

# Clark Hall Materials Facility Safety Orientation

For rooms D21, D19, D15, D10, & D22 Clark Hall



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# CCMR

Cornell Center for Materials Research

Cornell University, Ithaca, NY

<http://www.ccmr.cornell.edu>



# Acknowledging the Facility

Please remember to properly acknowledge use of the CCMR Facilities in your presentations, publications, and conference proceedings



Researchers who make use of these facilities must acknowledge the award number  
***NSF DMR-1719875***



Cornell Center for  
Materials Research

For more information please visit:  
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# Shared Facility Safety

- The Clark Hall Materials Facility is a shared facility.
- **You are responsible for your own safety and the safety of those around you.**
- Protect yourself: Pay attention to notices and warning signs posted in the facility. Access restrictions, hazards, warnings, and emergency contacts are posted on HASP door signs.
- Be conscientious: Don't take a chance of putting yourself, other facility users, facility staff, or custodians at risk.
- Do not introduce new hazards or hazardous materials without approval from facility staff.



# Shared Facility Safety: Sample and Waste Management

- All materials and containers must be labeled with the contents, NetID/email, and the date. CCMR provides self-adhesive labels.
- You must get facility staff approval for any activity that may generate hazardous waste.
- All samples must be removed from the facility after use/analysis. Do not leave samples in this facility.



# Facility Guidelines

- Do not prop open doors.
- Do not eat or drink in the facility.
- Closed-toed non-mesh shoes are required at all times.
- Long pants and sleeves are required when handling chemicals or cryogenics (lab coats are available in D21H).
- Long hair must be tied back to avoid getting caught in moving parts.
- Phones, laptops, etc. must not distract from safe facility use.
- Headphones may be used provided cords are managed and you can still hear what is going on around you.
- Leave areas at least as clean as you found them.



# Equipment Use

- Equipment training will be done by facility staff.
- Users are prohibited from using equipment for which they have not been trained.
- Use of equipment which has been enabled under someone else's FOM account is strictly prohibited in all CCMR facilities.
- Each tool has Standard Operating Procedures (SOP) posted at the tool and/or CCMR website describing proper use and any necessary safety precautions.



# Shared Facility Hazards (pg.1)

All users working in the following areas must be trained and aware of hazards which could potentially impact users in the vicinity. Obey posted signage.

## Chemical Area & fume hood (D21E)

- Fume hood safety training (CULearn #3355-FumeHood) is required to work in the fume hood.
- Be aware of hazards and warnings posted on the HASP door signs.
- **Safety glasses with side shields are required at all times.**
- **All containers must be labeled with the contents, NetID/email, and date.**
- Safety Data Sheets are required to handle hazardous materials.
- **Any activity that may generate hazardous waste requires approval from facility staff.**
- **There is a shared hazardous waste bottle for non-halogenated organic solvents in the hood. All waste must be documented on the log sheet for the hazardous waste container.**
- **Do not leave samples in this facility. Take your samples with you when you leave.**



# Shared Facility Hazards (pg.2)

All users working in the following areas must be trained and aware of hazards which could potentially impact users in the vicinity. Obey posted signage.

## High Magnetic Fields (D19, D22):

- Magnetic Field Safety (#5035-magnetic) training is required to work with equipment in these areas.
- The PPMS systems in D21 and D22 and the MPMS in D19 each contain powerful electromagnets.
- Areas are marked with tape indicating the threshold of a 5 Gauss (5 Oersted) field when the magnet is being operated at full power. (Note – MPMS 5 Gauss “line” is within instrument cabinet.) **Users with pacemakers or magnetic surgical implants must stay outside of this area.**





# Shared Facility Hazards (pg.3)

All users working in the following areas must be trained and aware of hazards which could potentially impact users in the vicinity. Obey posted signage.

## **Cryogenic Hazards (D21E, D22, D10):**

- Training in Handling Cryogenics (#3055-cryogenicsfty) is required to work with certain equipment in these areas.
- Wear safety glasses whenever open cryogenics are in use in the room.
- Do not touch any surface of a dewar, transfer line, or probe under cooling without cryogen gloves.
- If you notice a liquid or gas leak (or anything else unusual), notify the cryogen user and/or facility staff immediately.



## Waste Disposal (pg.1)

All waste generated in the facility must be disposed of according to EH&S regulations as outlined in EH&S Chemical Waste Disposal training. If you are unsure how to safely dispose of something, *please ask facility staff*. Don't take a chance of putting yourself, facility users, facility staff, or custodians at risk.

