

Standard Operating Procedures for Bromo-Deoxyuridine (BrdU)

For an Emergency refer to the Safety Data Sheet

Hazards:

Possible Mutagen- may cause heritable genetic damage

Possible Teratogen- may cause birth defects

Toxin- inhalation, ingestion, skin contact

Chemical handling instructions:

Personal Protective Equipment (PPE):

Those handling BrdU must wear chemically resistant gloves, lab coat, eye protection, a dust respirator and appropriate lab attire (pants, closed-toe shoes).

Preparing BrdU solutions:

1. Those preparing BrdU solutions must always handle it inside a certified chemical fume hood.
2. The work area should be prepared by laying down an absorbent work surface with the absorbent material facing up. Tape the edges of the absorbent material to prevent its movement in the fume hood.
3. Care should be taken to not generate any aerosol during the preparation or injection procedure. Always wash hands after removing gloves following handling BrdU.
4. To clean areas where BrdU has been handled, wash the area with soap and paper towels after removing the absorbent material. Any contaminated paper towels will then be placed into a container for hazardous waste, appropriately labeled for waste removal and placed in a designated area for disposal.

Waste Disposal:

1. Any leftover/unused BrdU should be collected for disposal as hazardous waste. All material contaminated with the chemical and residual chemical must be disposed of as hazardous waste. Re-useable glassware and other non-porous materials can be decontaminated by soaking in 10% bleach for 24 hours.
2. Used needles/syringes should be disposed in a sharps container destined for incineration. Do not recap or bend needles.
3. Contact the Safety Office at x2697 or SafetyOffice@unthsc.edu for hazardous waste pickup.

Animal Experiments

Research staff must inform DLAM in advance that BrdU will be used, and arrangements will be made for appropriate animal housing.

Injecting animals with BrdU:

1. Animals must be injected within a Class II Type B Biosafety cabinet or designated fume hood.
2. Animal handler must wear PPE as above with a 2nd pair of gloves (double-glove).
3. All needles must be disposed of in sharps container – do not recap or bend needles.
4. Dispose of waste as described above.

Cage handling:

1. DLAM staff should be made aware of BrdU use and cage cards should be labeled with "BrdU" after injection.
2. Animal cages and bedding are considered hazardous for a minimum of 3 days after an injection of BrdU. The first cage change after each drug administration is to be done no sooner than 3 days after the administration.
3. The bedding is considered contaminated and requires special handling. All bedding changes should be handled using procedures that minimize aerosolization.
4. After this first cage change there is no need for further special precautions to be taken regarding the animals or the cages as long as the animals have not received any more BrdU.
5. Dispose of all contaminated bedding and animal carcasses in waste container to be incinerated.