



LabNotes

No. 81

SAFETY NEWS FOR UC SAN DIEGO RESEARCHERS

SUMMER 2008

Important Safety Information:

Equipment Recall

BOC Edwards

Laboratory Vacuum Pump Motor Capacitors

Safety Concern – E2M0.7, E2M1 and E2M1.5 Series Rotary Vane Pump Motor Capacitors
<http://www.bocedwards.com/service/em/>

BOC Edwards has recalled the **motor capacitors** on the type and series of **laboratory vacuum pumps** named above. A small number of the motor capacitors have failed in use **causing fire damage** to the pump motor and, possibly, surrounding equipment.



See the BOC Edwards Web page at <http://www.bocedwards.com/service/em/> for details about the specific equipment recalled, how to identify it in your lab, and how to request a free retrofit kit if your equipment is affected.

Check all equipment in your lab that may be using this type of motor capacitor. Such equipment may include, but is not limited to, mass spectrometers and centrifuges. If recalled motor capacitors are identified in your lab, please notify EH&S at (858) 534-3660 or ehsweb@ucsd.edu.

A fire involving a mass spectrometer, apparently caused by a faulty motor capacitor, was reported to the UC Davis Fire Department on April 28th. Although the fire occurred over the weekend and didn't spread beyond the involved unit, the replacement cost in this case is approximately \$94,000. UC Santa Cruz inspectors looking for equipment subject to the recall also found a vacuum pump with the same capacitor set up on two ultra centrifuges, one of which needed to be replaced.

The UC Davis mass spectrometer fire emphasizes **the importance of promptly identifying equipment specified in manufacturer recalls**. Inspect all of your energized equipment regularly to ensure safety and reliability. Two recent UC San Diego lab fires were both started by old/faulty equipment. Don't use any piece of electrical equipment that sparks, smokes, smells, shocks, or is otherwise malfunctioning. Mark it "out of order" and have it serviced or replaced immediately.

If you need assistance, contact the Research Safety Program specialist assigned to your building: <http://blink.ucsd.edu/go/rap>.

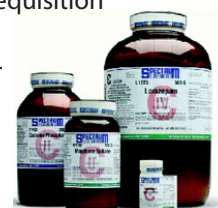
Controlled Substances: Plan Ahead to Keep Research Moving

There is no on-site stock of controlled substances (CS) for research at UC San Diego. Every CS order is obtained directly from the vendor. Plan your CS purchase in advance to ensure your research proceeds on schedule.

Controlled substances are restricted from department order. Purchase requisitions must be signed by the PI and reviewed by the Controlled Substances Program manager before an order is placed by a professional buyer in Purchasing. "Gifts" of controlled substances must also go through this same requisition process and will be processed for zero dollars.

Plan for the following delivery times when your order has been placed:

- Allow 3 weeks for Schedule II orders.
- Allow 10 days for Schedule III through V orders.



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How to Prepare for a Power Failure in a Lab

Electrical stage alerts during hot summer months may result in "rolling blackouts" during a statewide electrical supply emergency. (Read about electrical stage alerts on Blink at <http://blink.ucsd.edu/go/energy>.) UCSD departments may receive little, if any, warning. Protect your research and equipment by being prepared for sudden or unexpected blackouts or power failures.

What to do before the power fails:

- 1. Designate an emergency contact person for your lab.** This person should be available for contact 24 hours a day. Give the contact's information to your Area Safety Coordinator. Post emergency contact phone numbers on the lab safety sign in the hallway outside your lab.
- 2. Do not leave open chemicals in the fume hood** when the fume hood is unattended. Always safely store chemicals after use.
- 3. Put essential equipment on emergency power circuits.** These circuits have red cover plates and are powered by an emergency generator at each lab building. Install appropriately-sized surge protection devices for all sensitive or expensive electronics.

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Browse "EH&S—Safety" under Course Topics for schedules and registration. Learn more about safety training resources at <http://blink.ucsd.edu/go/safetytraining>.



Please post or circulate

Prepare for a Power Failure in a Lab

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Consult with Facilities Management, (858) 534-2930, if you need to install an uninterruptible power source (ups) or other backup electrical systems or equipment.

