



# EHS Bulletin

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## In This Issue:

- Quarterly Training
- Peroxide-Forming Chemicals
- Current Events

## Why Do I Have To Attend Quarterly Training?

**Because the law says so!** State law requires that all employers having 25 or more full- or part-time employees shall provide safety training at least four times a year. Anybody receiving a paycheck through OSU falls under this requirement. The one exception to this rule would be contractors who are paid for service for short-term projects.

More information regarding this law can be found at [Oklahoma Department of Labor](#).

The goal of the required training is to reduce workers' compensation claims costs by educating employees in safe work practices and heightening safety awareness. It is also intended to foster good relationships between employers and employees.

### How does this pertain to my job at OSU?

Each department is responsible for making sure that their employees, faculty, staff, and students, receive quarterly safety training. Departments and employees can utilize a variety of sources to complete the required safety training; such as videos, audio tapes, books, brochures, fact sheets, handouts, slides, classroom instruction or lectures, and in-service training. The key factor is the source and topic must be appropriate to the nature and severity of the hazards faced by the employee. Some departments may require additional safety training for employees due to job requirements. Provisions must be made for make-up sessions for employees who were not able to attend a scheduled training, but it does not have to be the exact same training.

Departments are also responsible for tracking and maintaining employee training records. Documentation of training shall include, but not be limited to, date(s), location, course information, course provider/trainer, and a list of employees in attendance. Example can be found <https://ehs.okstate.edu/node/42>. During a safety survey of the department, the department may be asked to provide documentation of the training records.

### If the department tracks the training records, what does EHS do?

Environmental Health and Safety (EHS) provides general and specific safety related training that can be tailored to meet the needs of your office or department. EHS can also assist with job hazard analysis to help determine the department's training needs.

EHS also provides monthly training for bloodborne pathogens, respiratory protection, and fire safety with hands-on personal fire extinguisher training. To learn more about these trainings or to talk to someone about training for your department, contact us at 405-744-7241 or visit <https://ehs.okstate.edu/content/safety-training>.

# What are Peroxide-Forming Chemicals, and Why Are They a Safety Hazard?

A significant number of laboratory solvents can undergo autoxidation under normal storage conditions to form unstable and potentially dangerous peroxide by-products. Peroxide-forming chemicals are materials which react with oxygen to form peroxides that can explode under impact, heat, or friction. These substances are capable of causing serious injury or death, and for this reason, it is imperative that all researchers learn to safely handle peroxide-forming compounds.

## What are some examples of peroxide-forming chemicals?

Ethers generally fall into this category. The most commonly found PFCs on campus are ethyl ether, diisopropyl ether, isoamyl alcohol, uninhibited tetrahydrofuran (THF), and p-dioxane, however, a comprehensive list is available online, <https://ehs.okstate.edu/content/peroxide-forming-chemicals>.

## Are some PFCs more dangerous than others?

Yes. These chemicals are placed into three hazard categories, ranked from highest to lowest risk: Class A, Class B, and Class C.

- Class A: Chemicals that form explosive peroxides without concentration (e.g. diisopropyl ether).
- Class B: Chemicals that form peroxides upon concentration, or distillation/evaporation (ex. diethyl ether, isoamyl alcohol, THF).
- Class C: Unsaturated monomers that may autopolymerize as a result of peroxide accumulation if inhibitors have been depleted (e.g. styrene).

## I have PFCs in my lab—are they safe to use?

Safe handling is determined by a variety of factors, including the specific hazard class of the chemical, age, storage location, use, etc. The important rule to remember is to **NEVER** touch a PFC that shows evidence of crystallization. If you see crystal formation, call EHS immediately and do not attempt to move or otherwise disturb this chemical. It is important that all PFCs be labeled, go to <https://ehs.okstate.edu> to see [example label](#).

## How long should I store these chemicals, and how often should they be tested?

Based on the hazard category of the PFC, recommendations have been made for storage and testing time-frames. If unopened, safe storage period is up to 18 months or stamped expiration date, whichever comes first. Testing varies:

- Class A: Testing for peroxides should be conducted within **3 months** of opening.
- Class B: Testing for peroxides should be conducted within **12 months** of opening.
- Class C: Testing for peroxides should be conducted within **12 months** of opening. \*After opening, materials without inhibitors should not be stored for longer than 24 hours\*

## So how do I test for peroxide concentration, and what happens if my chemical tests positive?

EHS can conduct testing of these chemicals through the use of color changing strips or other proven detection methods. If your chemical tests positive, there are neutralizing steps we can take to lower the peroxide concentration to an acceptable range. Contact EHS for more information on these services.

## Current Events

### *Bloodborne Pathogen Training*

1<sup>st</sup> Monday of the month, 9-10 am or 2-3 pm

EHS Conference Room, 003UHS

Required annually for members under OSHA's standard.

Registration: Email name to [chemicalsafety@okstate.edu](mailto:chemicalsafety@okstate.edu)

### *Respiratory Protection*

1<sup>st</sup> Tuesday of the month, 8:30-9:30 am

FM North Building, Room 101c

Required annually for members who wear respiratory protection.

Registration: Email name to [ohsp@okstate.edu](mailto:ohsp@okstate.edu)

### *Fire Safety w/ Hands-on Extinguisher Training*

2<sup>nd</sup> Friday of the month, 9:00-10:00 am

EHS Conference Room, 003UHS

Come join us for fire safety education featuring the BullsEye laser training device.

Registration: Email name to [ohsp@okstate.edu](mailto:ohsp@okstate.edu)

### *Monthly Employee Training*

3<sup>rd</sup> Thursday of the month, 9:30-11:30 am

EHS Conference Room, 003UHS

Topics: Hazcom; Fire Safety; Slips, Trips, and Falls; Office Safety; and Back Safety

Registration: Email name to [ohsp@okstate.edu](mailto:ohsp@okstate.edu)