

Use of Bromo-Dioxyuridine (BrdU)

Purpose:

To provide guidance for the use of Bromo-Deoxyuridine (BrdU) in the laboratory and animal facility environment. BrdU is commonly used in research at UW-Madison to detect replicating cells in living tissues.

Precautions:

The following information can be used to complete the Safety section of your animal protocol.

1. Chemical hazard agents – (Identify the category of the chemical): (*Select the following*)
 - Mutagen
 - Reproductive Hazard/Teratogen
 - Toxicant/Toxic Agent
2. Containment preparation – (Containment equipment required for the preparation of the chemical): (*Select the following*)
 - Fume Hood
3. Containment animals – (Containment equipment required for chemical administration and handling animals after exposure to the chemical): (*Select the following*)
 - No special containment needed.

NOTE: For Rodents: Microisolators or other containment type housing is recommended.
4. PPE needed - (for handling live animals, carcasses or animal waste/dirty bedding): (*Select all of the following*)
 - Exam gloves – nitrile
 - Safety glasses/goggles
 - Lab coat or disposable gown
5. Waste Disposal: (disposal of animal waste/dirty bedding from animals after exposure to the chemical) (*Select both options and include additional information for Other*)
 - Bag animal waste/dirty bedding and place sealed bag in secondary container and place secondary container in regular trash.
 - Other: Signage is required on each individual cage containing the chemical health hazard symbol and “Agent, End date and Disposal method”. *Cage signage available at www.ehs.wisc.edu

- **NOTE:** For BrdU administered in water, treated water should be disposed of into the drain with copious amounts of water within the animal room. Water bottles should be labeled appropriately.
- 6. Carcass disposal: (*Select the following*)
 - Pick up by EH&S for incineration.
- 7. Chemical human risk: (*Add the following*)
 - BrdU can cause mutations in DNA and appropriate precautions should be taken to avoid exposure. Pregnant and lactating women should avoid exposure to BrdU and animals that have been administered BrdU). As BrdU exposure can impair the immune system; immunocompromised individuals should also use extreme caution when handling BrdU.

References:

“Chemical Safety Practices Recommendations Bromo-Deoxyuridine (BrdU)” NIH December 2014

https://ncifrederick.cancer.gov/ehs/Safety/Media/Documents/CSPR_BrdU.pdf

“Bromo-Deoxyuridine (BrdU) SDS”

<http://www.sigmaaldrich.com/catalog/product/sigma/b9285?lang=en®ion=US>