *5* | *Suction room* |
| *UFL 046* | ***5285*** | *Audun Nerland* | *audun.nerland@uib.no* | *5* | *Bact.lab 1* |
| *UFL 074* | ***5255*** | *Beth Johannessen* | *beth.johannessen@uib.no* | *5* | *Sluice* |
| *UFL 075* | ***5215*** | *Beth Johannessen* | *beth.johannessen@uib.no* | *5* | *Sluice* |
| *UFL 078* | ***5235*** | *Karl A. Brokstad* | *karl.brokstad@uib.no* | *5* | *Centrifuges & Ultrafreezers* |
| *UFL 085* | ***5220*** | *Steinar Sørnes**Marit Gjerde Tellevik* | *steinar.sornes@uib.no**marit.gjerde.tellevik@helse-bergen.no* | *5* | *BSL2-bact* |
| *UFL 086* | ***5265*** |  |  | *5* | *Sluice* |
| *UFL 089* | ***5290*** | *Torbjørn Hansen* | *torbjorn.hansen@uib.no* | *5* | *Isotope lab* |
| *UFL 090* | ***5264*** | *Torbjørn Hansen* | *torbjorn.hansen@uib.no* | *5* | *Sluice* |
| *UFL 099* | ***5280*** | *Silke Appel* | *silke.appel@uib.no* | *5* | *Cell culture* |
| *UFL 005* | ***6270*** | *Rita Holdhus* | *rita.holdhus@helse-bergen.no* | *6* | *Data room* |
| *UFL 069* | ***6290*** | *Rita Holdhus* | *rita.holdhus@helse-bergen.no* | *6* | *RNA-purification* |
| *UFL 070* | ***6265*** | *Rita Holdhus* | *rita.holdhus@helse-bergen.no* | *6* | *DNA-microarray* |
|  | ***6300*** | *Beryl Leirvaag* | *beryl.leirvaag@uib.no* | *6* | *General lab* |
|  | ***6305*** | *Beryl Leirvaag* | *beryl.leirvaag@uib.no* | *6* | *DNA modification* |
|  | ***6330, 6335, 6340,*** | *Stian Knappskog* | *stian.knappskog@uib.no* | *6* | *Cell labs and sluices* |
|  | ***6320*** | *Stian Knappskog* | *stian.knappskog@uib.no* | *6* | *Plasmid purification* |
|  | ***6315*** | *Sigrid Lunde* | *sigrid.lunde@helse-bergen.no* | *6* | *Centrifuge room* |
|  | ***6295*** | *Mette P. Myklebust* | *mette.myklebust@uib.no* | *6* | *Immunohistochemistry* |
| *UFL 013* | ***7290*** | *Olav Mjaavatten* | *olav.mjaavatten@uib.no* | *7* | *LC-MS* |
| *UFL 021* | ***7300*** | *Olav Mjaavatten* | *olav.mjaavatten@uib.no* | *7* | *HPLC* |
| *UFL 027* | ***7230*** | *Anne Aarsand* | *anne.aarsand@uib.no* | *7* | *Morphology, microscopy* |
| *UFL 033* | ***7295*** |  |  | *7* | *Cell culture* |
| *UFL 034* | ***7310*** | *Irene Ohlen Moldestad* | *irene.moldestad@uib.no* | *7* | *Cell culture* |
| *UFL 044* | ***7345*** |  |  | *7* | *Workshop* |
| *UFL 076* | ***7315*** | *Nina Glomnes* | *nina.glomnes@uib.no* | *7* | *PCR* |
| *UFL 084* | ***7305*** |  |  | *7* | *Sluice* |
| *UFL 097* | ***7316*** |  |  | *7* | *Morphology, microscopy* |
