# Neuroscience & EH&S Annual Meeting

September 2018



# **Inspection Metrics**





## **Corrective Actions - 2018**





Corrective Action	<b>Total Actions</b>	Corrected By
Is there a 'No Smoking' sign posted on all laboratory entrance doors and conspicuously inside the lab?	23	EH&S
Are hazardous chemicals in non-manufacturer bottles labeled clearly and legibly with the chemical name,		
CAS# and hazard?	21	Laboratory
Have laboratory staff completed all required EH&S trainings on PEAK?	15	Laboratory
Is there a 'Laboratory - Potentially Hazardous Substances' sign posted on doors leading from the hallway into		
the lab?	12	EH&S
Are all refrigerator/freezers not rated for flammable material storage labeled with 'Store no liquids flashing		
below 100° F'?	11	EH&S
Are chemicals stored as to prevent breakage (not directly on the floor, not on unwalled carts, etc.)?	9	Laboratory
Is there a posted, up-to-date record of weekly testing for all eyewashes?	9	Laboratory
Are all liquid hazardous waste containers stored in secondary containment?	8	Laboratory
Are chemicals properly segregated, by distance or secondary containment, from incompatible materials		
and/or conditions?	8	Laboratory
Are food, beverages, and other consumables/wearables such as cosmetics kept outside the lab at all times?	8	Laboratory
Are all biological / sharps containers closed and not overflowing?	7	Laboratory

Per the FDNY, all laboratories are required to have the following signs

- Laboratory Potentially Hazardous Substances
  - Posted on entrance to lab
- No Smoking
  - Posted conspicuously throughout lab
- Store No Flammables
  - Posted on non-explosion proof refrigerators







• Contact EH&S (x4SAFE) for replacement signs

Labels must be legible, written in English and prominently displayed

- Identify the hazardous chemical(s), CAS #(s)
- Provide warnings of any physical and health hazards
- Be appropriate for the type and size of each container (tags may need to be created for small containers)
- Include expiration dates

# Abbreviations are not authorized on hazardous chemicals



Current Offered			Regulatory		Population						
Trainings	Training	Location	Agency	Frequency				pulation			
	On Campus	Online			All Researchers	Fume Hood Users	Work with Pathogens	Work with Radiation	Work with Lasers	Dark Room Users	Work with Needles
Basic Laboratory Safety (New Hire)	х	х	OSHA, EPA, FDNY	Initial	х						
Hazard Communication		Х	OSHA	Annual	Х						
Personal Protective Equipment		Х	OSHA	Annual	Х						
Laboratory Hazardous Waste Management		х	EPA	Annual	x						
Principles of Biosafety		Х	OSHA	Initial	Х						
Bloodborne Pathogens and Exposure Control in Research Settings		х	OSHA	Annual			x				
Bloodborne Pathogens and Exposure Control in HIV/HBV/HCV Laboratories		x	OSHA	Annual			x				
Needlestick Injury Prevention and Reporting for Research- Related Activities		x	OSHA	Annual							х
Proper Use of Chemical Fume Hoods		x	FDNY	Initial		х					
Compliant Management of Dark Rooms		x	OSHA, EPA, FDNY	Initial						х	
Initial Radiation Safety for Researchers		x	OSHA	Initial				х			
Radiation Safety Refresher		Х	OSHA	Annual				Х			
Laser Safety for Researchers		Х	OSHA	Initial					Х		
Laser Safety Refresher		Х	OSHA	Annual					Х		

Per FDNY, all chemicals must be stored in a manner as to prevent breakage

- Not stored above eye level
- Not stored directly on floor
- Not stored on un-walled carts



## **Corrective Action – Weekly Inspection Eyewashes**

## All eyewashes must be inspected on a weekly basis. Tests should focus on

WEEKLY EYEWASH STATION INSPECTION LOG Instructions for use by local staff:

Record inspection data on log.

· Activate plumbed equipment to ensure compliant operation and to clear any sediment accumulation.

