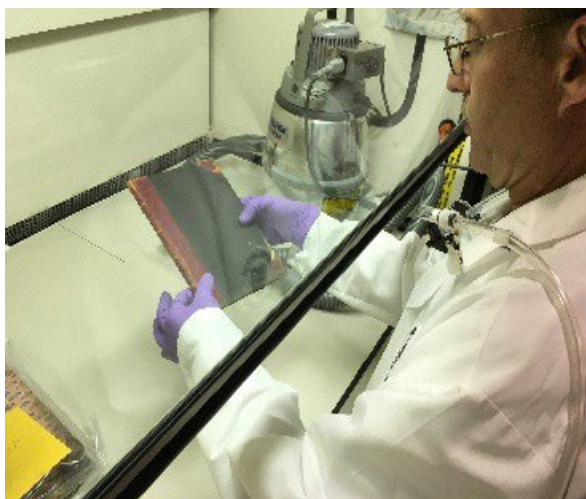




Conservation Lab Safety:

Harvard University's Conservation Labs play a critical role in supporting the longevity and accessibility of millions of accessions including scientific instruments, botanical, biological and organismic specimens and models, books, manuscripts, maps, photographs, archaeological, ethnographic and cultural collections. While these labs may differ in size, scope and as to the kinds of accessions they conserve, they may conduct activities that involve a variety of Environmental Health & Safety (EH&S) compliance risks. Some of these risks include, but are not limited to the handling, use and shipment of various chemicals and other hazardous materials, the safe storage and disposal of wastes, the safe use and disposal of sharps, the proper use of engineering controls and personal protective equipment (PPE), ergonomics, pest control and the lifecycle management of accessions. This fact sheet is designed to provide information and guidance on these EH&S risks. Every Conservation Lab on campus is supported by a Lab Safety Advisor (LSA) and/or a Designated Safety Officer (DSO) from the EH&S Department. Please reach out to your LSA or DSO for assistance with EH&S related concerns or questions.

Contact information: EHS [staff directory](#) and [assignments](#) by school/department.



Left: Inspecting pesticidal residues on library general collections.



Right: Historic restoration technique involving arsenic-containing adhesive and silk mesh on library special collections.

Collections that are known or suspected to be impacted by mold, pesticides, pests or their droppings, chemicals, metals, radioactive elements or poisons or are just unusual should be handled (if they must) under the assumption they are impacted and following Universal Precautions.

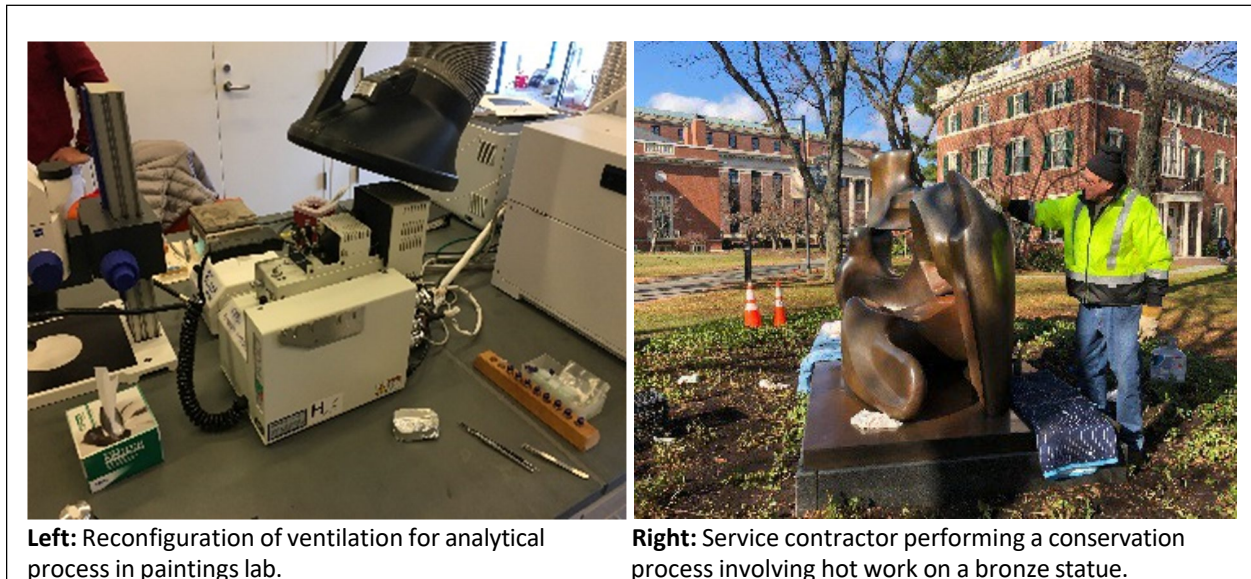


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Universal Precautions:

- Handle the objects in a manner which minimizes the disturbance of any contaminants.
- Wear appropriate fitting nitrile gloves when handling objects and always wash hands afterwards.
- Wear a lab coat when interacting with objects, to minimize the risk of bringing contaminants outside the lab on your clothing.
- Utilize an engineering control that is appropriate to the hazard (chemical fume hood, HEPA down draft table or self-contained hood, etcetera.)
- Do not permit food and drink storage or consumption in the area where these interactions occur.



Left: Reconfiguration of ventilation for analytical process in paintings lab.

Right: Service contractor performing a conservation process involving hot work on a bronze statue.

EH&S areas of consideration for Conservation Labs include:

- **Shipping/Transportation** of dangerous materials (Nitrite film, specimens in Ethanol) regulated by Department of Transportation or International Air Transportation Association. Contact your DSO or LSA for assistance.
- **Safe use and [compliant disposal of non-biological sharps](#)** such as scalpels, forceps, paper cutters.
- **Use of equipment** such as manual presses, board creasers and mechanical punches for example require proper training, guarding and controls. Users of this equipment must be properly trained and qualified and guards must be installed and in place.
- **Use of engineering controls** such as local exhaust, self-contained particulate and direct ventilation fume hoods, HEPA vacuums and downdraft tables. These may be used to control chemical fumes or dust. Regular inspection, certification and preventive maintenance of these types of equipment is typically required – refer to manufacturer’s



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specifications.

- **Lifecycle management of accessions** containing unusual materials that were part of historic treatment processes. The accessioning, handling, storage, labeling, patron use, reformatting and deaccessioning (including proper disposal) of collections containing mold, chemicals and metals as pesticides, pigments, etc. Contact your DSO or LSA to request a determination.
- **Ergonomics** associated with transporting, unpacking/packing and general handling of heavy and/or awkward accessions and repetitive bench top work can result in injury. Contact your DSO or LSA for an ergonomics evaluation to prevent this.
- **Respiratory protection (all respirators)** whether used as part of a mandatory or voluntary program must be evaluated by EH&S and will typically require training, medical clearance and respirator fit testing.



Left: Measuring radiation from a collection of scientific instruments, samples and manuscripts. **Right:** Inspecting library special collection impacted by pest damage.

- **Service Contractor Safety** expectations must be communicated to contractors and other non-Harvard personnel performing work on behalf of or at the direction of Harvard staff. Where possible, the contract for this labor should reference Harvard's [Service Contactor Safety Guide](#).
- **Hazard Communication** through signage and labelling of materials used in the lab. Safety Data Sheets (SDS) for chemicals are available via the EHS [website](#).
- **Appropriate storage and disposal** of chemical and other waste generated by the lab. [Chemical Waste Compliance Tips for Labs](#).
- **Pest management** to protect collections, and the greater facility and manage incoming accessions and loan returns. EH&S can provide assistance with developing an appropriate IPM plan, identifying pests, and training personnel on pest prevention, monitoring and mitigation. Contact your DSO/LSA for assistance.



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- **Hot Work** activities ranging from heat and soldering gun use on delicate metallic collections to propane torch use on outdoor bronze monuments as part of routine conservation activities requires specific certification, training and procedures to be followed. [Hot Work Program](#) & [Fact Sheet](#).
- **Active Construction sites** may serve as environments where accessions are removed, installed or conserved, and bring with them myriad scope-specific hazards. Contact your DSO or [Project Support Services](#) early in the planning stages for these types of activities.



Left: Monitoring VOCs in art conservation space.



Right: sampling of unusual materials in manuscripts.

Contact your EH&S DSO or LSA to schedule a site visit and to learn more about resources available to your conservation lab. **E-mail:** ehs@harvard.edu **Phone:** 617-432-1720 **Website:** <http://www.ehs.harvard.edu>