|  | ***8205*** | *Carol Cook* | *carol.cook@uib.no* | *8* | *GMO* |
| *UFL 024* | ***8335*** |  |  | *8* | *DNA Gel / Imaging* |
| *UFL 035* | ***8355*** | *Eirik Bratland* | *eirik.bratland@uib.no* | *8* | *Tissue culture 2* |
| *UFL 036* | ***8350*** | *Richard Alexander Hellesen* | *richard.hellesen@uib.no* | *8* | *Anteroom* |
| *UFL 037* | ***8345*** | *Eirik Bratland* | *eirik.bratland@uib.no* | *8* | *Sluice* |
|  | ***8365*** | *Liv Kristine Øysæd* | *liv.oysad@uib.no* | *8* | *Tissue culture 3* |
| *UFL 047* | ***8380*** | *Steinar Hustad* | *steinar.hustad@uib.no* | *8* | *LC-MS-MS* |
| *UFL 054* | ***8375*** | *Steinar Hustad* | *steinar.hustad@uib.no* | *8* | *HPLC, GC, GC-MS* |
| *UFL 055* | ***8140*** | *Randi Sandvik* | *randi.sandvik@uib.no* | *8* | *Centrifuge room* |
| *UFL 057* | ***8390*** | *Steinar Hustad* | *steinar.hustad@uib.no* | *8* | *PC-room* |
| *UFL 080* | ***8360*** | *Carol Cook* | *carol.cook@uib.no* | *8* | *Tissue culture 1* |
| *UFL 102* | ***8395*** | *Steinar Hustad* | *steinar.hustad@uib.no* | *8* | *Instrument* |
| *UFL 026* | ***9110*** | *Kristin Paulsen* | *kristin.paulsen@uib.no* | *9* | *Scintillation counter* |
| *UFL 030* | ***9145*** | *Torunn Eide* | *torunn.eide@uib.no* | *9* | *Cold lab* |
| *UFL 031* | ***9150*** | *Torunn Eide* | *torunn.eide@uib.no* | *9* | *Centrifuges* |
| *UFL 043* | ***9160*** | *Knut Matre* | *knut.matre@uib.no* | *9* | *Workshop* |
| *UFL 048* | ***9105*** | *Torunn Eide* | *torunn.eide@uib.no* | *9* | *LC-MS* |
| *UFL 049* | ***9125*** | *Torunn Eide* | *torunn.eide@uib.no* | *9* | *Data room* |
| *UFL 051* | ***9155*** | *Torunn Eide* | *torunn.eide@uib.no* | *9* | *HPLC* |
| *UFL 053* | ***9235*** | *Emmet McCormack* | *emmet.mccormack@uib.no* | *9* | *GC, GC-MS* |
| *UFL 056* | ***9236*** | *Emmet McCormack* | *emmet.mccormack@uib.no* | *9* | *PC-room* |
| *UFL 079* | ***9190*** | *Torunn Eide* | *torunn.eide@uib.no* | *9* | *Washroom, stockroom* |
| *UFL 083* | ***9290*** | *HUS* |  | *9* | *Hazardous waste* |
| *UFL 098* | ***9104*** | *Torunn Eide* | *torunn.eide@uib.no* | *9* | *Data room* |
| *UFL 104* | ***9163*** | *Siv/ Lise Bedringaas* | *siv.bedringaas@uib.no* | *9* | *Workshop* |
| *UFL 041* | ***1485*** |  |  | *1M* | *Ultra freezers* |
| *BKB* |  | *Anne Hammer Knudsen* | *anne.knudsen@uib.no* |  |  |
| *KK* |  | *Britt Edvardsen* | *britt.edvardsen@uib.no* |  |  |

