



## STANDARD OPERATING PROCEDURE 601 URETHANE

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### **1. PURPOSE**

This Standard Operating Procedure (SOP) intends to describe the safe use of urethane in laboratory animals.

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### **2. RESPONSIBILITY**

Principal investigator (PI) and their research staff.

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### **3. HAZARD CONSIDERATIONS**

- 3.1. Carcinogen - Known to cause cancer in humans
- 3.2. Irritant - eyes, mucous membranes, skin
- 3.3. Toxicity - Kidneys, liver, CNS

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### **4. PERSONAL PROTECTIVE EQUIPMENT (PPE)**

- 4.1. Those handling urethane must wear chemically resistant gloves, a lab coat, eye protection, and appropriate lab attire (pants, closed-toe shoes).
- 4.2. Urethane work should be done in a chemical fume hood.
- 4.3. If manipulations occur outside of a chemical fume hood, personnel must wear a respirator equipped with a multi-gas filter until an exposure assessment can be conducted

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### **5. PREPARATION OF URETHANE SOLUTIONS**

- 5.1 Those preparing urethane solutions must always handle it inside a certified chemical fume hood.
- 5.2 Care should not generate any aerosol during the preparation or injection procedure.
- 5.3 Personal handling urethane must wear protective equipment (section 4.1)

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### **6. ENVIRONMENTAL CONSIDERATION**

- 6.1. Work with Urethane only in a chemical fume hood or hard ducted (total exhaust hood in room 16 Building M9).
- 6.2. Care should be taken not to generate any aerosol during the preparation or injection.

- 6.3. Use a bench liner to contain the material.
- 6.4. Any leftover/unused urethane should be collected for disposal as chemical/cytotoxic waste.
- 6.5. Used needles/syringes should be disposed of in a sharp's container destined for incineration, a cytotoxic sharps container.
- 6.5. Decontaminate the affected area with soap and water after absorbance in a spillover event.

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## **7. ACCIDENT RESPONSE PROCEDURES**

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- 7.1. If the skin is exposed, wash immediately with soap and water. Flush mucus membranes with large amounts of water. Use a wet shower in case of extensive contamination.
  - 7.1.1. Use the spill kit and attire in cabinet 9A (next to room 16, building M9) to decontaminate the work area.
  - 7.1.2. Report the incident to the supervisor.
  - 7.1.3. Reports the accident/injury to the safety dept by online form.
  - 7.1.4. Remove all sources of ignition from the spill area.
  - 7.1.5. Spills in fume hood - use absorbent pads or vermiculite to clean up small fume hood spills— Clean up the spill area with additional pads or paper towels, followed by clean water.
  - 7.1.6. Spills in the room – notify others of the spill and keep the spill confined.
- 7.2. Spills must be cleaned immediately by adequately protected and trained staff.
- 7.3. Respiratory protection is required to clean up urethane spills outside an operating fume hood, as well as a disposable lab coat, goggles, and two pairs of nitrile gloves.
- 7.4. Use the same procedure as " spill in the fume hood."
- 7.5. Label spill waste in a plastic bag as hazardous chemical waste.

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## **8. REQUIRED AUTHORIZATION**

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- 8.1. The chemical safety officer must approve the suitability of the location and equipment to use urethane and have a startup meeting with the PI and research team before procurement.
- 8.2. The Principal Investigator (PI) must provide lab-specific training to all laboratory workers regarding the hazards (physical and health) involved in working with the substance, work area decontamination, and emergency procedures.
- 8.3. The PI must provide a copy of the MSDS and this SOP to any lab work with any materials covered.
- 8.4. The PI must ensure that all lab personnel has attended the required training and refresher training.

**SOP 601 URETHANE**

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*Approved by the BGU Animal Policy and Welfare Oversight Committee*