- Adequate pressure
- Tepid temperature
- Clear color



#### Location/Room #: Is the path of Is the water Is the water Date the Is there a highly Is the area problem was travel from hazard clear and tenid ressure adequate Are the dust caps Date of Checked By visible sign? well-lit? reported to Plant to equipment free to wrist (consistent. in place? Date Corrected (Print name) Inspection underside? Operations and of obstructions? balanced flow)? ervice Request # Yes No Yes No Yes No Yes No Yes No Yes No (if applicable)

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## **Corrective Action – Hazardous Waste**

- All hazardous waste labels must be legible and completely filled out.
- All liquid hazardous waste must be in secondary containment
- All containers must be compatible with the waste chemical

Supervisor:	Extension:
Building:	Floor/Room #:
<u>Chemical Contents</u>	Amount (%)
Haza FLAMMABLE COR Please handle with care Contact #EHSwast	rd Class (if known) IROSIVE

The Mount Sinai Medical Center





- Refer to "Laboratory Hazardous Waste Management" training on PEAK
- Contact <u>#ehwaste@mountsinai.org</u> for waste collection supplies

All chemicals must be stored to ensure incompatible materials are separated

- Oxidizers and Flammables
- Acids and Bases
- Refer to Appendix F



#### DOT Incompatibles GHS Chemical Category Storage **Example Chemicals** Hazard (also check SDS) Pictogram Placard Cool, dry area • 20 ft. away from oxidizing gases Methane Oxidizing gases Secure cylinders upright and . Flammable Acetylene Toxic gases immovable Propane Oxidizing solids · Portable propane gas cylinders cannot be stored indoors · Cool, dry area 20 ft. away from flammables or . Compressed Oxygen separated by 5 ft. high wall with Gas Oxidizing Chlorine Flammable gases XIDIZING 0.5hr fire resistance Fluorine mixtures · Secure cylinders upright and immovable Cool, dry area · Away from flammable gases and GAS Carbon monoxide Flammable gases Poisonous liquids Hydrogen sulfide Oxidizing gases · Secure cylinders upright and immovable Flammable liquids Separate, protected acid storage Hydrochloric acid Flammable solids Inorganic cabinet Sulfuric acid Bases Acids · NOT on metal shelves Phosphoric acid Oxidizers Organic acids Flammable liquids Separate, protected acid storage Acetic acid Flammable solids Organic cabinet Trichloroacetic acid Bases Acids · NOT on metal shelves Lactic acid Oxidizers Inorganic acids Corrosives Flammable liquids Separate, protected acid storage Nitric Acid Flammable solids Oxidizing cabinet Perchloric acid Inorganic acids · NOT on metal shelves Acids Organic acids Chromic acid Away from flammables Bases Flammable liquids Ammonium hydroxide · Storage cabinet separate from all Oxidizers Bases Potassium hydroxide acids Poisons Sodium hydroxide Acids

## Chemical Segregation & Storage Chart

All food and drink should be left outside the laboratory Avoid cosmetics (chap stick, contact solutions, lotions, etc.)





## **Corrective Action – RMW Containers**

# **Open Biological/Sharps Containers**



# Keep benchtop containers empty unless actively being filled

# Laboratory Rosters



## Hazard Assessments – SECTOR



# **Training Compliance – Laboratory Rosters**

• Principal Investigators and Lab Safety Managers can manage laboratory staff, roles and emergency contact information by leveraging the 'Lab Roster' module

Mount Sinai			Josef (Administrator) 🛛 🗋
Add User To Roster:			
		¢	
Name	Email	Allowed	Role
Josef Ehntholt [PI]	josef.ehntholt@mssm.edu		Principal Investigator Responsible Party
😢 Hector Maldonado	hector.maldonado@mssm.edu	V	et al a constant a cons
😵 Mark Matthews	mark.matthews@mssm.edu	Ś	Lab Safety Officer 🔗
😢 Maureen Parilla	maureen.parilla@mssm.edu		Laboratory Staff 🛛 🔗