# 9. WARNING

**Reporting of accidents, near-accidents and deviances**

All accidents, near-accidents and deviances should be reported. Guidelines and forms are available on the UiB HSE-portal:

<http://www.uib.no/poa/hms-portalen/en/systematic-hse-work/non-conformities-near-accidents-and-accidents>

Deviances, such as defective equipment, repeated violations of routines, rules of conduct, etc., should be reported to the person responsible for the room, your supervisor or HSE-representative and head of administration.

## Warnings given in emergency situations

Employees or students detecting a possible emergency should immediately notify:

|  |  |  |
| --- | --- | --- |
| **Haukeland University Hospital (HUS)*** Safety section: 559 72222
* Fire in the hospital area: 559 72004
* Accident/acute illness: 559 73333
 | **Emergency numbers*** Fire: 110
* Police: 112
* Ambulance: 113
 | **Duty phone** **UiB**55 58 85 00(24 hours) |

## Fire instructions

**Familiarise yourself with the following:**

• Evacuation routes and meeting points.

• Nearest manual fire alarm.

• Nearest fire hose/extinguisher.

• See fire instructions for evacuation plan and exit routes.

## Fire safety representative:

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Level** | **Phone** | **E-mail** |
| Torunn Eide | 9 | 74630 | *torunn.eide@uib.no* |
| Deputy: Oddrun Gudbrandsen | 9 | 74920 | *oddrun.gudbrandsen@uib.no* |
| Margit Solsvik | 8 | 74369 | *margit.solsvik@uib.no* |
| Deputy: Siv Johnsen | 8 | 77239 | *siv.johnsen@uib.no* |
| Anne Aarsand | 7 | 55585425 | *anne.aarsand@uib.no* |
| Deputy: Gry Hilde Nilsen | 7 | 73035 | *gry.nilsen@uib.no* |
| Beth Johannessen | 5  | 55585554 | *beth.johannessen@uib.no* |
| Deputy: Marianne Eidsheim | 5 | 74647 | *marianne.eidsheim@uib.no* |
| Deputy: Heidi Haraldsen | 5 | 77981 | *heidi.haraldsen@uib.no* |
| Kristin Paulsen | 3 | 73082 | *kristin.paulsen@uib.no* |
| Deputy: Siv lise Bedringsaas | 3 | 73059 | *siv.bedringaas@uib.no* |
| Beryl Leirvaag | 1M | 75014 | *beryl.leirvaag@uib.no* |
| Deputy: | 1M |  |  |

**UiB Fire safety officer:** Tore Reigstad(tore.reigstad@uib.no) 55584947 – 91 00 19 19

**Department Fire officer:** Steinar Sørnes (steinar.sornes@uib.no) (559)73067 – (555)85415

**Deputy:** Elin Theodorsen (elin.theodorsen@uib.no) 73015

## Fire/Evacuation plan

If you detect fire or smoke:

* Trigger the manual alarm.
* Inform the Safety section (loudspeaker phone 2222 or phone: 559-72222).
* Consider actions you may implement.
* Commence evacuation procedures – use designated exit routes

The Fire representative (wearing a yellow vest) will delegate any work tasks.

**The following announcements will be given over the loudspeakers:**

* Minor alarm: "Et automatisk varsel om brann blir undersøkt. Avvent nærmere beskjed". *(English translation: "An automatic fire alarm has been activated. Please await further instructions").* Actions: The Fire representative will investigate if there is smoke development/fire on the floor. If visual confirmation of a fire is confirmed, trigger the red fire alarm. All employees must await further instructions.
* Major alarm: "Det har brutt ut brann. Forlat bygningen gjennom nærmeste utgang eller nødutgang. Bruk ikke heisen". *(English translation: A fire has broken out. Please exit the building through your nearest exit or emergency exit. Do not use the lift").*

Actions: The fire representatives on the various floors will delegate tasks in according to the situation at hand, and will consider efforts required to warn, extinguish, save and evacuate. All employees are responsible for their patients and visitors exiting the building via escape routes to assembly area outside.

* When the danger has passed, the following announcement is given over the loudspeakers: "Situasjonen er under kontroll. Vi beklager forstyrrelsen og alle er velkommen inn igjen". (English translation: "The situation is under control. We apologise for any inconvenience and everyone is welcome back again").

**Meeting points:**

* Outside the stair entrance on 8th floor (facing Ulriken). Assembly area in the car park.
* Outside the 1st floor (facing the ER). Use staircase west to the 1st floor assembly point.
* CHOOSE THE ASSEMBLY POINT NEAREST TO YOU

**Returning to your work place:**

You should only return to your work place after an announcement from the loudspeakers or from representatives from the security department. On every floor an evacuation plan is

posted providing information that each and every one has a duty to familiarise themselves with.

