

Overview:

Chemicals listed as peroxide-formers have the potential to form explosive crystals under certain circumstances. Stored chemicals that go unused over several months and are exposed to air, heat, moisture, or light can contribute to a potential explosion or injury simply by unscrewing the cap or disturbing the container. It is important to inspect containers for any observable crystals or solids present and to periodically test for non-observable formations of peroxides. **CONTACT EHS IMMEDIATELY IF PEROXIDES ARE VISIBLE OR IF THERE IS A POSITIVE TEST FOR PEROXIDES (x4462).**

Instructions:

1. Check to see if your laboratory works with any peroxide-forming chemicals. Most chemical manufacturers will indicate, "may form explosive peroxides" on the label.
2. Once the peroxide formers are identified, a label must be placed on each container indicating the "Date Received," "Date Opened," and "Expiration Date." This label will be used to determine when to begin testing and when it is time to dispose of the chemical container.
3. The allowable time period for use of the chemical may be extended after peroxide testing. This testing is to be completed by laboratory personnel. Peroxide testing strips and labels are available through Environmental Health and Safety.
4. Contact Environmental Health and Safety for removal of waste peroxides at x4462 or cv594@hunter.cuny.edu.

Peroxide Strips and Label:

- EMD Millipore MQuant™ Peroxide Test Strip
 Fisher Scientific-Catalog Number M1100810001

WARNING-PEROXIDE FORMING CHEMICAL		
Date Received: _____	Date Opened: _____	Expiration: _____
Date Tested/Result: _____	_____	_____
Date Tested/Result: _____	_____	_____
Date Tested/Result: _____	_____	_____
Date Tested/Result: _____	_____	_____

This material can form potentially explosive peroxide byproducts. Regular testing and disposal will ensure a safe laboratory environment. Visit the Hunter College Environmental Health and Safety Website for more information or call (212)-772-4462.

Peroxide-Forming Chemicals:

Group A Chemicals-Test for peroxides before using; discard after 3 months

Butadiene	Potassium metal
Chloroprene	Sodium amide
Divinyl acetylene	Tetrafluoroethylene
Isopropyl ether	Vinylidene chloride
Potassium amide	

Group B and C Chemicals- Test for peroxides every 6 months; discard after 12 months

Acetal	2-Cyclohexene-1-ol	Furan	Stryene
Acetaldehyde	1,4-Dioxane	4-Heptanol	Tetrahydrofuran
Benzyl alcohol	Decahydronaphthalene	2-Hexanol	Tetrahydronaphthalene
2-Butanol dioxanes	Diacetylene	Methyl acetylene	Vinyl acetate
Chlorobutadiene	Dicyclopentadiene	3-Methyl-1-butanol	Vinyl acetylene
Chlorofluoroethylene	Diethylene glycol dimethyl ether	Methyl isobutyl ketone	Vinyl chloride
Cumene	Diethyl ether	4-Methyl-2-pentanol	Vinyl ethers
Cyclohexene	Ethylene glycol ether acetates	4-Pentene-1-ol	Vinyl pyridine
Cyclopentene	Ethylene glycol monomethyl ether	2-Phenylethanol	

Source: Clark, DE. Peroxides and peroxide forming compounds. *Chemical Health and Safety*, 2011; 8 (5), 12-21.