4. Make a list of equipment that must be reset, reprogrammed, restarted, or recalibrated once power returns. Post the list in a conspicuous place. Program equipment that operates unattended to shut down safely during a power failure and not restart automatically when power returns.

5. Identify an emergency source of dry ice, if you have items that must be kept cold. Do not use dry ice in walk-in refrigerators or other confined areas. Refrigerators and freezers will maintain their temperature for several hours if they are not opened.

What to do while the power is off:

1. Shut down experiments that involve hazardous materials. Make sure experiments are stable and won't create uncontrolled hazards.

2. Check fume hoods. Stop any operations that may be emitting hazardous vapors or fumes. Securely cap any open chemical containers. Close fume hood sashes.

3. Check equipment on emergency power to ensure it's running properly. It may take 20 to 30 seconds for emergency power to activate after a power failure.

4. Reduce electrical use and risk of power surges by disconnecting from emergency outlets equipment that runs unattended, and turning off unnecessary lights and equipment.

5. Transfer vulnerable items from cold rooms and refrigerators that have lost power to equipment served by emergency power.

What to do when the power returns:

1. Check your equipment. Reset and restart equipment. If building systems, including fume hoods, fail to restart or operate correctly, contact Facilities Management Customer Relations Service Referral Desk, (858) 534-2930.

If non-building equipment fails to restart or operate correctly, contact the manufacturer or service provider.

Confirm air flow in your fume hood is restored. Recalibrate and reprogram equipment as necessary.

2. Keep doors closed on refrigerators and freezers that failed until they have been repaired and returned to safe working temperature. Note: Some refrigerators and freezers require a manual restart.

3. If system or equipment failures create hazardous conditions, immediately notify:

During business hours, Environment, Health & Safety: (858) 534-3660

After business hours, Campus Police:

From land lines: 911

From cell phones: (858) 534-4357

Questions? Contact the Research Safety Program specialist assigned to your building: <http://blink.ucsd.edu/go/rap>.

Controlled Substances

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Allow 20 days for Listed Chemicals and California Precursors to arrive if their hazard class requires shipment by ground transportation.

The primary lab contact indicated on the PI's Controlled Substance Use Authorization (CSUA) will be e-mailed when the order arrives and informed of where to pick it up. Read about how to place CS orders on Blink at <http://blink.ucsd.edu/go/cs>.

Important: If the chemical you're ordering will be used in animals, it must appear in your Institutional Animal Care and Use Program Committee (IACUC) protocol Section 17.

Questions? Contact the CS Program manager at ehscs@ucsd.edu, or (858) 534-1362.

Hydrofluoric Acid (HF) Commands Respect

Anhydrous hydrogen fluoride and hydrofluoric acid are damaging to all body tissues. Incidental skin contact can result in painful, deep penetrating burns that are slow to heal. Physical contact with dilute solutions (<50%) may not become apparent for several hours; whereas concentrated solutions and anhydrous HF cause immediate damage to tissue with significant bodily injury and pain.

More substantial danger rests in the unique properties of hydrofluoric acid. Undissociated HF penetrates the skin. When absorbed, it dissociates rapidly into the fluoride ion, damaging underlying tissue. Once in the body, the fluoride ion causes significant destruction to soft tissue and decalcification of bone by binding with the calcium ion (as well as magnesium, sodium, and potassium). As a result, cell membranes collapse and nerves will fail to function, leading to fatal pulmonary edema.

Review the HF standard operating procedures found on Blink's Lab & Chemical Safety Menu at <http://blink.ucsd.edu/menu/lab>.



Our Ergo Chair Winner Is May - Tineke Lauwaet, Pathology



Complete Web-based ergonomics training and **you could win** a free Steelcase chair or lab stool for your workplace*. **How it works:** Log in to Enrollment Central at <http://enrollmentcentral.ucsd.edu> and complete the *Evaluating Your Computer Workstation for Comfort and Productivity* Web-based training program. A winner will be randomly drawn each month from a list of employees who have successfully completed the training during that month. * Chairs awarded through this program are the property of the winner's UCSD department.