## **Attachment 1 – Fire handbook for K2**:

[http://k2info.b.uib.no/en/hms/brannbok-for-k2/](http://k2info.b.uib.no/en/hms/brannbok-for-k2/%20)

(in Norwegian)

## Key people

|  |  |  |
| --- | --- | --- |
| **Key people** | **Name** | **e-mail** |
|  |  |  |
| **Administration:** |  |  |
| Head of Department | Per Bakke | *per.bakke@uib.no* |
| Head of Administration | Julie Stavnes  | *Julie.stavnes**@uib.no* |
| Faculty Safety Officer | June Indrevik | *june.indrevik@uib.no* |
|  |  |  |
| **Safety officers for K2** |  |  |
| Lab building | Beryl Leirvaag | *beryl.leirvaag@uib.no* |
| BKB/Pediatrics | Anne Hammer Knudsen | *anne.knudsen@uib.no* |
| KK/Women’s clinic | Britt Edvardsen | *britt.edvardsen@uib.no* |
| Lab building (5th floor) | Marianne Eidsheim | *marianne.eidsheim@uib.no* |
|  |  |  |
| **Group leaders K2:** |  |  |
| Cardio/Thorax/Heart/Geriatrics | Knut Matre | *knut.matre@uib.no* |
| Infection/Microbiology/Rheumatics/Immunology | Steinar Skrede | *steinar.skrede@uib.no* |
| Lung/Haraldsplass | Jon Hardie | *jon.hardie@uib.no* |
| Gyneocology/Obstetrics/Pediatrics | Nils-Halvdan Morken | *nils.morken@uib.no* |
| Pharmaology/Pharmacy | Jan Schjøtt | *jan.schjott@uib.no* |
| Endocrinology/Endocrine surgery/Clinical Biochemistry | Jørn Sagen | *jorn.sagen@uib.no* |
| Hematology/Oncology | Øystein Bruserud | *oystein.bruserud@helsebergen.no* |
| Pediatrics/Medical Genetics | Gottfried Greve/Vidar Steen | *gottfried.greve@uib.no**vidar.steen@uib.no* |

## Useful Links

HSE-gateway: <http://www.uib.no/poa/hms-portalen/en>

Health, safety and environment: <http://www.uib.no/hms/handbok/kapittel5/k5_1.html>

EcoOnline: <http://www.ecoonline.no/>

# Attachment 2 – for K2 Gynecology/Obstetrics

Always request training prior to working with new equipment!

**Room 0082 Cell lab/Microscope**

Responsible / Contact person: Britt Edvardsen; Phone: 559 7-63 36

**Cell work / LAF-bench:**

Use gloves. All cell lines must be considered as potential sources of contamination even though no contaminated agents have been detected. It is particularly important to avoid cuts / puncture wounds. It is mandatory to wear a lab coat.

Cells known to be infected should not be cultured. If so, they must be cultured in a P2/P3-lab at HUS.

Do not use equipment belonging to others without permission. Do not use solvents and media used by others as you may contaminate them and ruin your experiments (and those of others).

Solid biological waste should be wrapped and placed in the contaminated waste ("smittekartong"). Label the box as "SMITTE" and place it in the waste room.

Liquid biological waste should be collected in bottles/flasks (max 6L) and placed in the contaminated waste ("smittekartong"). Label the box as “Sugekolber og Drenasjebeholdere” (vacuum flasks and drainage containers). Close it and place in the waste room.

Your work is not finished until you have cleaned up after yourself. Work benches should be cleaned with water, then with 70% ethanol.

If spills occur in the CO2-incubator or on the microscopes the same cleaning procedure applies.

**LN2 tank and O2 detector:**

Thermo gloves and safety glasses/visor should be used for any work with LN2. Make sure there is good ventilation in the room when the tank is opened. ALWAYS use cryotubes in the LN2 tank. Avoid nitrogen spills.

The O2 –measuring device will initiate a warning when there is too little O2 in the room. Follow general rules and call upon service from Lambrechts if required.

**Cryotome:**

Wear gloves to avoid transfer of DNA, both from you to the biopsy – and from the biopsy to you.

Be careful! The cutting blade is very sharp.

Changing the cutting blade: The old blade is discarded in the sharps container labelled "stikkende / skjærende".

Biological waste should be collected, wrapped and placed in the contaminated waste ("smittekartong").

Work benches should be cleaned with 70% ethanol after each use.

**Wash your hands when you have finished!**

**Microscope:**

Used slides should be discarded in the Sharps container labelled "stikkende/ skjærende".

