

SAFETY RISK MANAGEMENT OF RESIDUAL PESTICIDES IN COLLECTIONS

Kerith Koss Schragger, Anne Kingery-Schwartz and Kathryn Makos (Health & Safety Committee of the American Institute for Conservation)

Individuals should consider their own health and safety to be equally as important as the health and safety of the collections in their care, particularly when handling potentially hazardous materials such as those containing pesticide residues. Creating a comprehensive plan to assess and manage risks provides management with a prioritized plan for budgeting resources toward not only protecting staff but making collections accessible for use. Safety investments are not just a legal requirement of the collecting institution to provide a safe environment, but also a positive factor in productivity.

ARE YOU AT RISK?

HAZARD vs. RISK – An Important Distinction! Pesticides are inherently hazardous by nature. Risk is the degree to which that hazard will negatively affect your body's systems.

Disciplined reliance on OSHA recommended safe work practices, engineering controls, and proper training will help reduce your health risks.

For example, formaldehyde (a carcinogen) poses low-exposure risk if handled with proper gloves and used in a hood by a person with safe work practice training.



WHAT IS A RISK MANAGEMENT PLAN?

A Risk Management Plan serves to protect persons from the risks associated with workplace tasks such as handling collections-based hazards inherent to or acquired by objects and specimens. Once the commitment is made to create proactive safety programs, the technologies of hazard control are well-developed, often inexpensive, and easily accessible.

HEALTH & SAFETY RESOURCES

Numerous public health and safety resources exist to help individuals as well as large facilities assess hazards, then develop and implement a risk management plan. These include easily accessible web-based information, such as directories of professional organizations' safety consultants, information on pro-bono services, and links to occupational medical clinics.

For links to resources on specific topics, visit the **AIC Health & Safety Committee website** www.conservation-us.org/HealthandSafety

KEY ELEMENTS OF A SAFETY RISK MANAGEMENT PLAN

The following procedures will help create a risk management plan for the safe handling of pesticide-contaminated objects.

Contamination includes all current pesticide treatments, legacy hazards from historic treatments and toxic elements inherent to the collection.

HAZARD IDENTIFICATION by Collection Type

Determining whether pesticide residues are present on objects can be difficult since the residues are often not visible to the naked eye.

- Chemical or analytical tests are required to confirm the presence of pesticides
- Learn to recognize the types of collections that are commonly treated and the types of pesticides that are used on those collections
- Keep in mind that organic ethnographic, taxidermied and botanical collections were regularly treated with pesticides such as arsenic, mercury and DDT

EXPOSURE ASSESSMENT

If pesticides have been identified, conduct an assessment to define the severity of the contamination and the risks associated with handling, storing or displaying contaminated objects.

- Determine if the contamination can be contained or eliminated
- Consult an Industrial Hygienist or Safety Professional
- Identify exposure risks through personal monitoring while performing work tasks
- Use exposure study results to decide feasible ways to remediate or control exposures

REMEDIATION & DECONTAMINATION

In many cases, objects cannot be completely decontaminated and should be isolated to prevent contamination of cabinets, workspaces and exhibitions cases.

- Clean objects using a HEPA-vacuum for dust suppression or wash to remove contaminants
- Use a fume hood or trunk whenever possible
- Consult federal, state and local regulations for proper disposal of each type of pesticide on objects and materials—they may be EPA regulated hazardous waste
- Process specimens quickly to remove treatment hazards and cover during transport

SAFETY PROTOCOLS & TRAINING

Anyone who will be in contact with contaminated objects or areas must receive periodic training for handling, treatment and cleaning.

- Always wear and have in stock the appropriate Personal Protective Equipment (PPE) such as gloves, respirators, lab coats, Tyvek suits and goggles that are approved for the identified contaminant
- Create a written plan describing safety protocols once a contaminated object has been identified

HAZARD DISCLOSURE

Learning to effectively communicate about hazards is an important step in safety in the workplace.

- Post warning signs for staff and visitors, alerting them to the hazard and required access procedures
- Learn legal and ethical practices for the disclosure of pesticide-contaminated items that are going to be shipped, loaned or repatriated
- Get hazard identification from all lenders of collections, including your own staff

