



# Department of Occupational and Environmental Safety NEWSLETTER

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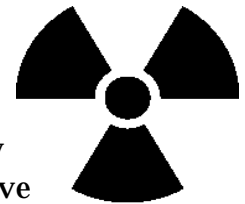
## Allergic Reactions to Latex

Allergic reactions to latex have increased dramatically over the years. Though the amount of individuals affected is small compared to the tremendous amounts of latex products on the market, concern is still warranted because of the potentially severe reactions to latex.

There are three main types of reactions to latex: non-allergenic or irritant reactions, delayed cutaneous reactions, and immediate reactions. Irritant dermatitis is not an allergic reaction and is usually brought on by contact with chemicals, acids, or glove additives. It is exacerbated by frequent hand washing, exposure to detergents or disinfectants, excessive sweating, and glove powders. Symptoms include itchy dry skin, burning, red or swollen tissues, and cracking or flaking of the skin.

The second type of reaction is a de-

## Secure Radioactive Materials



On recent after-hours laboratory checks, our safety technicians have found laboratories and hallway freezers unlocked, potentially allowing unauthorized people access to restricted materials. This is a serious security issue and needs to be immediately addressed.

Several universities have recently been fined by the NRC for failure to provide adequate security of radioactive materials, and problems of this sort were noted at our last NRC inspection. Principal Investigators must

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While bicycles are a great way to get around on campus, some consideration should be given to where they are parked and/or stored when not in use.

Some buildings have outside racks to which the bikes can be secured; unfortunately, many do not. Most people, therefore, prefer taking their bikes inside for



## **What WASTE!**

### **Xylene, Ethanol, Acetone: Recyclable Materials**

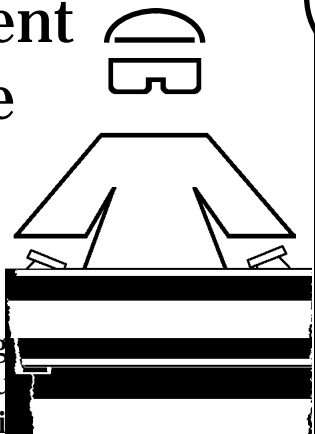
DOES encourages researchers to think about waste materials that can be recycled with our spinning band still. We have had great success recycling xylene to a near-pure form and are interested in recycling more of this material. We have also recycled ethanol, though with less success—the still provides a final product that is about 75% ethanol (still good for sterilization procedures).

Acetone wash still comprises our largest amount of recycled materials. The still reclaims the acetone in a near-pure form so that it can be re-used as a wash reagent.

Recycling saves money for you and the university, by replacing the need to buy new materials and by reducing waste disposal costs. Recycling also reduces the amount of hazardous waste introduced into the environment. If you have large amounts of any of these materials, call DOES (x2907).



## Personal Protective Equipment Outside the Lab



Personal protective equipment (PPE) includes anything that protects your body from potential

hazards in the lab. The most commonly worn PPE consists of gloves, lab coats, surgical masks, protective footwear, and protective eyewear. Because these items are protective equipment, they should not be worn outside the lab area. We have observed many people wearing PPE, gloves and footwear especially, when they are outside their laboratories. This could be perceived as a hazard on the part of your colleagues and the general public and is against OSHA regulations.

Take gloves, for example. If your gloves have done their job, then they might be carrying around some sort of potentially hazardous material. After all, that's why you put them on in the first place—just in case. And while potentially harmful material is acceptable in laboratories or medical treatment areas, it is unacceptable in lunch rooms or office areas frequented by the general public. So please remove gloves and other PPE before you leave your laboratory. PPE should be removed even if they are clean or you did not work with any hazardous materials. The reasoning behind this premise is simple: you may know that the materials with which you have been working are not hazardous, but others around you do not, and this sort of uncertainty can cause those around you to feel uncomfortable or unsafe.

Please contribute to the peace of mind of others by leaving laboratory clothing in the laboratory. Thank you for your cooperation in this matter.



