



UPDATE

www.oseh.umich.edu

Winter 2008

Emergency Planning at the University of Michigan

Emergency plans have long been in place at the University of Michigan, and since Sept 11, 2001, all of us have become more aware of the need to be prepared. Emergencies, disasters, accidents, injuries, and crimes can occur without warning at any time. Being physically and psychologically prepared to handle unexpected emergencies is an individual as well as an organizational responsibility.

The Emergency Response Flipchart has been redesigned to assist in minimizing the negative effects from such an event. Please read this guide thoroughly before an emergency occurs, become acquainted with the contents, and post it in your office or lab for immediate reference. Once you are familiar with the information, you will be better prepared to protect yourself and your co-workers.

WHAT YOU CAN DO TO PREPARE:

- Remain calm – Don't panic.
- Stay tuned to radio or news sources for updated information.

- Keep emergency supplies in your office or lab (medications, flashlights, comfortable shoes, bottled water, batteries, and portable radios).
- Review and post the Emergency Procedures Flipchart in a visible location in your office/lab.
- Contact your building coordinator to learn your building's evacuation plan and become familiar with the quickest exit routes from your building.
- If you need to evacuate know where the rally point is to meet your co-workers and be accounted for.
- Locate the nearest fire extinguisher and pull station, and participate in a fire extinguisher training course.
- Report suspicious and / or unauthorized persons to DPS (call 9-1-1 or 763-1131).
- Immediately report to DPS suspicious or unattended packages, containers or vehicles; signs of a break-in or attempted unauthorized entries; or unusual odors or substances.

The Emergency Response Flipchart can be found at:

<http://www.umemergencymanagement.umich.edu/epp/flipchart.shtml>

To learn more about what you can do at home to prepare for an emergency go to www.ready.gov

Another good website for emergency kit information (work, home and car) is

http://www.ewashtenaw.org/government/departments/emergency_management/em_fp.html

Approved Liquid Scintillation Cocktails

Historically scintillation cocktails were organic based. Organic based cocktails presented a disposal problem—they were considered a hazardous waste as well as a radioactive waste. As a result, manufacturers developed a wide range of non-organic scintillation cocktails that are both effective and are not considered a hazardous waste.

OSEH periodically reviews scintillation cocktails to ensure that waste generated is handled in a safe, regulatory compliant and cost effective manner. The list of scintillation cocktails entitled *Liquid Scintillation Fluid (Cocktails) Approved by Radiation Safety Service* has been updated and can be found below, and on the OSEH website at <http://www.oseh.umich.edu/appfluid.html>.

Several scintillation cocktails were added to the list. Three scintillation cocktails, Ecosint A, Solvent Free and Poly-Fluor were removed from the list and are no longer considered approved cocktails. Ecosint A has very limited use at UM; Solvent Free and Poly-Fluor appear to no longer be manufactured. If you use any of these three scintillation cocktails please contact HMM at 763-4568 for assistance.

Cocktail Name	Manufacturer
Ready Safe	Beckman Coulter
Scintisafe 30%	Fisher Scientific
Scintisafe Plus 50%	Fisher Scientific
Scintisafe Econo F	Fisher Scientific
Scintisafe Econo 1	Fisher Scientific
Scintisafe Econo 2	Fisher Scientific
Scintisafe Gel	Fisher Scientific
Scintiverse BD	Fisher Scientific
BCS	GE Healthcare (Amersham)
In-Flow 2:1	IN/US Systems, Inc.
BetaMax ES	MP Biomedicals (ICN)
CytoScint ES	MP Biomedicals (ICN)
Ecolite (+)	MP Biomedicals (ICN)
EcoLume	MP Biomedicals (ICN)
UniverSol ES	MP Biomedicals (ICN)
Ecosint O	National Diagnostics

Formula 989 H F PT	Perkin Elmer (Packard)
MicroScint 20	Perkin Elmer (Packard)
MicroScint O	Perkin Elmer (Packard)
Opti-fluor	Perkin Elmer (Packard)
Opti-fluor O	Perkin Elmer (Packard)
Ultima Gold	Perkin Elmer (Packard)
Ultima Gold AB	Perkin Elmer (Packard)
Ultima Gold F	Perkin Elmer (Packard)
Ultima Gold MV	Perkin Elmer (Packard)
Ultima Gold XR	Perkin Elmer (Packard)
Ultima Flo AF	Perkin Elmer (Packard)
Ultima Flo AP	Perkin Elmer (Packard)
Ultima Flo M	Perkin Elmer (Packard)
Biosafe II	Research Products, Inc.
Bio-Safe NA	Research Products, Inc.
Econo-Safe	Research Products, Inc.
Beta Plate Scint	Wallac
OptiPhase HiSafe 2	Wallac

Note that manufacturers may make a family of scintillation cocktails with very similar names, but very different properties, making one an approved cocktail and its cousin an unapproved cocktail. One example is that MP Biologicals (ICN) makes both a cocktail named UniverSol and UniverSol ES. UniverSol is organically based and is not an approved cocktail, whereas UniverSol ES is non organic and is approved. Be very careful when ordering and using scintillation cocktails. Ensure that the proper scintillation cocktail is recorded on your LLRW Waste manifest also.

If you using, or plan to use, a scintillation cocktail that is not on the approved list please contact RSS (764-6200) or HMM (763-4568) immediately. Temporary authorization may be granted to use a non approved scintillation cocktail. But additional handling and processing steps are required of the laboratory to ensure proper disposal.

Scintillation Vial Disposal

Liquid scintillation counting (LSC) is an integral part of research at U-M. LSC is used for analysis of radioactive samples and to monitor and control radioactive contamination. LSC analysis is routinely performed in vials that are called LSC vials.