24-Hour Emergency Contact Numbers						
😢 (212) 241-7233 - N/A (/	😵 (212) 241-7233 - N/A (Apr 14, 2017)					
😢 (917) 439-7600 - Ehntholt, Josef (Jul 19, 2017)						
Add Phone Number	+1 ###-##### N/A					

# **Training Metrics**



# **Training Compliance – SECTOR**



# **Training Compliance – SECTOR**

- Principal Investigators and Lab Safety Managers can track training compliance on the Lab Safety Module
  - 5 Core EH&S Trainings
  - Trainings Required by Job Function

Select Training			
Basic Laboratory Safety		•	
Add Training to All Lab Personnel			
Josef Ehntholt		Add Selected Training	
Training	Last Completed	Status	
× Basic Laboratory Safety	Feb 23, 2017 🖋	Current	
X Needlestick Injury Prevention and Reporting for Research-Related Activities	Sep 8, 2017 🗬	Current	
X Initial Laser Safety for Researchers	Sep 21, 2017 🖋	Current	
X Principles of Biosafety	Oct 12, 2017 🖋	Current	
X Hazard Communication and GHS	Nov 30, 2017 🖉	Current	
X Proper Use of Chemical Fume Hoods	Dec 13, 2017 🖋	Current	
X Laboratory Hazardous Waste Management	Dec 19, 2017 🖋	Current	
X Bloodborne Pathogens and Exposure Control in HIV/HBV/HCV Laboratories	Jan 24, 2018 🖋	Current	
X Bloodborne Pathogens and Exposure Control in Research Settings	Apr 12, 2018 🖋	Current	
X Personal Protective Equipment	Never Completed 🖋	Needed	
Hector Maldonado		Add Selected Training	
Training	Last Completed	Status	
X Hazard Communication and GHS	Nov 13, 2013 🐠	Expired	
X Principles of Biosafety	Feb 27, 2014 🖋	Current	
X Proper Use of Chemical Fume Hoods	Sep 9, 2016 🗬	Current	
X Bloodborne Pathogens and Exposure Control in Research Settings	Never Completed 🖋	Needed	
X Personal Protective Equipment	Never Completed 🖋	Needed	
X Needlestick Injury Prevention and Reporting for Research-Related Activities	Never Completed 🖋	Needed	
X Initial Radiation Safety for Researchers - RAM Users	Never Completed 🖋	Needed	
× Basic Laboratory Safety	Never Completed 🖋	Needed	
X Laboratory Hazardous Waste Management	Never Completed 🖋	Needed	

# **Training Compliance – SECTOR**

• Principal Investigators, lab safety officers and lab members will receive automatic updates when trainings are incomplete or close to expiring

Mount Sinai		
Dear Emma Klein, The following training courses require your attention:		
Training	Expires	
[EHS116] Hazard Communication and GHS	Not Completed	
[EHS124] Personal Protective Equipment	Not Completed	
[EHS213] Laboratory Hazardous Waste Management	Not Completed	
[EHS220] Principles of Biosafety	Not Completed	
Please visit <u>PEAK</u> to take the required training courses at your earliest convenien Please note that training records may take up to 24 hours to update in SECTOR a If you have any questions regarding your safety training, please contact Mount Si Mount Sinai Environmental Health and Safety	ice. For more information ifter you have completed inai Environmental Healt	a about safety training, please visit the <u>Environmental Health and Safety website</u> . the training course. h and Safety at <u>AskEHS@mssm.edu</u> or by calling x4SAFE.