**Room 0081/0075 Main lab**

Responsible/Contact person: Britt Edvardsen

Work benches and equipment should be cleaned with water and then with 70% ethanol. Change bench paper if spills occur.

**Sample Collection “Prøvemottak”:**

All blood- and tissue samples must be considered as a potential source of contamination even though no contaminated agents have been detected. It is mandatory to wear lab coat. Use bench paper. Tips, tubes, etc should be discarded in a plastic bag placed in a sharps box. When the plastic bag is full discard it in the contaminated waste (“Smitte”). Replace with a new plastic bag. Used scalpels and needles should be discarded in a sharps box and when full in the waste box labelled "stikkende / skjærende".

**Fume hood:**

Only place the equipment you need when working in the fume hood. Remains of alcohol, hematoxylin, cytostatica and formalin, etc., should be poured into appropriate bottles/flasks and then to Miljøhallen for storage/destruction. Clean the fume hood after you have finished.

Waste handling of disposables: As above.

**Stock room/Freezers**

Room responsible: Britt Edvardsen

Freezers: Britt Edvardsen is responsible for the organization and storing of samples including the Biobank. Always place a receipt in the space where a sample has been removed.

-80°C freezers are coupled to the alarm system at the Security section of HUS. If the alarm goes off, the security section will contact the routine laboratory at KK, who again will contact Britt Edvardsen (or Helga Salvesen/Line Bjørge). The alarm will be triggered if the temperature exceeds -70°C.

# Attachment 3 – Special labs 5th floor Laboratory Building

 **ISOTOPLAB (5265)**

Contact person: Torbjørn Hansen.

The isotope lab is exclusively for work with radioactive material. You will require appropriate training to work with isotopes.

**BACTERIOLOGY LAB (5285)**

Contact person: Audun Nerland.

Safety measures:

* Work in a sterile bench when opening freeze-dried ampules and seeding from

 cultures in Greave´s medium

* Contaminated inoculating loops and pipettes have to be disposed of immediately in the plastic container lined with a white plastic bag.
* Never leave contaminated equipment on the bench or in the steril bench.
* Media with bacteria grown on plastic dishes should be disposed of in the cardboard box marked ”Stikkende/skjærende”.
* When the waste box is ¾ full close, label and put in the waste room.
* Contaminated glassware should be disposed in the metal container lined with a red plastic bag.
* When full, place the metal container in the autoclave room.
* Wipe up spills of bacteria cultures at once with paper, then with 70% ethanol. Use gloves.
* Turn off the gas flame when not in use.
* The anoxomate and the gas supply have to be switched off after use and at the end of the day.
* Used chemicals after gram-staining should be collected in bottles stored under the sink.
* Avoid polluting the water! Crystal violet is especially harmful to aquatic organisms.
* Empty bottles for liquid waste can be found in the chemical storeroom (5090).

**CELL-LAB (5270 AND 5280)**

Contact persons: Beth Johannesen (5270), Karl-Henning Kalland (5270), Silke Appel (5280), Marie Karlsen (5280)

All blood samples and cell lines must be treated as a potential source of infection, even though it has not been proven. It is important to avoid cuts and injury. Always use a lab coat.

Culturing of cells with known infection should be performed in the infection labs 5275 (virus) or 5285 (bacteria), or the P3 lab on the 4th floor.

* Do not use other groups equipment, solutions or growth media without permission. Solutions and media can be contaminated and ruin other people’s experiments.
* Do not work with more than one cell line at a time in the sterile bench.
* Be considerate and polite, and avoid unnecessary talking and noise.
* Solid biological waste should be placed in its own container. Liquids containing biological waste should be autoclaved before disposal in the sink.
* Your work is not finished until you have tidied and cleaned up. Surfaces should be cleaned with water, then 70% ethanol.
* Wash your hands before you leave the cell lab.