### • Hazardous Waste

- Any activity that may generate hazardous waste must be planned and approved in advance by facility staff.
- Hazardous waste must be collected in the room where it is generated.
- CCMR provides hazardous waste containers bearing an EH&S hazardous waste label.
- Hazardous waste containers must be stored in secondary containment.
- The solvent waste container in the hood has a log sheet. Chemicals and quantities must be added to the log sheet for the container.
- If you need to dispose of a chemical that does not already appear on the container's hazardous waste label, you **must** consult with facility staff to determine how your waste should be segregated.

PRESS HARD WITH BALL POINT PEN  
FILL AND ATTACH BOTH COPIES TO CONTAINER  
REQUEST WASTE PICK UP ON LINE 47  
WWW.EHS.CORNELL.EDU

NYDOOC810986 B 103710  
CORNELL UNIV. ENVIRONMENTAL HEALTH & SAFETY  
201 FRESH FORDS TRINCA BLDG 4480

BLDG & RM ST 01A 420 DATE 10-2-10  
NAME S. S. S. TEL# 4-1667

CHECK TYPE	CHEMICAL NAME/Volume or Weight	
<input type="checkbox"/> Poison	Acetone	20%
<input checked="" type="checkbox"/> Flamm. Solvent	Dichloromethane	20%
<input type="checkbox"/> Nonflamm. Solvent		
<input type="checkbox"/> Oxidizer	Tetrahydrofuran	10%
<input type="checkbox"/> Flamm. Solid	Hexane	20%
<input type="checkbox"/> Corrosive-Acid	Water	20%
<input type="checkbox"/> Corrosive-Alkali	Toluene	20%
<input type="checkbox"/> Corrosive-Solid	Ethyl acetate	5%
<input type="checkbox"/> Irritant		

Hazardous Waste - Federal Law Prohibits Improper Disposal  
If found contact the nearest police or Public Safety authority in the U.S. EPA

NYDOOC810986 B 103710

Hazardous Waste - Federal Law Prohibits Improper Disposal  
If found contact the nearest police or Public Safety authority in the U.S. EPA





## Waste Disposal (pg.2)

All waste generated in the facility should be disposed of according to EH&S regulations as outlined in EH&S Chemical Waste Disposal training. If you are unsure of how to safely dispose of something, *please ask facility staff*. Don't take a chance of putting yourself, facility users, facility staff, or custodians at risk.

- **Lab Glass** – Microscope slides, old or broken glassware, silicon wafers, etc., which are not contaminated with hazardous materials should be disposed of in the glass disposal containers in D21 (outside the office) and D21E.
- **Sharps** – Used blades and other sharp objects (including small items listed above) go in the white sharps containers located around the lab.
- **Pipette tips** – Ensure pipette tips are empty, then dispose of them in the green bin in the hood.
- **Syringes/needles** – Consult with facility staff if you plan to use these as they have special storage/disposal guidelines.
- **Recyclables** – Paper, cardboard, clean and empty drink containers, etc., should be left in the small blue recycling bins or the large blue box in D21.
- **Trash** – Anything not fitting the above categories should go in the small trash bins or the large trash can in D21.

PRESS HARD WITH BALL POINT PEN  
FILL AND ATTACH BOTH COPIES TO CONTAINER  
REQUEST WASTE PICK UP ON LINE AT  
WWW.EHS.CORNELL.EDU

NYDOOC810986 B 103710  
CORNELL UNIV. ENVIRONMENTAL HEALTH & SAFETY  
201 FRESH FORDS TRINCA BLDG 420

BLDG & RM ST Dia 420 DATE 10-2-10  
NAME Sarah Johnson TEL 9-1667

CHECK TYPE	CHEMICAL NAME/Volume or Weight
<input type="checkbox"/> Poison	Acetone 20%
<input checked="" type="checkbox"/> Flamm. Solvent	Dichloromethane 20%
<input type="checkbox"/> Nonflamm. Solvent	
<input type="checkbox"/> Oxidizer	4L Tetrahydrofuran 10%
<input type="checkbox"/> Flamm. Solid	Hexane 20%
<input type="checkbox"/> Corrosive-Acid	Water 20%
<input type="checkbox"/> Corrosive-Alkali	Toluene 20%
<input type="checkbox"/> Corrosive-Solid	Ethyl acetate 20%
<input type="checkbox"/> Irritant	

Hazardous Waste - Federal Law Prohibits Improper Disposal  
Please contact the nearest police or Public Safety authority in the U.S. EPA  
A bond collector is required prior to Public Safety authority in the U.S. EPA

NYDOOC810986 B 103710  
Hazardous Waste - Federal Law Prohibits Improper Disposal  
Please contact the nearest police or Public Safety authority in the U.S. EPA





# Materials Facility Emergency Contact Info

In case of emergency, dial 911 from a campus phone, or 255-1111 from your mobile phone, to reach Cornell Dispatch.

