# Autoclaving and washing of equipment in Molecular Genetics and Microbiology-labs

## Types of equipment:

1. Bacteria/DNA/RNA/antibiotics-contaminated disposable equipment (pipette tips, plastic pipettes (1, 2, 5, 10, 25, 50 ml), gloves, plastic kyvettes, tooth picks, glass beads, tubes (1.5, 5, 10, 13, 50 ml) etc.)
2. Bacteria/DNA/RNA/antibiotics-contaminated glassware/non-disposable plastics (shake flasks with lid/stopper, centrifugation tubes (small, large, x-large), other type of flasks, beakers, measuring devices etc.)
3. Glassware/non-disposable plastics used for preparation of solutions etc. (flasks with lids, beakers, graded cylinders (målesylindere), volumetric flasks (målekolber), spatulas, stirring magnets etc.)
4. Disposable plastics used for preparation of solutions etc. (pipette tips, plastic pipettes, plastic kyvettes, tubes etc.)

## How to deal with the autoclaving/washing:

**Equipement type 1:** Bacteria/DNA/RNA/antibiotics-contaminated disposable equipment is disposed of in the big autoclaving buckets in the labs. An autoclaving plastic bag is placed inside the bucket before any trash is put in to it. When the bucket is full it needs to be transported to the autoclave room (3.205) for autoclaving. Put some autoclaving tape on the lid to mark it (so that you can separate the non-autoclaved buckets from the ones already autoclaved). Write name of the group on the tape. After autoclaving, let the contents cool down before disposing of the autoclaving bag in the black trash bags (only one autoclaving bag in each trash bag). If anything has leaked from the autoclaving bag into the bucket (e.g. agar from plates), the bucket needs to be cleaned before it can be used again. Rinse the bucket with water or if the content is sticking: add water + soap and let stand for a while before rinsing.

**Equipment type 2:** Bacteria/DNA/RNA/antibiotics-contaminated glassware/non-disposable plastics are placed in the small autoclaving buckets in the labs. The lids of centrifugation tubes/bottles must be removed from the tube/bottle and placed next to it in the bucket (if the lid is on the tube during autoclaving, the tube may become deformed and will be ruined). When the bucket is full it needs to be transported to 3.205 for autoclaving. Put some autoclaving tape on the lid to mark it (so that you can separate the non-autoclaved buckets from the ones already autoclaved). Write name of the group on the tape. When the bucket has cooled down after autoclaving, put all of its content in to the dishwasher (except cotton stoppers). Lids are placed in a separate unit to the side of the sink. Try to place equipment in places that fits to prevent breakage. If there is any spill at the bottom of the empty bucket, rinse before re-use. After dishwashing, place clean equipment on table on wheels or bench (where marked CLEAN)

**Equipment type 3:** Non-disposable equipment that has not been in contact with bacteria/DNA/RNA does not need to be autoclaved. Transport equipment to 3.205 and put it in the dishwasher. Try to place equipment in places that fits. After dishwashing place clean equipment on table on wheels or bench (where marked CLEAN).

**Equipment type 4:** Disposable equipment that has not been in contact with bacteria/DNA/RNA does not need to be autoclaved. The equipment can be disposed of in the black trash bags present in the labs. Exception: plastic pipettes (5, 10, 25, 50 ml) may result in the black trash bags tearing when removed by cleaning personnel. Put all such pipettes in the assigned plastic box with an autoclaving bag in 3.207. If the box is full, remove the bag and throw it in the black trash bags. Place a new autoclaving bag in the box.

**Liquid bacteria waste:** Liquid bacteria waste is disposed of in the plastic containers placed in the labs (in fume hoods). Hazardous chemicals and organic solvents must not be added to these containers! Try to avoid pipette tips, toothpicks and glass beads from entering these containers. When the container is approx. half full, close the lid and transport it to 3.205 for autoclaving. Put some autoclaving tape on the lid to mark it (so that you can separate the non-autoclaved containers from the ones already autoclaved). Put the container in the metal bucket found next to the autoclaves (in case of spill during autoclaving). Open the lid of the container before autoclaving, otherwise the container will be deformed. After autoclaving, let the content cool down before disposing of it (either in the sink in 3.205 or in the sink in a fume hood if the content smells bad).

## Operation of dish washers:

There are two dishwashers available: Miele Professional G7883 and Miele PG 8583.

Dirty equipment is placed where it fits. Rinse autoclaved equipment (if quite dirty) before placing in the dishwasher. Be careful to remove any pipette tips, toothpicks etc. as such items may damage the machines. Lids, spatulas and magnets are placed in the separate unit placed to the side of the sink.

**Cotton stoppers:** Cotton stoppers cannot be washed in the dishwasher (will dissolve like paper and clog the filter). After autoclaving, cotton stoppers are simply put in the baskets on the bench for re-use. If a cotton stopper should happen to end up in a dishwasher anyway, please remove it as soon as this is discovered and clean the filter (otherwise the dishwasher will be ruined). Contact the lab engineer if you need help.

When the dishwasher is full, put one measuring spoon of washing powder in the dishwasher (washing powder Deconex) is found in a box on top of the dishwasher (with spoon) and in a bigger box next to the dishwashers). Check that there is rinsing agent left in the bottles placed on top of the dishwashers. For Miele Professional G7883 start program by checking that it is set to “E” and then pressing the green start button. For Miele PG 8583 start program no. 1. Register in the logbook so that you can be contacted if there are any problems. When the program is done, remove equipment from the dishwasher and place on table on wheels or bench to dry (where marked CLEAN).

## Organization of the work:

Groups organize work themselves**.**

**If you need help or have any questions: contact Hanne Jørgensen, phone: 913 51 279**