Guidelines for the use of the cell labs:

* General: As the cell labs are for joint use, every user MUST follow the rules. Please help us to keep the cell labs in working order! You can use the cell lab after you have had a training course from either of the people responsible for the room (5270: Beth, 5280: Silke). The doors should always be kept closed.
* Changing of lab coats/shoes: Only blue coats are allowed in the cell lab. Every user has to change lab coats before entering the cell lab. Also change your shoes (or alternatively use the blue disposable shoe covers). No normal shoes are allowed beyond the marked area in the lab.
* Storage space: Each user group has an assigned shelf space for their cell culture plastics as well as a drawer to store pipettes and pipette filler.
* LAF benches: Please reserve LAF bench time using the lists on the door. The bench should be turned on 10 minutes before use. Wipe with surface disinfectant (70% EtOH) before and after use. Spilled liquids should immediately be cleaned up (ﬁrst with water, then 70% EtOH). Only place what you really need in the bench. Remember to remove everything out of the LAF bench after use. Use the UV light when appropriate.
* CO2 Incubator: Each user has an assigned space in the CO2 incubators. At the moment we have 2 per lab. The incubator needs to be cleaned once a month.
* Waste disposal: There should be one waste box per LAF bench. Change the box when it is 3/4 full, after working with blood products or before the weekend. If the box is full, close the box, label with the appropriate sticker and place on the outside of the box. Put the box in the waste room next to the elevator (east).
* Liquid waste: Room 5280: There is a vacusafe pump with each LAF bench. When ¾ full, add Virkon and leave to stand overnight before disposing down the sink. Clean the ﬂask afterwards, spray with 70% EtOH.

Room 5275: Collect the liquid waste in a round yellow plastic bucket. Boil in the microwave and discard in the sink.

* Mycoplasma routines: Before working with new cell lines in the cell lab, test for mycoplasma infection. Cultured cells should be tested regularly.
* Cleaning routines: Keep the lab tidy. Everyone working in the lab has to participate in the cleaning routines. A list with the persons responsible for monthly cleaning is on the inside of the door.
	1. Water bath: replace with clean water once a month (sterile RO) and add “Water Safe”. Incubators and LAF benches should be cleaned once a month.
* **VIRUS LAB (5275)**

Contact persons: Jane Kristin Nøstbakken, Åsne Jul-Larsen.

Biosafety Level 2 is suitable for work involving agents of moderate hazardous potential to personnel and the environment. It includes various viruses that cause only mild disease to humans or that are difﬁcult to contract via [aerosol](http://en.wikipedia.org/wiki/Aerosol) in a lab setting.

BSL-2 differs from BSL-1 in that:

* Laboratory personnel have speciﬁc training in handling pathogenic agents and are supervised by scientists with advanced training
* Access to the laboratory is limited when work is being conducted
* Extreme precautions are taken with contaminated sharp items
* Certain procedures in which infectious aerosols or splashes may be created are conducted in [biological safety cabinets](http://en.wikipedia.org/wiki/Class_II_cabinet) or other physical containment equipment.

Guidelines for the use of the virus lab:

* General:

As the virus lab is for common use, every user MUST follow the rules. Please help us keep the lab in good working order!

Make sure you work in a safe manner for yourself and your surroundings!

The doors should always be kept closed.

You can use the Virus lab after you have had an introduction from the person responsible for the room and been through training program conducted by an authorized person.

All persons working in the Virus lab should sign a form to state that the rules have been read and understood and sufﬁcient training has been received. This should be signed by the person responsible for the room and the person who conducted the training.

Everybody is responsible for keeping the lab clean and tidy.

Clean and tidy the lab benches after use.

Reﬁll RO water in the incubators and autoclave more as required.

Make sure to exchange waste boxes during the week and before the weekend. Switch on the UV light in the room and benches at the end of the week.

* Changing of lab coats/shoes:

Only yellow coats are allowed in the BSL 2 lab. Every user has to change their lab coat before entering the cell lab.

White lab coats and yellow BSL 2 coats should be kept separate in the anteroom (“sluice”).

Yellow lab coats should be changed every 1-2 weeks.

Also shoes need to be changed (or alternatively use the blue disposable shoe covers). No normal shoes are allowed beyond the marked area in the lab.

* Storage space: Each user has an assigned shelf and drawer space for their consumables and pipettes. Use your own equipment when working in the lab.

If you need to borrow anything from another group you need to clarify this in advance. Lab benches should not be used for storage since these are common workspaces. Electronic equipment that needs to be charged can be stored on the bench.

