

# The Lab Guy meets The Safety Lady: Notes on biohazards



## From The Lab Guy, Tim Dumas

Do you remember the one time you did not do what you normally do to be safe? Was it something simple like not wearing your seat belt? Did you reach into a biohazard container to retrieve a tube of blood? Did you get lucky when nothing bad happened? Or did you pay for it? As a lab tech for many years now, I have more than a few stories, and some from others who, too, can answer “yes” to that last question. There was a time in the lab when the main safety rules were:

- Do not wear jewelry. Why? It could get caught in the moving analyzers.
- Do not eat or drink in the lab. Why? Your food could contaminate, or get mixed with, the samples.
- Do not pipette by mouth Why? You could suck in dangerous liquids, or pick up germs left on that pipette by other people who used it.

Ah! The good old days. After 1982, that all changed when, if those simple rules were not followed, you could die. Enter the age of HIV. No way to test for it. We were not sure who had it or how it was spread. We had five techs in a hospital lab where I was working at the time that quit due to the fear and ignorance of how HIV was contracted.

It soon became apparent that the old safety rules would need to be stepped up a bit. Gloves, which were an option then, now became common-sense precaution. Later, gloves became mandatory. Nobody took his lab coat home to wash anymore. Either through experience or fear, we learned how to prevent and protect ourselves. But still, accidents would happen, usually because someone was in a hurry or just got lazy. The most common explanation was: “*It’s the one time I didn’t ...*” Lab workers would say, “I always wear my gloves. This is the one time I didn’t, and the tube leaked all over my hands.” Or “I didn’t have time to put my shield on and that thing sprayed everywhere.” Does any of this sound familiar?

Face it, most people work in an environment that requires some form of special safety precautions. Construction workers wear hard hats; flight line workers wear bright colors and earplugs; radiology techs wear lead aprons or stand behind a lead wall — the list goes on and on.

As lab techs, we are required to be educated about all the dangers in the laboratory and the medical field. It comes down to common sense. We are provided the tools to assess the risk involved in each task we do. The Material Safety Data Sheets (MSDS) are the resource to educate us to the dangers of the chemicals we use. We have biohazard policies and procedures to follow, immunizations to protect us, blood tests to monitor our health, and continuing education to keep us informed. All the tools are there to keep us safe, but *only if we use them*.

Do it! Not because it is the law, but because *it is the smart thing to do*. Make sure you are not the person that, after a foolish mistake, one day laments: “It’s the one time I didn’t ...” □

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## From the Safety Lady, Terry Jo Gile, MT(ASCP), MA Ed

If you need a wake-up call for the use of proper personal protective equipment (PPE), you need look no further than Dr. Aldous’ article on page 32. His discussion centers on what happens to an employee who is working with a specimen later identified as a select agent, which requires a higher level of containment to prevent a laboratory-acquired infection (LIA). Since Dec. 6, 1991, the Occupational Safety and Health Administration (OSHA) has made it very clear that PPE was required in the laboratory setting when dealing with blood-borne pathogens.

Laboratorians continually ask The Safety Lady about PPE. Here is what you must do to assure protection from any blood-borne pathogen:

1. Always wear a laboratory coat that meets the American Standards for Testing and Materials (ASTM) requirements.
  - a. Reusable coats should:
    - i. repel water with a Suter rating of 400 or more;
    - ii. have a break strength of 150 inch pounds of force after 100 or more washings;
    - iii. have a soil release grade of 5; and
    - iv. be made of antistatic material.
  - b. Disposable coats should:
    - i. be made of antistatic material; and
    - ii. changed when torn or contaminated by chemicals, blood, or body fluids.
2. Gloves must be worn when dealing with blood and body fluids.
  - b. Wear gloves when reading microbiological plates. If you are hesitant, re-read Dr. Aldous’ article. Early on, microbiologists petitioned OSHA to be exempt from wearing gloves when reading plates. In a QUIPS document during that time, OSHA agreed. That was then, however, and the world has changed. It is much more prudent to wear gloves when reading plates — especially if you do not know what might be lurking on the plate.
3. Shoes must adequately cover the *entire* foot. They must be made of leather or vinyl, and cannot be made of canvas or contain any holes.
  - a. Shoes continue to be a subject no one really wants to address. CLSI says they must be rubber-soled and cover the entire foot. Popular shoes include some that have holes in the top and are open in the back; these do not meet the requirements.

PPE is often taken for granted and carries a low priority at budget time. Moving its selection up on the priority scale just might save a life and prevent potential litigation. □

Best-selling author, professional speaker, and safety consultant Terry Jo Gile, The Safety Lady, has helped thousands of laboratorians create safety-savvy laboratories. Her book, *Complete Guide to Laboratory Safety – 2nd ed.*, is the consummate safety reference tool specific to clinical labs. Contact her at [www.safetylady.com](http://www.safetylady.com).