University of Nebraska Lincoln

Safe Operating Procedure

(Revised 12/13)

PRESERVED SPECIMENS HAZARDS, STORAGE, LABELING, AND DISPOSAL

(For assistance, please contact EHS at (402) 472-4925, or visit our web site at http://ehs.unl.edu/)

Biological specimens such as fish, amphibians, mammals and other organisms are often placed in a sealed container with a preserving solution to prevent the tissues from decomposing. The most commonly used preserving solutions are:

- Formaldehyde and water
- Acetic acid, ethanol, formaldehyde and water (sometimes abbreviated FAA)
- Glycerin and methanol (called glycerol)
- Nebanol
- Glycerin
- Formaldehyde/methanol (called formalin) and water
- Ethanol (or isopropanol) and water
- Carosafe

Where possible, avoid using formaldehyde, methanol, and ethanol for the preservation and storage of specimens. Formaldehyde possesses low occupational exposure limits, poor warning properties, and is likely carcinogenic. All work with formaldehyde preservatives should be done in a chemical fume hood or while wearing adequate respiratory protection. Respirator users must contact EHS to enroll in UNL's Respiratory Protection Program.

Methanol and ethanol are flammable liquids. Specimens in flammable preservatives must be stored in flammable liquids storage cabinets or in engineered flammable liquid storage rooms when quantities exceed fire code limits.

Specimen containers must be labeled. See the EHS SOP, ***Chemical Container Labeling.*** The storage solution, not the initial preserving solution, is what must be recorded on the label.

Generally, unwanted specimens are incinerated, collected by EHS, or managed through a contractor. Specimens must not be disposed as ordinary garbage. Disposal of preserving and storage solutions is accomplished by tagging them for collection by EHS.