* LAF benches: Please reserve LAF bench time using the lists by the door. There are three LAF benches that have been divided between each group. The bench

should be turned on 10 minutes before use. Wipe the surfaces with surface disinfectant (70% EtOH) before and after use. Spilled liquids should cleaned immediately (ﬁrst with water, then 70% EtOH).

Only place things that you really need in the bench. Remember to remove everything from the LAF bench after use. Switch the UV light on when appropriate.

* CO2 Incubator: Every user has an assigned space in the CO2 incubators. The water tray needs to be cleaned once a month. This should be organised by the groups who are using the different incubators. The incubator displays a warning when more water is needed (RH PAN). Please reﬁl water and make sure there always is sterile ROwater in the Virus lab.
* Waste: There should be one waste box per LAF bench. Change the box when it is 3/4 full, after working with blood products, or before the weekend. When the box is full, close it and label with the appropriate sticker on the outside of the box. Put the box in the waste room (avfallsrom) next to the elevator (east).
* Liquid waste: Collect the liquid waste in a round yellow plastic bucket. Heat it in the microwave and discard it in the sink. If a vacusafe pump is used, add Virkon when ¾ full or before you start using it, and leave to stand overnight before disposing all liquid down the sink. Clean the bottle afterwards, ﬁrst with water and then spray with 70% EtOH.
* Mycoplasma routines: Before working with new cell lines in the cell lab, test for mycoplasma infection. Cultured cells should be tested regularly.

Karl-Henning Kalland’s group has the equipment to test for this.

* UV light: UV light in the benches should only be used when there is no-one working in the lab. The last one working in the lab each day should switch on the UV light in all three benches. The benches have a timer that will leave the UV light on for approximately 1 hour. The UV light in the room should be used once a week for 1 hour. The last person working each Friday or the “Ordens-mann” should switch this on. There is a timer outside the lab above the door. The UV light is switched off by re-setting the timer to ‘0’. When you switch on the UV light, remember to hang the UV sign on the door. Always remember to check if tthe UV light is on before entering the room.
* Problems: If there arise any problems regarding the room or the work performed there, please contact your group leader.

**PRE-PCR LAB (5130)**

Contact person: Marit Gjerde Tellevik.

The purpose of this room is to have a “clean” area for preparing reagents and reaction mixtures for PCR or other similar work. To avoid contamination, the work ﬂow must proceed unidirectional from the pre-ampliﬁcation area to post-ampliﬁcation areas.

* This is a ”clean” area; under no circumstance should DNA, RNA, other specimens or ampliﬁed material be transported to or manipulated in this room.
* All equipment including pipettes, ﬁlter tips, tubes, tube racks, gloves, mini centrifuges, vortex mixers, reagents, markers etc., are dedicated to this room.
* No reagents, pipettes or other items from other laboratory areas should be allowed into this room.
* All reagents and supplies should be delivered to and stored within this work area.
* Use dedicated lab coats that are kept in this lab (separate from post-ampliﬁcation areas).
* Always wear gloves.
* Always use ﬁlter tips.
* Do not bring protocols, books, etc from post-ampliﬁcation areas; make a copy!
* Mark your consumables (e.g. tips, tubes) with your name/group and date.
* Replace consumables when you use the last one and replace waste containers with new ones when they are full.
* Change the surface protection paper when needed.
* Tidy/clean up when you have finished.
* Avoid unnecessary trafﬁc in and out of the room and keep the door to this room closed.

**AGAROSE GEL ELECTROPHORESIS LAB (5129)**

Contact persons: Kristi Øvreås, Christel Gill Haansuus

* Always sign in before you start running gels.
* DO NOT use Ethidium Bromide in this room. Stain your gels with Gel Red.
* Mark your private stuff with name/group.
* Always use a lab coat.
* Always wear gloves when operating Gel Doc equipment and PC.
* Always turn off Gel Doc equipment after use!
* Turn the PC off and on if you have problems with the program.
* Ask before you borrow equipment from other groups.
* Throw waste in waste containers labelled “Cytostatika” (in the case of GMO). When ¾ full, pack and write the date and Lab building 5th ﬂoor on the label, and replace with a new one.
* Change surface protection when needed.
* Tidy/clean up when you have finished.
* Do not store equipment by the sink!