LABORATORY DECONTAMINATION and WASTE MANAGEMENT
LABORATORY DECONTAMINATION

- What is Decontamination?

  it is the removal of microorganisms to a certain level as not to be able to infect humans and cause disease.

- What is Sterilization?

  It is the absolute removal of all microorganisms.
LABORATORY DECONTAMINATION

- What Decontaminating agent you should use?

0.5% Sodium Hypochlorite Solution

- Dilute household bleach by mixing 1 part bleach to 9 parts distilled water.
- It must be prepared fresh daily.
- Prepared decontaminating agent should be clearly labelled with:
  - Agent name
  - Concentration
  - Date of preparation
LABORATORY DECONTAMINATION

What to wear when performing decontamination?

• For area decontamination
  • Nitrile gloves
  • Cover-all
  • Dedicated laboratory shoes or Rubber boots (when mopping)
  • Facial Protection (Respirator and Goggles or Face Shield)

• For equipment and supply decontamination
  • Nitrile gloves
  • Cover-all
  • Dedicated lab shoes
  • Facial Protection (Respirator and Goggles or Face Shield)
LABORATORY DECONTAMINATION

What should be Decontaminated?

• Laboratory Work Surfaces
  • floor, table and horizontal surfaces, anything you came in contact with while performing laboratory procedures.

• Laboratory Equipment
  • Biological Safety Cabinet, Centrifuge, Vortex mixer, Pipetors, PAPR’s

• Laboratory Supplies
  • Boots, supplies from the BSC, Transport boxes, PPE
LABORATORY DECONTAMINATION

How to perform Decontamination?

- Laboratory work surfaces
  - Apply decontaminating agent (0.5% Sodium Hypochlorite)
    - For the floor, use a mop soaked in decontaminating agent to apply it on the floor.
    - For table, horizontal surfaces and anything you came in contact with, soak an absorbent with the agent and wipe to spread or gently pour it directly on the surface and gently spread it.
    - Start from the cleanest part towards the dirty part to prevent the spread of contaminants.
  - Allow to stand for 10 minutes (for contact time)
  - Mop or wipe dry with paper towel.
LABORATORY DECONTAMINATION

How to perform Decontamination?

- Laboratory Equipment (BSC, Pipetor, I-Stat, etc.)
  - Check equipment manual for procedure in decontamination and if 0.5% sodium hypochlorite solution can be used as decontaminating agent.
  - Decontaminate surfaces exposed to infectious material with 0.5% Sodium Hypochlorite solution.
  - Allow to stand for 10 minutes.
  - Rinse off hypochlorite residue by wiping with 70% Alcohol.
  - Wipe dry with paper towel.
How to perform Decontamination?

- Laboratory Supplies (Items from the BSC)
  
  * Pipet tip rack, marker, decontaminant spray bottle, forceps, etc.

- Perform all decontamination procedure inside the BSC.
- Wipe with absorbent soaked with 0.5% Sodium Hypochlorite solution and allow to stand for 10 minutes
- Rinse off hypochlorite deposit with 70% alcohol
- Wipe dry with paper towel.
How to perform Decontamination?

• Laboratory Supplies (Transport Box/Containers)
  • Spray with 0.5% Sodium Hypochlorite solution and allow to stand for 10 minutes
  • Rinse off hypochlorite deposit with 70% alcohol
  • Allow to dry.
LABORATORY DECONTAMINATION

- How to perform Decontamination?

  - PPE’s (Boots)
    - If visibly soiled, soak in mild detergent to remove excessive dirt and organic material then soak with 0.5% Sodium Hypochlorite solution and allow to stand for 10 minutes
    - If not, spray with 0.5% Sodium Hypochlorite solution and allow to stand for 10 minutes
    - Rinse off hypochlorite deposit with 70% alcohol
    - Allow to dry.
# LABORATORY DECONTAMINATION

## When to perform Decontamination?

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<td>- Transport box</td>
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LABORATORY DECONTAMINATION

- Who must perform Laboratory Decontamination?
  - Trained medical technologist or laboratory professional.
WASTE MANAGEMENT
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GENERAL GUIDELINES

• All waste should be segregated at the point of generation.

  – Sharps (needle, pipet tips, applicator stick) should be placed immediately in puncture resistant containers. Container should contain decontaminating agent sufficient enough to soak contents. Container should not be filled more than 2/3 of its volume.
WASTE MANAGEMENT
WASTE MANAGEMENT

• All solid, non-sharp, infectious waste should be placed in leak-proof waste bags.

• These may include samples in containers, swabs, used paper towel, used PPE’s.
• All containers should be visibly labeled, leak-proof, and sealed before transporting.
WASTE MANAGEMENT

- Wear PPE when handling laboratory waste.
  - Heavy duty / Thick rubber gloves
  - Cover-all and Impermeable gown (when handling large amounts)
  - Dedicated laboratory shoes and Rubber boots (when handling large amounts)
  - Facial Protection (Respirator and Goggles or Face Shield)
WASTE MANAGEMENT

- Never handle laboratory waste against your body.

- Handle laboratory waste gently to avoid generating aerosols and/or breakage of container.
WASTE MANAGEMENT

• Before removing waste containers from the site, they should be sealed and external surfaces decontaminated.
WASTE MANAGEMENT

• They should only be transported in collection bins with cover to the site of sterilization.

• Collection bins should be decontaminated after use with 0.5% sodium hypochlorite solution.
WASTE MANAGEMENT

• All laboratory waste should be autoclaved at 121°C for 30 minutes prior to incineration.

• Refer to your equipment/operators manual for proper use of your Autoclave.
WASTE MANAGEMENT

• Add an indicator (Chemical or Biological) when autoclaving and label the indicator with equipment code, setting, date and time, and operator.

• All autoclaved waste should be clearly labelled as sterilized and placed in a secure, separate area prior to incineration.

• Never place autoclaved and un-autoclaved waste in a single area.
REFERENCE

- http://www.cdc.gov/HAI/prevent/prevent_pubs.html