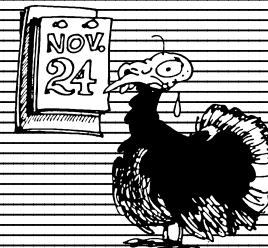




# LAB



# NOTES

Safety Newsletter for Lab Workers

UCSD Environment, Health & Safety Office

## Explosion Hazard: NEW Wash® Stored in Domestic Refrigerators

Storage of flammable liquids in standard or domestic refrigerators is prohibited at UCSD because of the potential risk of explosion.

When ethanol is added to solutions such as NEW Wash® (a Qbiogene BIO101® Systems product used with GENECLEAN® Kits), resulting in an approximately 50% ethanol content, **the solution is flammable**. Solutions of ethanol are considered flammable down to 20%.

Manufacturer instructions for NEW Wash say to store solutions in freezers. Consequently, labs may be unintentionally storing a flammable liquid—NEW Wash mixed with ethanol—in domestic freezers. **These containers should be removed immediately.**

Qbiogene has determined that original NEW Wash solution (not mixed with other materials) can be stored and used at room temperature, rather than 0°C. You can verify this by contacting Qbiogene:

- Web site: [www.qbiogene.com](http://www.qbiogene.com)
- E-mail: [technical@qbiogene.com](mailto:technical@qbiogene.com)
- Phone: (800) 424-6101 (push '3' on the key pad)

### Prudent Practices

- **Review other solutions stored in your domestic refrigerators or freezers** that might be considered flammable.
- If flammable solutions need to be refrigerated or frozen, use a "flammable storage" or "explosion-proof" refrigerator or freezer available through many vendors.
- If an appropriate refrigerator or freezer is not available in your lab, ask a neighboring lab if they're willing to share space in theirs.

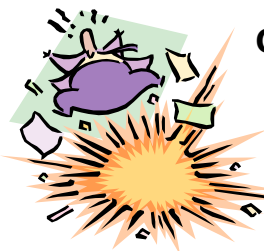
See the **Blink Lab and Chemical Safety Menu** (<http://blink.ucsd.edu/menu/lab>) for additional information. Questions? Contact your Research Assistance Program specialist (<http://blink.ucsd.edu/go/rap>).

## Safety Award For Excellence Goes to Dr. Daniel Masys!



If you work with hazardous materials at UCSD, Dr. Daniel Masys made safety training a whole lot easier for you. Dr. Masys, a School of Medicine faculty member, went way beyond his own department's needs to help UCSD meet a safety training challenge. With his generous assistance, Environment, Health & Safety was able to bring convenient online Annual Hazardous Materials Refresher training to the campus. Dr. Masys graciously allowed EH&S to adapt his own web-based training software for safety training, and now hosts the resulting program on his server. **Thank you, Dr. Masys, for your commitment to supporting, improving, and delivering safety training materials for UCSD employees.**

Nominate the people you know who are making UCSD a SAFE place. Use the online form at <http://blink.ucsd.edu/go/safe> to tell us about them!



## Organic Peroxide Formers

Organic peroxides are a class of compounds that have unusual stability problems, making them **among the most hazardous substances found in most laboratories.**

**Organic peroxides are powerful explosives.** They're sensitive to oxygen, heat, friction, impact, light, and strong oxidizing and reducing agents. **The risk associated with peroxide increases** if the peroxide

continued on back ... see **Organic Peroxide Formers**

## Organic Peroxide Formers ... continued

crystallizes or becomes concentrated by evaporation or distillation.

Peroxide-forming materials react with oxygen – even at low concentrations – to form peroxy compounds. Peroxide crystals may form on the container plug or the threads of the lid and detonate when the lid is twisted.

**Materials that form dangerous organic peroxides** over time include the following classes of chemicals:

- Ethers (especially cyclic ethers and those containing primary and secondary alcohol groups)
- Aldehydes
- Compounds containing benzylic hydrogen atoms (particularly if the hydrogens are on tertiary carbon atoms)
- Compounds containing the allylic structure, including most alkenes
- Vinyl and vinylidene compounds

**Storage and handling of these materials** requires careful labeling, observation, and testing to guard against and recognize the formation of organic peroxides.

**Be aware of the passage of time** when peroxide formers are in your chemical inventory.

- If you find a peroxide-forming material past its expiration date, or more than one year past its receipt date, **DO NOT OPEN OR MOVE** the container.
- Request a hazardous waste collection promptly.
- Label the container to avoid possible inadvertent use until EH&S collects it.
- **If the material is very old or shows evidence of conversion to a hazardous status** (crystalline materials in or under the cap of ethers, for example), **DO NOT MOVE THE CONTAINER.**
- Contact EH&S immediately at (858) 534-3660 or 534-2753.
- **Diethyl ether** must be used or disposed of within six months of the container being opened, or one year from receipt, or by the expiration date.

**Need more information about storage, labeling, or handling organic peroxide formers?** Contact the Research Assistance Program specialist for your area: <http://blink.ucsd.edu/go/rap>.



**Go to Enrollment Central  
for Safety Training**  
<http://enrollmentcentral.ucsd.edu>

**Looking for biological, chemical, hazardous waste, and radiation safety training?** Register for safety training online via Enrollment Central at <http://enrollmentcentral.ucsd.edu>. Browse “EH&S – Safety” under Course Topics for schedules.

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### Laboratory Safety for Professionals/IIPP

Laboratory Safety for Professionals/IIPP class is **required** for all lab workers who do not have documented lab safety training. Please note this course meets both the Injury & Illness Prevention Program (IIPP) and the Laboratory Safety Plan training requirements in one convenient session.

Find out what research safety training is required and recommended for the kind of work you do at:

- Laboratory and Chemical Safety Training:  
<http://blink.ucsd.edu/go/labchemtrain>
- Radiation Safety Training:  
<http://blink.ucsd.edu/go/radtrain>
- Biosafety Training:  
<http://blink.ucsd.edu/go/biotrain>
- Hazardous Waste Training:  
<http://blink.ucsd.edu/go/hazwastrain>

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### Basic Cell Culture Workshop

Presented by the CORE Cell Culture Facility, staff research associates, and other employees who use cell culture procedures in University research will learn techniques and information for working more efficiently, effectively, and safely.

Check schedules and register via Enrollment Central at <http://enrollmentcentral.ucsd.edu>. Browse under “Laboratory.”



## Moving or Closing a Lab?

Arrange a smooth and safe transition by reading “**How to Close or Relocate a UCSD Laboratory**” on Blink. Check the Lab & Chemical Safety Menu at <http://blink.ucsd.edu/menu/lab>.