

**Proper Preparation, Dilution, Usage and Storage of Drugs, Medical Materials and  
Controlled Substances**

- Secure the keys to the narcotic cabinet,
- Document after each use of the CS
- Uniquely identify each bottle of CS which matches the CS log sheet,
- Maintain current inventory after each use,
- and store only CS in the narcotic lockbox.

If barbiturate agents (i.e. pentobarbital) are in short supply, pharmacy may recommend an alternative euthanasia solution (SleepAway®, Euthasol®, Beuthanasia®, etc) that can be ordered. Use of this alternative euthanasia agent will not require a modification to your protocol.

- Important note: Euthanasia agents containing pentobarbital MAY NOT be substituted for pentobarbital or other agents for recovery procedures.

If an investigator orders controlled substances using his/her own DEA number for use in live animal research, he or she is responsible for secure storage, accurate documentation, proper disposal (surrender) and use of compounds that are not expired.<sup>12</sup>

### **Substances Administered for Experimental Purposes**

Non-pharmaceutical-grade chemical compounds used for experimental purposes must meet the requirements described in UCAR's Non Pharmaceutical Grade Substance Policy.<sup>6,8</sup>

### **Preparation and Handling of Medical Materials**

Medical Materials administered to animals must be handled and stored to maintain sterility. This is accomplished by:

- Appropriate closed sterile containers (e.g. injection vials, red-topped blood tubes)
- Mixing the smallest amount of agent suspension/dilution/mixture needed to minimize storage time
- Using aseptic technique when adding or withdrawing solutions
- Using clean, sterile container for each preparation (do not reuse)

Drugs and fluids must be stored in ways that will not affect their efficacy upon administration to animals. Improper storage of such materials includes the following: 1) storage in a dirty environment, e.g. permanent placement of a hypodermic needle in the top of a multi-dose vial 2) storage in an unsuitable environment, e.g. maintaining drugs intended for refrigeration at room temperature or not storing light sensitive drugs in amber or covered bottles and 3) storage of drugs in unlabeled containers or syringes.

the date of first use written on them. Fluids that contain sugar (e.g. glucose, dextrose) should be discarded 12 hours after they are opened because of their ability to support microbial life if contaminated. All other fluids where **aseptic technique\*** is used must be discarded 30 days after their first use.<sup>2</sup>

- The expiration date (use-by date) for dilutions; medications from stock vials stored in secondary containers (i.e. sterile vials, sterile tubes or bottles) and cocktails of anesthetics (e.g., ketamine + xylazine) and other drugs will be 30 days from the date of compounding or the earliest expiration date of any single compound used, whichever is first.<sup>2</sup>

- Mixtures may be given extended expiration dates if scientifically justified (e.g. if there are published studies of stability or the PI provides evidence that the mixture is stable, sterile and effective for longer than 30 days).<sup>3</sup>

- For tribromoethanol (TBE, Avertin), please refer to the TBE policy.

### **Laboratory Inspections**

Throughout the year, the University of Rochester is subject to unannounced inspections by two important governing agencies. USDA and New York State inspectors visit animal housing areas, procedure rooms, surgical facilities and laboratories where animals are taken for research. If improperly prepared or stored drugs, or expired medical materials are identified, the institution may be cited for veterinary deficiencies.

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9. URMIC, Department of Pharmacy Policy and Procedures (Inpatient Pharmacy) – Controlled Substance in Animal Research Labs (10G).
10. USDA APHIS Animal Care Resource Guide Policies, AC 3.1
11. USDA APHIS Animal Welfare Regulations, 9 CFR § 2.33 (2008).
12. U.S. Department of Justice, Drug Enforcement Administration, Diversion Control Division