## HOT TIPS



### Radioactive Waste Reduction: Use Spill Trays

Contaminated bench paper makes up the largest bulk of radioactive waste on campus. In order to help reduce this huge amount of radioactive waste, we ask researchers to use spill trays whenever possible during experiments involving radioactive materials. Then, if a spill occurs, it is contained in a small area that can be easily cleaned, rather than thrown away.

If you must use bench paper, survey it completely to determine what sections are contaminated and dispose of these sections as radioactive waste. The uncontaminated sections can be disposed of as non-radioactive waste.

The better solution, however, is a spill tray, which can be cleaned with a comparatively tiny disposable Kimwipe. This one step would drastically reduce the amount of radioactive waste on campus. We encourage all researchers to invest in a few of these trays, which can be ordered through Fisher Scientific.

If you have any questions about spill trays or other ways to reduce radioactive waste, call Radiation Safety at x2906.

## Allergic Reactions to Latex

(continued from p.1)

The final reaction to latex is an immediate hypersensitivity reaction. This reaction requires that there was a prior exposure to an immunogen capable of causing an antibody response, and re-exposure to the same antigen. For this reason, those most at risk are persons who frequently use latex: latex industry workers and health care professionals, especially dentists. Symptoms of mild contact urticaria include hives, itching, conjunctivitis, and rhinitis; in some cases these reactions may lead to cardiac arrhythmia, low blood pressure, and breathing problems. More advanced cases may include generalized urticaria and anaphylactic shock.

In general, researchers agree that the culprits involved in occupationally acquired sensitization to latex include: the chemicals used in glove manufacture, latex proteins, and cornstarch lubricating powders (which serve as vectors for proteins). Implementation of Universal Precautions, which has led to the increased frequency and wear-time of gloves, and hand dermatitis, stemming from either frequent hand washing or from poor hand care habits, have also greatly contributed to the problem. Allergen absorption in health care workers generally occurs through skin contact with allergens in the glove—wearing gloves increases skin temperature, which in turn increases the likelihood of chemical and/or latex absorption. Then the second type of reaction, contact dermatitis, generally occurs.

Unfortunately, latex allergens in glove products vary drastically. Some people may react strongly to an antigen in

### REMEMBER!

If you think you may be allergic to latex and are considering switching gloves, make sure that the new gloves are compatible with whatever chemical you are using.



one glove product but remain unaffected by different gloves containing fewer water soluble

### Food and Latex?

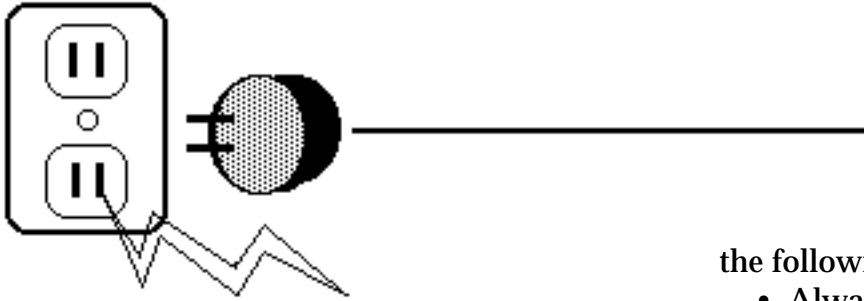
Allergies to latex and certain fruits or vegetables have been recently documented to produce patterns of allergic cross-reactivity. While details of this relationship must be further studied, food allergies have been found to coexist with latex sensitivities for some people. Some possible cross-reactions may exist between latex and the following:

#### High degree of association:

Bananas  
Avocados  
Chestnuts  
Passion fruit (possibly)

#### Moderate degree of association:

Apples  
Carrots  
Celery  
Tomatoes  
Papayas  
Kiwis  
Potatoes  
Melons



the following in mind:

- Always check equipment, cords and attachments before each use. For example, make sure that cord insulation, which provides a barrier to electrical current, is appropriate for the voltage and kept undamaged, clean and dry.
  - Never modify or remove a guard. Guards act as a physical barrier, keeping you from contacting energized equipment parts.
  - Make sure all equipment is properly grounded and plugged in to grounded circuits.
  - Be aware of flammable vapors, liquids, or gases and corrosive chemicals.
  - Make sure the area in which you are working is not wet or damp. If you must work in damp
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