For urgent but non-emergency equipment issues, call the appropriate staff member using the number posted on the HASP signs on the doors. If you have questions regarding proper procedures, safety regulations, or other concerns, please contact one of the Facility Staff:

- Steve Kriske: kriske@cornell.edu, D21F Clark Hall
- John Wright: jgw92@cornell.edu, D21 Clark Hall
- Darrah Dare: dj378@cornell.edu, D21A Clark Hall
- Jon Shu, CCMR Associate Director: jbs24@cornell.edu, 633 Clark Hall

The following contacts may also be of assistance:

- John Sinnott, CCMR Safety Representative: jps39@cornell.edu, 624 Clark Hall
- Keane Leitch, PSC Safety Manager: kjl44@cornell.edu, 121 Baker Lab
- Todd Pfeiffer, PSC Facilities Director: tap66@cornell.edu, 105 Weill Hall

# Emergency Exits

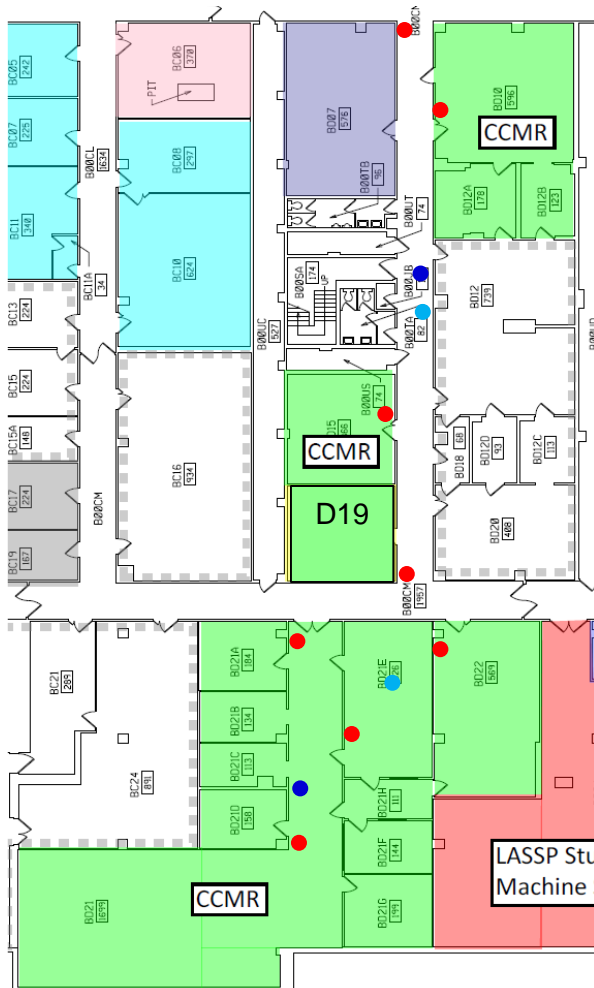
In case of an emergency, follow the exit signs to the loading dock (primary exit), or into Baker to the exit at the end of the hallway (secondary exit).



Secondary Exit  
Through Baker Hall

Primary Exit to  
Loading Dock

## Emergency Facilities



Protect yourself: know where emergency facilities are located before you need them:

- Fire Extinguisher
- Safety Shower
- Eyewash



# Shared Facility Access

All users must understand the information presented in this facility orientation and show proof of the following safety trainings, available through CULearn, in order to gain access to the facility:

- EH&S Laboratory Safety (#2555-laboratory)
- EH&S Chemical Waste Disposal (#2716-chemwaste)
- EH&S Fire Safety (#5330-firesafety)

See <http://culearn.cornell.edu/> for information on how to obtain training or verify your CULearn records.



# CCMR Facility Access form

- Please go to the link below to download the PDF form which you can provide to the appropriate facility staff.
  - <http://www.ccmr.cornell.edu/ccmraccessform/>
- Please remember to properly acknowledge use of the CCMR Facilities in your presentations, publications, and conference proceedings



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or [www.ccmr.cornell.edu/facilities/](http://www.ccmr.cornell.edu/facilities/)