

## Never Underestimate the Hazard!

In December 2008, a graduate student was working in a university research laboratory. She was attempting to transfer approximately 2 oz. (60 mL) of *tert*-butyl lithium from one laboratory container to another. *Tert*-butyl lithium is a pyrophoric material — it ignites spontaneously when exposed to air. The initial investigation of the incident found that the student had not been properly trained on the transfer procedure, and was not wearing the proper clothing and personal protective equipment. The material was released, splashed onto the student, caught fire, and set her clothing on fire. She suffered serious burns, and died of her injuries several weeks later.

When you work in a plant that contains large quantities of flammable or toxic hazardous materials, you may underestimate the hazards of materials that are handled in small quantities. Nearly all plants require that samples be taken and transported to a laboratory for analysis. Many facilities have in-plant laboratories where operators carry out quality-control tests. These operations involve small quantities of materials. The laboratory tests may also require the use of chemicals that are not handled anywhere else in the plant, and you may not be as familiar with the hazards of these materials. Remember that even a small quantity of a hazardous material can cause serious injury, damage, or even a fatality.



## What Can You Do?

- Know the hazards of all chemicals you work with, even if you only use small quantities. Don't forget any chemicals that are only used in small amounts in your plant's quality-control laboratories.
- Respect all hazardous materials, even if you handle them in small quantities.
- Make sure that you are fully trained on all plant sampling operations, and on how to use any special equipment required to safely take and transport samples.
- Understand what kind of protective clothing and personal protective equipment are required to protect yourself from the hazardous materials you work with,

and always use all of the required protective clothing and equipment, including when working in the laboratory.

- Know where to find, and how to use, emergency equipment, such as safety showers and eyewash stations, when you are handling chemicals.
- Always use the required containers for taking samples and proper sample carriers for transporting samples.
- When you take a sample to a laboratory, make sure that the sample is properly labelled, that you follow procedures to ensure that it is received by qualified laboratory personnel, and that they know what is in the sample container.

**Even a small amount of a hazardous chemical is dangerous**

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