



# Lab Notes

Spring 2010

## IUPUI ENVIRONMENTAL HEALTH AND SAFETY People Mover Transportation Safety

By: Lee Stone



The Clarian People Mover is a convenient way to move about between the IUPUI campus, the Clarian Pathology Lab Building and Methodist Hospital. The People Mover is open to the general public as well as physicians, faculty and staff so it is important to understand that it is not designed to carry cargo. Because this is public transportation certain materials are prohibited from being transported on the People Mover.

Any product or item which meets the definition of a Hazardous Material as defined by the Federal Department of Transportation (DOT) cannot be transported via vehicles which are open to commerce or on the People Mover.

Examples of prohibited items are:

- Explosive materials
- Flammable liquids
- Flammable solids
- Oxidizing materials
- Radioactive materials

- Corrosives
- Compressed gases (*with the exception of D and E oxygen cylinders and liquid oxygen strollers in use by passengers*)
- Poisonous materials
- Infectious substances
- Etiologic agents

For more information please refer to the Clarian Health People Mover Transportation Safety Policy, which can be found at the following link: <http://pulse.clarian.org/depts/PandP/policies/eoc/ec5-11.pdf>

This policy is part of the of the Environment of Care (EOC) manual and was written with the purpose of reducing risk of injury or damage due to the transportation of inappropriate materials on the People Mover.

Please protect the health and safety of our public and do not violate this policy by transporting hazardous materials on the People Mover.

# IUPUI ENVIRONMENTAL HEALTH AND SAFETY

## Spring 2010

### Online Laboratory Safety Training

We are pleased to announce that the OSHA required laboratory safety training is now available online for those of you who missed the initial training when hired. Laboratory safety training is presented in the Rooftop Lounge on the 6th floor of the Union Building on the dates and times in the table below and is also now available for the first time online for those who are unable to attend the classroom session. The training is available through Oncourse and can be accessed as follows:

- Go to <https://oncourse.iu.edu/portal>
- Log in
- Fill in IU User Name and Passphrase
- Click on My Workspace Tab
- Click on Membership (left side of screen)
- Click on Joinable Sites
- In Search area type - Environmental Health and Safety, and press enter
- Click 'Join' next to Environmental Health and Safety

- Click on Resources (left side of screen)
- Click on Environmental Health and Safety Training Folder
- Click on "Laboratory Safety" folder
- Click on the training
- Complete the PowerPoint presentation
- Select Original Test and Survey (left side of screen)
- Click on Take Test or Survey
- Click on the "Laboratory Safety " link, and complete the quiz

You must answer at least 80% of the questions correctly to receive credit for the training. If you failed the training, please review the training session and retake the quiz.

This training also makes an excellent refresher for those of you that have been here a while so please log on and take our training.

### New Employee Training Schedule

Training	Time	2010 Dates	Building	Room
<b>Laboratory Safety-REQUIRED</b> for all new employees working in laboratories with hazardous chemicals.	9:30 AM-Noon	June 14 July 12 August 9	Union Building	Roof Lounge-6th Floor
<b>Bloodborne Pathogens-REQUIRED</b> for all employees working with human blood, body fluids or tissues.	8:30 AM- 9:30 AM	June 14, 28 July 12, 26 August 9, 23	Union Building	Roof Lounge-6th Floor
<b>New Employee Orientation-REQUIRED</b> for all new employees.	10:00 AM-Noon	June 1,8,15,22,29 July 6 July 13,20,27 August 3 August 10,17,24,31	Campus Center	268 305 268 268 305
<b>Biosafety Training-</b> All employees who work with biohazardous materials are encouraged to attend.	9:30 AM-11:30 AM	June 28 July 26 August 23	Union Building	Roof Lounge-6th Floor

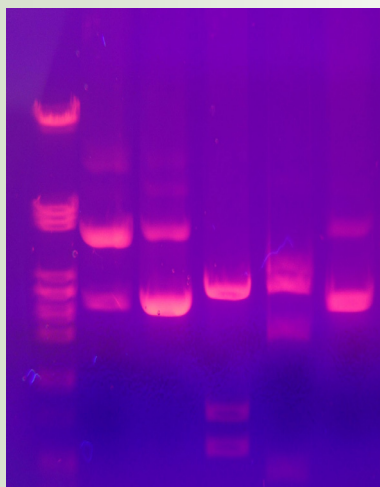


# IUPUI ENVIRONMENTAL HEALTH AND SAFETY

## Spring 2010

### Ethidium Bromide

*By: Winston Baity*



Ethidium Bromide (EtBr) is commonly used in research laboratories on the campus of IUPUI. It is a known mutagen and toxic during an acute exposure. As an irritant to the skin, eyes, mouth, and upper respiratory tract, direct contact should be avoided. The best practice for handling EtBr, as with

handling any chemical, is to consult the MSDS prior to usage.

