

FLSC Standard Operating Procedure for Handling Doxycycline in the Vivarium

Purpose

Transgenic animals often exhibit lethality that interferes with the researcher's ability to investigate genetic deletions. Some transgenic mice have inserted into the genome a section that allows expression of the gene(s) until the gene activity is turned off by the addition of doxycycline in food or water in effect creating a null animal. This SOP is to ensure the safe handling and disposal of doxycycline treated food and water.

Precautions for Handling Food and Water

1. Personal Protective Equipment (PPE) must be worn when handling doxycycline treated food, water, or animal or their caging. PPE required includes:
 - a. Nitrile gloves
 - b. Particulate filter mask
 - c. Safety glasses
 - d. Face shield or goggles when pouring doxycycline treated water
2. Avoid creating dusts from food – do not sift or shaking food.
3. Avoid creating aerosols from water – reduce the distance from stock container to water bottle when pouring.
4. Wash hands and arms immediately after handling to avoid skin irritation.
5. Discard all PPE after use. Do not reuse masks or gloves.

Disposal Requirements

1. Food should be disposed with the dirty bedding.
2. Soiled cages from doxycycline treated mice must be emptied at a dump station.
3. Nitrile gloves, particulate filter mask, and safety glasses must be worn during the removal of food and soiled bedding.
4. Water bottles containing doxycycline treated water can be emptied into a drain or sink. A face shield or goggles must be worn as a precaution against splashes. Nitrile gloves and procedure mask must also be worn.

Additional Precautions

1. Doxycycline treated water must be prepared in the PI's lab. Doxycycline in the pure powdered form is not to be brought into the animal facility.
2. Commercially prepared pelleted diet will be transferred into feed containers. Secure the bag with a twist tie to prevent exposure to dust.