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Standard Operating Procedure For The Action in Case of Class I GMO Splash or Spillage Within Research Space, LRI

University Hospitals of Leicester NHS
NHS Trust

Research Space SOP 5010

Trust Reference:C1/2022

1. Introduction and who this Standard Operating Procedure (SOP) applies to

The purpose of this SOP is to ensure that spillages of Genetically Modified Organisms (GMOs) are cleaned up with minimal exposure to the operator and to maintain containment of spillages and minimise risk to people and the environment

This SOP applies to all clinical staff, researchers, students, visitors, laboratory and pharmacy staff handling genetically modified organisms in Research Space.

This SOP is only applicable to Class I GMO studies where a safety cabinet is not recommended.

1.1. Responsibilities

All staff members performing this procedure are responsible for:

- completing appropriate training specified in the implementation plan, or be under the supervision of a trained person.
- safe handling and management of Class I GMO products in accordance with this SOP, local and national health and safety policy / guidance and study protocols.
- using personal protective equipment (PPE) as per local guidance and UHL B9/2004 Personal Protective Equipment at Work UHL Policy including gloves, plastic apron and visor for eye and mouth protection

The Research Space Senior Management Team (SMT) is responsible for:

- implementing and monitoring compliance with these procedures

2. Guideline Standards and Procedures

Before performing any procedures or injection involving a Class I GMO substance, a GMO spillage kit **must** be in the area where the procedure or injection is going to take place. The spillage kit will contain:

- SoChlor disinfection tablets
- SoChlor Granules
- SoChlor dilution bottle
- Gloves

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- Aprons
- Scoops and scrapers
- Illustrated step-by-step instructions

Ensure there is an adequately sized and appropriately labelled open sharps bin available.

2.1. Spillage on a work surface or floor

If spillage occurs and practicable, evacuate and secure the immediate contaminated area unless spillage during treatment of a patient.

2.2. Deactivating the spill

- A trained member of staff must ensure that they are wearing the personal protective clothing to clean up the spill. This includes wearing two pairs of gloves.
- Enter the contaminated area with the spill kit and open sharps bin.
- Place absorbent pad over the spill from the kit. Pour solution from the outside of the spill working inwards in a spiral motion and place absorbent pad over the spill.
- Leave for 10 minutes.
- During this time ensure that no other members of staff, visitors or researchers walk through the area.
- If the spill is due to a broken glass vial, the absorbent pad and all glass fragments must be scooped up using the designated spill kit scooper and scraper. This should then be directly added to the open sharps bin.
- If the spill is not due to a broken glass vial, the absorbent pad may be picked up by hand as long as the appropriate personal protective clothing is worn, and two pairs of gloves. Draw the corners of the absorbent pad inwards, remove it from the contaminated surface and place it in a sharps bin
- If required, the process should be repeated a further two times but only leaving 1 minute each time
- Dry the area fully with absorbent pad.
- Remove one set of gloves and place them in sharps bin.

2.3. Spillage on a metal surface

If spill is on a metal surface follow section 2.2 as above. In addition rinse the surface thoroughly with water to remove cleaning agent residue, as prolonged exposure may damage metal surfaces.

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2.4. Spillages contained to a blue tray

If a spillage occurs that is contained in the blue tray (most likely to transpire whilst an injection is being prepared) place the blue tray straight in a biohazard bag labelled as GMO waste.

2.5. Packing and Transporting Waste

Follow SOP 5011 Preparation and Administration of Class I GMO Vaccines for the packing of GMO waste materials and the transportation of waste.

2.6. Decontamination of Operators

- **Decontamination of Skin**
    - If the Class I GMO product is splashed onto the skin of an operator, care must be taken not to transfer the contamination to other areas.
    - For spillage on unbroken skin, wash area and irrigate thoroughly with running water for at least 15 minutes.
- **Decontamination of the eyes or mucous membranes**
    - Do not use alcohol gel on mucus membranes such as eyes or mouth.
    - Wash contaminated area immediately using a litre of 0.9% saline attached to a giving set for approximately 15 minutes.
    - Seek medical attention immediately.
    - Follow reporting procedures outlined in section 2.8.
    - For all inoculation injuries follow trust procedures.

2.7. Decontaminating of Clothing

- Put gloves on and wipe area with a wipe. Place wipe in autoclave bag
- Remove the contaminated clothing and gloves and place in GMO waste labelled bag.
- Follow SOP 5011 Preparation and Administration of Class I GMO Vaccines for disposal of GMO waste.

2.8. The 1-2-3 for Spill Cleanup:

- Remove the broken container. If broken container was glass, use scoop and scraper from spill kit. Place glass in sharps container for disposal. If container was not glass, place it in a biohazard bag for disposal.

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- Treat, absorb and remove the spill contamination. Cover spill with disinfectant saturated towel and allow to treat spill for several minutes. Absorb and remove spill contamination. Place absorbed spill materials and associated wastes in biohazard GMO waste bag. Repeat this process if any evidence of contamination remains.

- Disinfect all impacted surfaces. Apply disinfectant to all surfaces impacted by the spill (including those in the "splash zone"); wait the prescribed contact time before removing disinfectant residues.

- Use care to limit contact with contaminated surfaces when removing PPE. Place all used spill response materials (including mechanical tools and disposable PPE) in the biohazard bag for treatment as biohazardous GMO waste.

2.7 Reporting

Accidental spillages involving Class I GMO substances must be reported using the Trust online Datix system as soon as practicable. Those that need notification are:

- Head of Research (Nursing & Midwifery)
- Research Space Manager
- Children's Research Manager
- Head of Trust Occupational Health
- Biological Safety Officer

3. Education and Training

- CAUTION: pregnant, breastfeeding, and/or immunocompromised staff are NOT permitted to be involved in the preparation, administration, processing, disposal, or cleaning of any GMO product or spillage at UHL.
- Supervised or unsupervised handling or storage of Class I GMO products within Research Space must only be undertaken by staff who have:
  - Undertaken relevant GMO, vaccination, Medicines Management, study specific and/or lab training, as applicable to their role in the study
  - approval to work in Research Space managed facilities
  - completed a Research Space orientation

Supporting Documents and Key References

- SOP 5011 Preparation and Administration of Class I GMO Vaccines
- UHL B9/2004 - Personal Protective Equipment at Work Policy
- Relevant PPE risk assessments

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4. Key Words

Research Space, Genetically Modified Organisms, GMO, Splash, Spillage, Class I

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