A laboratory that uses EtBr can easily become contaminated if appropriate precautions are not taken. Pure EtBr should always be handled in a chemical fume hood. EtBr gels have routinely been found to have high concentrations of EtBr. IUPUI Environmental Health & Safety requires the use of leak proof containers to store EtBr gel waste.

The uses of cardboard boxes laced with plastic bags are highly discouraged as EtBr is a strong mutagen and plastic bags tend to leak which results in contamination. There are several options that laboratories can use for leak-proof containers. Ziploc® brand container, shown below, with smart snap are an inexpensive acceptable option for leak-proof containers laboratories can use.



Materials such as contaminated bench sorbents, gloves, & paper towels should be included with gel waste. A suitable separate container should be used for contaminated sharps, such as pipette tips or test tubes. EtBr waste must be disposed of through the Office of Environmental Health and Safety. For information on recommended methods of EtBr disposal contact IUPUI Environmental Health & Safety office at 274-4351.

Since EtBr contamination may occur in the laboratory the following decontamination method is recommended by the Office of Environmental Health and Safety:

- Wash the equipment or contaminated area once with a paper towel soaked in a decontamination solution consisting of 4.2g of sodium nitrite and 20ml of hypophosphorus acid (50%) in 300 ml of water. Make up the decontamination solution just prior to use.
- Wash the equipment or contaminated area five times with water-soaked paper towels, using a fresh towel each time. (**Note:** if there is some concern that the decontamination solution is too corrosive (pH 1.8), then use six water soaked towels).
- Soak all of the towels used in the decontamination process in decontamination solution for 1 hour.
- Check for completeness of surface decontamination by passing a UV light over the contaminated area while checking for illumination of EtBr.

Glass, stainless steel, formica, floor tile, and the filters of transilluminators have been successfully decontaminated using this technique.

IUPUI is dedicated to the protection of the environment and to the preservation of the natural resources of our community so join us by ensuring proper disposal of EtBr in your laboratory.

### Gloves Outside the Lab

By: Derrick Stratton

Appropriate Personal Protective Equipment (PPE) must be worn when handling hazardous materials. Proper glove selection provides protection from absorption of particular hazards in the lab such as chemical, biological, and radiological materials through the dermal layers of the hands.

While glove use is essential inside the laboratory, they are not to be worn outside of the lab. All PPE should be left inside the lab when exiting, as described in the lab safety handbook. The only exception to this rule applies when transporting hazardous materials. Outside of the lab, one hand must be ungloved to open doors and push elevator buttons while the other gloved hand is used to hold the transportation device containing the hazardous material.

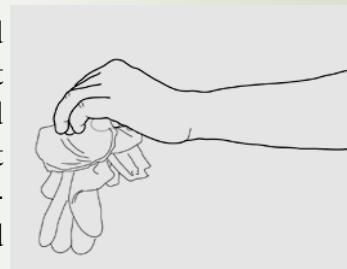
Exiting the lab with gloves puts everyone outside the lab at risk. Your gloves (which may be contaminated without your recognition) are touching all common areas that are used by the public daily. Some of these most common items include door handles/knobs and elevator buttons.

When removing your gloves please remember the proper glove removal technique.

1. Pinch one glove at the wrist level, without touching the skin of the forearm, and peel away turning the glove inside out.
2. Hold the removed glove in the gloved hand and slide the fingers of the ungloved hand inside between the glove and the wrist.



3. Remove the second glove by rolling it down the hand and fold into the first glove then appropriately discard the used glove.



Never touch the outside of a used glove with any part of your skin.

After glove removal, hands must always be thoroughly washed before leaving the lab. A thorough hand washing includes washing the backs of the hands, the wrists and between the fingers with soap for 20-30 seconds followed by a rinse. Don't simply perform a quick wash and rinse of your hands when you are ready to exit the laboratory. Gloves act as a barrier to prevent skin contact, but they should not be considered 100% effective, especially when gloves are used inappropriately for applications other than what are recommended for the glove material, so wash those hands.



For assistance with proper glove selection please refer to the Material Safety Data Sheet (MSDS) for the chemicals you will be working with. You may also refer to the company website that manufactures the gloves that your lab uses for a glove selection guide or you can type in "glove selection chart" into an internet search engine such as Google and you can pull up quick glove selection reference guides by different glove manufacturers.

