



INDIANA UNIVERSITY

OFFICE OF THE EXECUTIVE VICE PRESIDENT
FOR UNIVERSITY ACADEMIC AFFAIRS

University Environmental Health and Safety

IUPUI CHEMICAL MOVE GUIDELINES

The IUPUI Department of Environmental Health & Safety (EHS) wants to ensure the safe transport of chemicals for campus laboratory moves. Contractors hired to move equipment and furniture are typically not licensed, trained, or equipped to handle and move chemicals. Under no circumstances should University personnel transport chemicals in a personal vehicle. EHS can conduct chemical moves in a safe and compliant manner. Therefore, we have developed these guidelines to assist staff in preparing for and completing laboratory chemical moves.

Notify EHS:

EHS requires a two week advanced notice to schedule and plan laboratory chemical moves. This allows us time to schedule, and ensure adequate resources are available. EHS charges an hourly rate to cover labor costs for this service. To request EHS assistance with a chemical lab move, please complete and submit the online [Chemical Move Notification and Request Form](#). Once the form is received, a representative from EHS will contact you to schedule a firm date for the chemical move, and assist with any questions. We recommend scheduling your chemical move on a different date as lab equipment and furniture.

Evaluate Your Chemical Inventory

Moving is a good opportunity to clean out old, outdated or unwanted material as well as waste. It is highly recommended that you find a central location in your lab to place these items so they can be inventoried for disposal. The waste disposal manifest form can be found [here](#).

This will also be an opportunity to ensure that all containers are in sound condition, with tight fitting lids. In addition, you may find unstable materials that will need special evaluation and removal by EHS.

Chemicals of Concern

Contact EHS if you discover any potentially explosive or unstable materials. These include but are not limited to:

- Expired peroxide formers including:
 - Tetrahydrofuran
 - Ethers, including ethyl ether
 - Dioxanes
 - Potassium or sodium amide
 - Divinylacetylene
 - 1,1-dichloroethylene

- Polynitroaromatic compounds such as picric acid
- Nitrocellulose
- Any compound that is considered reactive or explosive due to exposure to air, light, shock, friction, or heat
- Leaking containers of any hazardous material

What to Expect

Typically, EHS provides full service chemical moves including segregation and packing. In this case, a laboratory representative must be present during the move to assist EHS staff with chemical storage locations so that we can locate and pack the chemicals. When feasible, all materials should be pulled from cabinets and fume hoods, and placed on bench tops for easy packing.

When scheduling conflicts, staffing issues or the scale of the move precludes our ability to offer full service segregation and packing, then laboratory staff will be expected to perform these tasks.

Attachment A outlines segregation and packing guidelines for these instances.

Moving to the New Lab

EHS will conduct the move on the scheduled date(s) between the hours of 9:00 am and 3:30 pm. Once the move is complete, chemicals should be unpacked in a timely manner in order to return boxes to EHS. For questions regarding chemical hygiene and storage, please visit here

<http://ehs.iupui.edu/chem-lab-safety.asp?content=recommendations-for-storage-of-laboratory-chemicals>.

Intra-Building Lab Moves

Intra-building lab moves typically do not require outside transportation assistance. However, you are still required to submit the online [Chemical Move Notification and Request Form](#). You should indicate on the form that your lab is moving to another space within the same building. In addition, please review the general guidelines for segregating and packing chemicals, and for waste disposal. Disposal costs for any abandoned laboratory chemicals will be charged back to the department, so ensure all unwanted materials are disposed of through EHS prior to final lab closure.

During intra-building lab moves, take precautions to avoid chemical accidents or spills. Use a sturdy cart and a freight elevator if available. Do not use the stairs.

Decommissioning the Old Lab

The policy and guidelines for closure of the previous lab can be found at the following link:

<http://ehs.iupui.edu/chem-lab-safety.asp>

Attachment A: Segregation and Packing Guidelines

General Requirements

Safety glasses, a clean lab coat and appropriate gloves must be worn. Chemicals should be segregated by hazard. Incompatible materials or those posing a higher hazard must be packed separately. Pack all materials chemical in nature, including bleach and other cleaning products. Pack containers in a manner that prevents breakage. Ensure all lids are tightly sealed, and containers are in sound condition.

All boxes should be packed in a single layer with cushioning material, and weigh less than 50 pounds. Once the move is complete, the boxes provided should be returned to EHS for re-use. Report any spills immediately according to the provisions in the IUPUI Emergency Procedures Handbook.

Special arrangements must be made to move large volumes of biological materials. This can be indicated on the Lab Move Notification and Request Form. EHS can provide a limited number of boxes for packing chemicals.

Segregation by Hazard



Flammable Liquids:

- Most flammable liquids can be packed together.
 - Do not pack flammable acids and flammable bases in the same box.
 - Compartmentalized boxes are ideal for packing flammable liquids



Reactive Materials:

- Reactive materials must be separated by hazard and clearly marked. Examples include sodium metal, phosphorus pentoxide, solid paraformaldehyde, sodium borohydride, etc.



Oxidizers & Organic Peroxides:

- Solid and liquid oxidizers and organic peroxides can be packed in boxes or original shipping containers. Ensure boxes of oxidizers are clearly marked.



Toxic Materials:

- Miscellaneous toxic and inert materials can be combined into boxes following the general packing guidelines of a single layer with cushioning, and weighing 50 pounds or less.



Corrosives:

- Pack corrosive materials according to their compatibility
 - Pack acids separately from bases
 - Pack organic acids separately from inorganic acids, and oxidizers (including nitric and perchloric acids)
 - Pack cyanides separate from acids
 - Compartmentalized boxes are ideal for packing corrosive liquids

**Please refer to Attachment B for a list of specific incompatible materials.*

Attachment B: Incompatible Materials Table

All materials listed as incompatible must be segregated and boxed separately.

GENERAL CHEMICAL INCOMPATIBILITIES	
Acids	Bases
Alkali and Alkaline Earth Metals Carbides Hydrides Hydroxides Oxides Peroxides	Water Acids Halogenated organic compounds Oxidizing agents Halogens & Halogenating agents Hydrogen peroxide and peroxides Nitric Acid, nitrates Perchlorates and chlorates Permanganates Persulfate
Inorganic Azides	Acids Heavy metals and their salts Oxidizing agents
Cyanides	Acids, strong bases
Nitrates	Acids Metals Nitrites Sulfur
Nitrites	Acids Oxidizing agents
Sulfides	Acids
Organic Compounds	Oxidizing agents Bases Organic hydroxy compounds Aluminum metal
POWDERED METALS	Acids Oxidizing agents
* Chemicals in columns A and B should be kept separate. * Oxidizing agents include the types of compounds listed in the entry for alkali and alkali earth metals	
SPECIFIC CHEMICAL INCOMPATIBILITIES	
ACETYLENE AND MONOSUBSTITUTED ACETYLENE (R-C CH)	Halogens Group IB and IIB metals and their salts
AMMONIA AND AMMONIUM HYDROXIDE	Halogens Halogenating agents Silver Mercury
CARBON, ACTIVATED	Oxidizing agents
HYDROGEN PEROXIDE	Metals and their salts

NITRIC ACID	Metals Sulfuric acid Nitrites and other reducing agents Chromic acid and chromates Permanganates
MERCURY AND ITS AMALGAMS	Ammonia and ammonium hydroxide
OXALIC ACID	Silver Mercury
PHOSPHORUS (YELLOW)	Oxygen Oxidizing agents Strong bases
PHOSPHORUS PENTOXIDE	Water Halogenating agents
SULFURIC ACID	Metals Chlorates Perchlorates Permanganates Nitric acid