



# Waste Education Series

Cooperative Extension · University of Wisconsin - Extension

425.SB9704

## WASTE REDUCTION IN THE VETERINARY CLINIC



This fact sheet is being provided to assist your veterinary clinic with the proper management of your toxic, hazardous<sup>1</sup>, and medical wastes. Reduction of toxic substances and other wastes at the source is a major objective of the United States Environmental Protection Agency and the State of Wisconsin's Department of Natural Resources. This is often the most cost-effective manner of managing wastes. The next few pages will explore management and reduction techniques for mercury and other wastes. You will learn to save your clinic money while complying with state and federal regulations.

### INTRODUCTION

It is recommended that the use of mercury in your veterinary practice be eliminated wherever possible to help keep mercury out of the environment. Not all mercury that you use remains in your clinic. Some of it escapes into the environment, undergoes change, and is eaten by fish. Mercury-contaminated fish are the most likely source of mercury's potentially adverse effects on human health.

This happens because the mercury discharged through your clinic's sewer system cannot be removed by your community's wastewater treatment plant. Although the amount of mercury may be quite small, any release is costly to your business and the health of the food we eat.

### *Medication Containing Mercury*

Listed here are several products which contain mercury that can be found in veterinary practices. In order to reduce the mercury coming from your practice, you can either find alternatives for these products or take special precautions so as not to allow the product to go down the drain and enter your sewer system or septic system.

<sup>1</sup> Hazardous waste and toxic emissions are regulated by the Wisconsin Department of Natural Resources

Product	Mercury-containing ingredient	Manufacturer	Alternative/ Substitute
Dip-A-Way	Merbromin	Universal Aquarium Systems	Watch for alternatives; be careful not to discharge to drain.
Wound Control	Merbromin	Universal Aquarium Systems	Watch for alternatives; be careful not to discharge to drain.
RX ICK Control	Merbromin	Wardley Corp	1) If you detect the ick at the very early stage, changing the water and incre-asing the temp. to 82°F for 7 days will kill the bacteria - no medication necessary. If medication is necessary, Promethyasul is mercury free.
Thimerosal (Vaccine)	1:10,000 approved by USDA for use in leptospirosis bactirens vaccine for cattle, swine and dogs.		Use up all vaccines; return expired vaccines to vendor.

### ***Facility Mercury and Other Chemicals***

Mercury can also be found in the following sources. The preferred solution is to use mercury-free equipment instead, but until you are able to find alternatives, it is important to be able to handle the materials properly. In general, mercury spill kits should be available in all areas where mercury containing products are used and all employees should be trained on how to handle mercury spills.

#### **Thermometers -**

- ⇒ Use digital thermometers, electronic sensors or temperature strips instead of thermometers containing mercury.
- ⇒ Mercury free (Geritherm)

#### **Batteries -**

- ⇒ Phase out mercury-containing batteries in equipment.
- ⇒ Set-up in house recycling program for batteries.
- ⇒ Use re-usable, rechargeable batteries whenever possible.
- ⇒ Keep batteries out of sharps containers.

#### **Other Chemicals -**

- ⇒ Do not put chemicals containing pollutants down the drain. Substances to be aware of include hazardous wastes and all products containing silver, cadmium, chromium, copper, cyanide, lead, mercury, nickel, selenium and zinc.
- ⇒ Make sure all chemical containers are clearly labeled and securely closed.
- ⇒ Provide secondary containment for all hazardous materials and waste storage.

#### **Cleaning -**

##### **Eliminate:**

- ⇒ Floor waxes or strippers that contain zinc.
- ⇒ Toilet cleaning and disinfection products containing tri-butyl tin.
- ⇒ Carpet and upholstery cleaners that contain tri-butyl tin.

## *Just a Few Vendors*

<b>Mercury Recyclers:</b>	U.S. Technologies 21211 Durand Avenue Union Grove, WI 53182 414/878-2599	Inmetco PO Box 720 Ellwood City, PA 412/758-5515
<b>Licensed Infectious Waste Haulers:</b>	BFI Milwaukee: 414/679-0860 Madison: 608/271-2522 Eau Claire: 715/835-3538 Green Bay: 414/456-9733	L.B. Medwaste PO Box 1486 Wausau, WI 54402-146 715/355-5505
<b>Gallistan Containing Thermomenters:</b>	R.G. Enterprises 2000 Town Center, Suite 1900 Southfield, MI 48075	

### **X - Ray Fixer and Developer -**

X-ray fixer is considered a hazardous waste because of its high silver content. However, fixer is easily recyclable. USEPA and WIDNR recommend that you recover and recycle silver. Developer should not be mixed with fixer solutions. Waste developer can typically be sewerred if it is not mixed with fixer (check with your wastewater treatment plant operator). If your x-ray machine mixes the fixer and developer, an adapter can be purchased to keep them separate. The fixer can be handled one of three ways:

- ⇒ Use a silver recovery unit for your developing system if you comply with the hazardous waste recycling requirement, (NR625, Wis. Administrative Code). This can be sewerred if approved by your wastewater treatment plant operator.
- ⇒ Give, sell or pay someone that operates a silver recovery unit to take your fixer. If disposed of off site, collect and store it in a closed plastic container labeled: Hazardous Waste - Used Fixer.
- ⇒ Use a cleaner that does not contain chromium.