Please protect yourself and others by following these simple instructions.



### Please Welcome Our New Laboratory Safety Technician



Hello IUPUI campus! My name is Amy Donofrio and I am the new Laboratory Safety Technician for the Office of Environmental Health and Safety. I received a Bachelor of Science degree in Biochemistry from IUPUI and am currently working on my Masters in Biotechnology, also here at IUPUI. I have been a lifelong resident of Indiana where I currently live in Greenfield with my husband and three children.

During part of my undergrad years I worked as a research assistant in the IUPUI Department of Chemistry synthesizing VLCFA (very long chain fatty acids) to mimic those found in the social amoeba *Dictyostelium discoideum*. I also worked in the Microbiology and Immunology Department at the IU School of Medicine. My research involved investigating two supposed glutaminase genes *yneH* and *ybaS* in *E. coli* to confirm their contribution to the residue, glutamate biosynthesis.

After graduation I worked for Lancaster Labs on site at Eli Lilly as an NMR (Nuclear Magnetic Resonance) Specialist. My primary function was to use the

NMR to quantify the amount of impurities and the API (Active Pharmaceutical Ingredient) in drug samples. As an added benefit to my knowledge base I learned the technical and mechanical upkeep of the NMR.

My first introduction to lab safety came in the lower undergrad chemistry labs by way of Mrs. Cynthia Kelley, also known as the “goggle police.” (Sorry Mrs. Kelley, but anyone who has taken chemistry labs at IUPUI knows exactly about whom I am talking about). While working in the lab one day I went to lift my goggles up to wipe off the fog, and was immediately told by Mrs. Kelley to “put the goggles on.” At the time I thought this to be somewhat rude. Years later in one of my upper chemistry labs, I leaned in to look close at an experiment and briefly lifted up my goggles. At that exact moment a shot of chemicals from an extremely small capillary tube shot out and landed in one of my eyes. Frantically I began the eye wash for what seemed like an eternity; all the while Mrs. Kelley’s voice was in the back of my mind to keep those goggles on. It was at that moment that I realized how important her advice had been. Lucky for me my eye was okay but I came away with a new found respect for Mrs. Kelley and for the importance of PPE in labs.

I am excited to build upon that strong foundation as the Lab Safety Technician for IUPUI, and look forward to working with all of the research labs in and around campus. I am grateful to have the opportunity to give back to a campus that has given me so much in my educational experience.

In my spare time I enjoy being with my children and watching them grow and learn new things. I also love the alone time with my husband while riding our

*(Continued on page 6)*

# IUPUI ENVIRONMENTAL HEALTH AND SAFETY

## Spring 2010

(Continued from page 5)

awesome Harley Davidson! On the weekends my family goes camping, where we hike, swim, and trail ride horses. We have two dogs: Kody, an 80-pound Samoyed and Sleigh, an 8-pound King Charles Spaniel. They are a wonderful addition to our family and quite hilarious to watch!

### *Lab Safety Tips!*

- ⇒ Keep it Closed– Ensure all dump jugs and chemical containers remain closed when not in use. Funnels are not to remain inside of a dump jug after use.
- ⇒ Keep it Clear– Keep isles, exits and emergency equipment free of obstruction. Do not place objects in front of emergency eyewashes or under emergency showers/
- ⇒ Keep it Secure– Ensure all compressed gas cylinders are secured with a chain or other device.
- ⇒ Keep them segregated- Segregate you chemicals during storage to ensure acids, basis, oxidizers, flammables and poisons are stored in separate areas.

## EHS STAFF

### Director

Rich Strong.....4-1388  
RISTRONG@IUPUI.EDU

### Hazardous & Infectious Waste Management

Kevin Mouser.....4-4351  
KMOUSER@IUPUI.EDU

### Asbestos Management

Jerry Bush.....4-5239  
JBUSH@IUPUI.EDU

### Biosafety Manager

Jim Klenner.....4-2830  
JKLENNER@IUPUI.EDU

### Lab Safety Manager

Lee Stone.....8-6150  
LEESTONE@IUPUI.EDU

### Industrial Hygiene Manager

Rebecca Bratt.....4-2829  
RBRATT@IUPUI.EDU

**All Other Areas**.....4-2005

*Lab Notes, a quarterly publication of IUPUI Environmental Health and Safety, is edited and published by K. Lee Stone*

**Please Post or Circulate**



Indiana University-Purdue University  
at Indianapolis  
Office of Environmental Health & Safety  
620 Union Drive, Room 043  
Indianapolis, IN 46202-5167

**“An open dump jug opens the door to a fine.”**