

# Workplace assessment and instructions for working with waste water in the laboratory.

Waste water contains micro-organisms and various chemical substances, which can pose a health risk through contact and inhalation. Therefore, it is important to avoid direct contact with waste water and to protect oneself against any risk of exposure. It is essential to observe the rules of good laboratory practice and good hygiene.

## What is the risk?

- Airborne risk of infection in the form of inhalation of aerosols.
- Risk of infection through direct contact, e.g. in case of sample spillage or hand contact.
- Risk of infection due to poor hygiene.
- Infections by contact with damaged skin, e.g. wounds or skin abrasions.
- Exposure to chemical substances by inhalation of aerosols and vapours.
- Exposure to chemical substances through skin contact through spills, splashes and splashes.

## What symptoms are there?

- In the case of disease-causing microorganisms in the body, nausea, fatigue, diarrhoea, headache, fever etc. can occur.

## How do you avoid being infected/exposed?

- Practice good hygiene before and after working with waste water.
- Avoid direct contact with waste water samples. If you come into contact with waste water, make sure you wash yourself immediately to reduce the risk of infection/exposure.
- Use safety equipment and personal protective equipment. Work in a fume hood and use labcoats/gloves, protective glasses. If there is a risk of splashing, replace the protective glasses with a visor.
- If it is not possible to work in a fume hood, in addition to the personal protective equipment mentioned above, a suitable respiratory protection must be used.

## Vaccination?

- You must be effectively vaccinated against tetanus, polio and hepatitis A. Check whether you have these vaccinations and whether they still cover or whether it is time to renew.
- Arrange the vaccination with your project manager before you go to the doctor. More information about vaccination in connection with work can be found here: <https://at.dk/regler/at-vejledninger/vaccination-personer-beskaeftiget-kloakslam-spildevand-d-2-14/> (only in Danish)
- The vaccination must be carried out by your own doctor and must take place at least 2 weeks before starting work with waste water.
- The cost of the vaccinations is paid by the AU project in which waste water is used.



## What do you need to do before starting work?

- Prepare and plan your work in such a way that it can be carried out in a completely safe and healthy manner (select a suitable laboratory).
- Check whether the right protective equipment (PPE) is available in the laboratory. (Labcoat, disposable gloves and goggles)
- Find all the necessary materials, that will be used during the experiment and have them nearby and prepare your workplace.

## How should you work with wastewater samples?

- Always wear gloves and labcoat if necessary, disposable plastic apron.
- Always handle the waste water samples in a fume hood, as this provides the least risk of inhaling aerosols.
- Work so that you avoid spills, splashes, splashes and the formation of aerosols,
- Always change gloves when the gloves come into direct contact with waste water.
- Do not touch handles on doors/cupboards/drawers and taps when wearing gloves that have been used for waste water samples.
- It is important to have plastic waste bags ready so that contaminated waste can be disposed of correctly.
- In case of spillage, wipe up with 70% ethanol.
- In case of spillage on the skin, wash thoroughly with soap and water and then use hand sanitizer.
- In case of sewage in the eyes, use eyewash bottles or the shower installed in the sink
- In the event of waste water in the mouth, rinse repeatedly with water and, if necessary, seek doctor
- Wash hands thoroughly before leaving the laboratory.

## What should you do when you finish work?

- Clean the fume hood, table tops and other surfaces thoroughly with 70% ethanol
- Clean the used laboratory glasses etc. with 70% ethanol and let it work for 30-60 minutes, after which it is rinsed with tap water and placed in the dishwasher.
- Labcoat may only be used in the wastewater laboratory.
- Make sure your labcoat is washed often and that it is washed in a special wash bag.
- Solid waste and disposable personal protective equipment are collected in a waste bag in the fume hood. At the end of the work, the bag is closed and put into a new bag, after which it is disposed as common waste.
- Liquid waste with waste water can be disposed of in small quantities, if it does not contain large coarse particles (blocking drains) and provided no additional chemicals have been added, via the drain in a fume hood. Drains are subsequently cleaned with 70% ethanol. Pay particular attention to the use of personal protective equipment against spills, splashes and the formation of aerosols. Large volumes of waste water are recommended to be autoclaved.
- Clean the fume hood with 70% ethanol.

## Pregnant or breastfeeding?

- If you are pregnant or breastfeeding, contact your immediate manager and a health and safety representative, as a workplace assessment must be carried out to assess whether it is safe for you, the foetus or the child to work with wastewater, for more information, see <https://medarbejdere.au.dk/en/administration/hr/workingenvironment/physical-work-environment/chemistry-and-biology/pregnant-and-breastfeeding-women>