For information on silver recovery, request SHWEC fact sheet 430.WP9511

## ***Medical Waste***

Medical waste must be handled carefully in order to fulfill Occupational Safety and Health Act (OSHA) standards and WIDNR rules.

**Animal Tissue:** Any animal tissue known to be carrying or experimentally infected with a zoonotic infectious agent (i.e. Bacillus anthracis, Brucella abortus, Chlamydia psittaci, Coxiella burnetii, Lyssa virus (rabies), Mycobacterium bovis, Mycobacterium tuberculosis etc.) must be treated by one of the following methods:

1. Methods which render the tissue non-infectious.
2. Incineration in a licensed medical waste incinerator.
3. Burial on the land on which the animal was kept, in accordance with s. 144.44(7)(h), Stats., for animals infected with scrapie or s. 144.44(7)(g), Stats., or NR 503.08 for other animals.

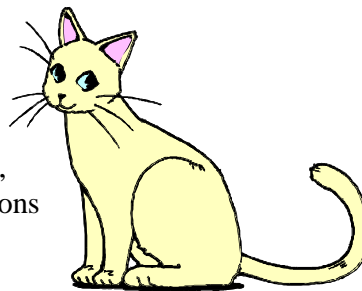
**Bulk Blood:** If you have bulk blood on towels, gauzes, etc. that is not totally absorbed (that you can squeeze or pour blood or infectious waste from the material) you must properly dispose of this blood/infectious material. Place it in a plastic bag that is both puncture- and tear-resistant. If necessary, use two bags. Rigid reusable containers are also acceptable as long as they are disinfected after being emptied. Place the sealed bag in a rigid shipping container, e.g., corrugated cardboard box, a covered reusable container or a cart. The rigid container must be labeled with a bio-hazard emblem and the word “bio-hazard”. Don’t re-open the bags or containers except to prevent spills or leakage.

It is recommended that you arrange for a licensed infectious waste hauler to remove your tissue and bloody infectious waste. If you always transport less than 50 pounds per month, you may transport your infectious waste to a treatment center yourself without having to get a special license.

## Refer to your yellow pages for a listing of waste disposal services.

**Sharps:** Place sharps, such as used needles, in rigid-puncture resistant containers with secure lids or caps. Acceptable containers include commercially-available sharps containers or heavy plastic detergent or bleach bottles with screw caps. Unacceptable containers include coffee cans (their lids are too easily punctured), plastic milk jugs, plastic bags, pop cans or soda bottles. Sharps containers must be labeled with a bio-hazard emblem or with the words “bio-hazard”, “sharps” or “infectious waste”. DO NOT add bleach to the container; bleach may not completely disinfect needles, and it may spill and injure you or waste handlers.

Sharps collections stations are places that collect discarded sharps as a public service, generally at or below cost. They can be found at pharmacies, health care organizations and the like. There are currently more than 250 registered stations state-wide, with at least one in most counties. While some serve only home generators, many accept sharps from generators like your clinic. To locate stations near you, call you local WIDNR office or the American Diabetes Association (1-800-342-2383).



County Extension Information	SHWEC Offices	
	<p style="text-align: center;"><b><u>Green Bay</u></b>            University of Wisconsin            Environmental Science 317            2420 Nicolet Drive            Green Bay, WI 54311            414/465-2707            Fax: 414/465-2143</p> <p style="text-align: center;"><b><u>Stevens Point</u></b>            College of Natural Resources            University of Wisconsin            Stevens Point, WI 54481            715/346-2793            Fax: 715/346-3624</p>	<p style="text-align: center;"><b><u>Milwaukee</u></b>            UWM UW-Extension            SHWEC            161 W Wisconsin Ave            Suite 6000            Milwaukee, WI 53203-2602            414/227-3175            Fax:414/227-3165</p> <p style="text-align: center;"><b><u>Madison</u></b>            610 Langdon Street            Room.529            Madison, WI 53703            608/262-6250            Fax: 608/262-6250</p>