Disposal of LSC vials depends on the choice of LSC cocktail, segregation of isotopes and packaging of the vials, and the activity contained within LSC vials.

Current LSC technology offers a wide range of scintillation cocktails that are biodegradable and environmentally safe. OSEH Hazardous Material Management (Hazmat) and Radiation Safety Service (RSS) maintains a list of approved scintillation cocktails on the OSEH website at <http://www.oseh.umich.edu/appfluid.html>. Check this list to ensure that your choice of cocktail is approved before purchase and use. Use of a non-approved LSC cocktail may result in additional work for laboratory staff prior to OSEH waste pick up and create a waste that is more difficult and costly to dispose.

Segregation of isotopes and packaging of LSC vials is detailed in the radioactive waste manual entitled *Proper Segregation and Disposal of Low-Level Radioactive Waste (LLRW) at The University of Michigan*. This document is included in your Radiation Safety Records Binder and on the OSEH website at: <http://www.oseh.umich.edu/segreg.html>.

Proper segregation of isotopes and packaging of LSC vials facilitates disposal and reduces the chances of radioactive contamination in the laboratory and during transportation. Several of the more important points are described below.

- Collect and package LSC vials by isotope. H-3 and C-14 may be collected and packaged together. Other isotopes should be collected and packaged separately.
- Segregate glass vials from plastic vials and package accordingly.

- LSC vials **must not be disposed** in the yellow drums provided for solid waste. This applies to both empty and full LSC vials.
- Package vials for collection in the original container if possible. Return used vials to the original flats and boxes. This helps to keep the vials upright and reduces the likelihood of leakage and contamination.
- Vials that are packaged loose, without the aid of a flat to keep the vials upright, need controls to contain any leakage from LSC vials. We do not encourage laboratories to package their scintillation vials loose without the aid of a flat. However if no other option is available, line these collection boxes with 2 plastic bags or several layers of bluepads.
- Indicate “top” on the box or draw up arrows on one or more sides of the collection box. Maintain the box in the upright position during storage in the lab.
- Perform a contamination check smear of the outside of each box for collection, as is required for all radioactive waste containers. There is no need to do contamination check smears on individual LSC vials or collection flats.

The activity contained within an entire collection box should be recorded as accurately as possible. Remember that by normal usage, LSC vials will contain a small amount of radioactivity. Assignment of too large an activity may create a waste that is more difficult and costly to dispose.

For the most part, LSC vial usage, collection, packaging and disposal proceed smoothly. The above points are reminders to help reinforce current practices that allow for efficient processing and disposal of LSC vials.

Please call OSEH Hazmat at 763-4568 when questions arise.

Uncontaminated Sharps

Do you have to dispose of your razor blades into a sharps container even when they are not contaminated with biohazardous materials? The answer is yes! This will protect workers handling the waste.

OSEH considers the following as sharps even when they are not contaminated with blood or other types of biohazardous materials: needles, scalpels, razor blades, lancets, glass Pasteur pipettes and glass capillary tubes.

If you use any of these sharps, make sure that you have a sharps container available for proper disposal.

Sharps containers can be ordered through OSEH's Hazardous Materials Management Program (HazMat) by calling 763-4568.

There are two sizes of sharps containers available – a 3.5 gallon and 2 gallon. A five gallon

pail can also be utilized as long as a biohazard sticker and the accumulation start date are on the pail. Pictures of the different types of waste containers supplied by OSEH can be seen by visiting the following link:
<http://www.oseh.umich.edu/OSSEHSupplies.pdf>.

Also, remember to write the accumulation start date on your sharps container. Since sharps are considered regulated medical waste, this type of waste can only be accumulated in your laboratory for up to 90 days.

OSEH recommends that you call HazMat at 763-4568 around day 60 to allow adequate time for pickup.

NOTE: There may not be a place on the sharps container requesting the accumulation start date. Just write the date sharps are first placed in the container on the front of the container so that it is visible.

Pictures of the different types of waste containers supplied by OSEH can be seen by visiting the following link:

<http://www.oseh.umich.edu/OSSEHSupplies.pdf>

Thoughts from the Director

By Terry Alexander

As you may have noticed from last quarter's Update and now this one, emergency preparedness is a hot topic for the campus. With everything that has happened at sister institutions such as Virginia Tech and Northern Illinois, the expectations are running very high from not only our campus community but also the parents of our students that we will be prepared to deal with emergencies. Over the last 8 months we have moved into a fast track to bring all of our planning up to a 2008 environment. While the response actions have not changed much in several years, the threat levels certainly have which means our plans need flexibility to adapt quickly. OSEH has recently brought on line a new web site (www.umemergencymanagement.umich.edu) to help the campus community better understand the planning that is underway.

We now have a high expectation and need to be able to warn the community quickly when there is an immediate threat. You should already be aware of the UM Emergency Alert system (www.umemergencyalert.umich.edu) that went active last month – please sign up! In the event of an actual emergency on campus, the Department of Public Safety website (<http://police.umich.edu/>) will be used to help keep you up to speed on what is happening. And our final recent development has been a major revision to the emergency

procedures flip chart (www.umemergencymanagement.umich.edu/epp/flipchart.shtml) that will assist you in planning your local emergency needs. Expect more changes to come as we move through this next year.

I want to remind our community that being physically and psychologically prepared to handle unexpected emergencies is an individual as well as an organizational responsibility. It is our hope that you will use the resources provided to prepare yourself as well as your units. If you have questions or need further assistance, please contact our Office of Emergency Management at emergencymanagement@umich.edu.

2008

Safety Coordinator Conference

June 5th !!!

Register at:

<http://www.osehtraining.umich.edu/osehtraining/>

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