

Use of Chloramphenicol

Purpose:

To provide guidance for the use of Chloramphenicol in the laboratory and animal facility environment. Chloramphenicol is commonly used in the laboratory environment at UW-Madison for selection of microbes (in vitro) that have been engineered to have resistance to chloramphenicol; and also as an antibiotic in live animals.

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) :
 - Carcinogen
 - Irritant (respiratory/eye/skin)
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
4. PPE needed - (for handling live animals, carcasses or animal waste/dirty bedding): (*Select all of the following*)
 - Exam gloves – nitrile OR Exam gloves - latex
 - 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 the following*)
 - No special precautions needed for waste/dirty bedding
6. Carcass disposal: (*Select the following*)
 - Pick up by EH&S for incineration.
7. Chemical human risk: (*Add the following*)
 - Chloramphenicol is listed as a possible carcinogen. Occupational exposure risk is the greatest while handling the powdered form because of the possibility of inhalation and eye exposure. Once prepared in liquid form, care should be taken to avoid accidental ingestion or inoculation. The amount needed for toxic effects in humans is relatively large compared to the small amounts generally used in cells or small animals in the laboratory setting. Dermal absorption is

possible but considered of small risk as a large contact spill would be required for toxic amounts to be absorbed dermally. Dermal contact can cause skin irritation. Because of the unpredictability of aplastic anemia, all exposures should be promptly reported and a physician consulted if necessary.

References:

“Chloramphenicol National Toxicology Program” NIH October 2014
<http://ntp.niehs.nih.gov/ntp/roc/content/profiles/chloramphenicol.pdf>

“Chloramphenicol SDS”
<http://www.sigmaaldrich.com/catalog/product/sigma/c1919?lang=en®ion=US>