# **Training Compliance \***

Training Name	Neuroscience Compliance	Institution Compliance
Basic Laboratory Safety - 8/30/2018	73%	72%
Personal Protective Equipment - 8/30/2018	61%	62%
Hazard Communication and GHS - 8/30/2018	58%	64%
Laboratory Hazardous Waste Management - 8/30/2018	59%	61%
Principles of Biosafety - 8/30/2018	63%	67%



# Laboratory Hazard Assessments



# Laboratory Hazard Assessments

- A Chemical Hygiene Plan (CHP) is required per OSHA's Occupational Exposure to Hazardous Chemicals in Laboratories standard (29 CFR 1910.1450) and Mount Sinai policy.
  - The CHP provides essential information for prevention of potential exposures to hazardous materials and physical hazards in the laboratory.
- Mount Sinai has developed a Chemical Hygiene Plan to provide an overview of information about the use of hazardous materials in research laboratories, their hazards, warning signs, control measures, safety training to minimize exposure and waste management.
- This LHAT is your laboratory-specific complement to the Mount Sinai Chemical Hygiene Plan.

### Chemical Hazards

### Working with small volumes of corrosive liquids (< 1 liter).

Room: MSM: Annenberg - 1608, 1620

Hazard: Eye or skin damage

*Engineering Controls:* Handle materials inside a certified chemical fume hood to ensure adequate ventilation.

PPE: Safety Glasses or Goggles, Light Chemical-Resistant Gloves, Lab Coat

# **Common Hazard in Lab Assessments (LHATs)**

Activity	# of PIs
Working with small volumes of corrosive liquids (< 1 liter).	25
Minor chemical spill cleanup.	22
Working with small volumes of organic solvents (< 1 liter).	22
Working with animal specimens (preserved and unpreserved).	21
Working with toxic chemicals (solid or liquid).	21
Working with very cold equipment or dry ice.	19
Working with live animals (Animal Biosafety Level 1, ABL- 1).	17
Working with cryogenic liquids	13
Working with agents classified as Biosafety Level 1, (BSL-1).	11
Working with hot liquids, equipment, open flames	11
(autoclave, Bunsen burner, water bath, oil bath).	
Manipulation of cell lines, viruses, bacteria, or other organisms classified as Biosafety Level 2, (BSL-2).	10
Removing freezer vials from liquid nitrogen	10

• Pending LHATs can be completed by LSOs

# **Laboratory Hazard Assessments**

• Hazard Assessments must be reviewed and digitally signed by all lab members!

			•	
Ehntl	nolt, Josef	[MSH&ISMMS] Environmental Health and Safety Ehntholt, Josef	Sign	Derint Print
	By signing below and clicking 'Save' you are certifying that you h	ave read and understood the LHAT. You may sign with a mouse or use a touchscreen on supported devices.		

After review, please sign and date below.

Name Email		Signature	Date	
Mark Bailey	mark.bailey@mssm.edu			
Ma Behzadi	Behzadi ma.behzadi@mssm.edu		6/29/18	
Carly Bliss	carly.bliss@mssm.edu			
Felix Broecker	felix.broecker@mssm.edu			
Lynda Coughlan	lynda.coughlan@mssm.edu			
Marianne Dejong	marianne.dejong@mssm.edu			
Alec Freyn	alec.freyn@icahn.mssm.edu			
Victor Leyva-Grado	victor.leyva-grado@mssm.edu	and the second s	7/5/18	

# **Certificate of Fitness**



## Hazard Assessments – SECTOR

### Welcome to SECTOR!

SECTOR is Mount Sinai's online platform for Safety, Environment, Compliance, Training, and Online Recordkeeping.

#### Getting Started with SECTOR

Begin by verifying or updating your personal information by clicking the 😔 icon in the top right corner of the screen. This includes your name, email address, and Life Number.



# **Certificate of Fitness**

- Certificate of Fitness for Supervising Non-production Chemical Laboratories (C-14)
  - As per the 2008 Fire Code, all non-production laboratories within New York City must be operated under the supervision of a Certificate of Fitness holder. This applies both to new laboratories constructed after July 2008 and those constructed before (referred to as "pre-existing laboratories").
- Mount Sinai's **Executive Lab Safety Committee** has decided to go above and beyond the city requirements and is requiring all personnel that work in a lab to obtain a C-14 certificate of fitness. This is to promote a safety awareness culture as well as to ensure labs are always in compliance with local law.

## CERTIFICATE ISSUED BY NYC FIRE DEPT

CERT # <b>12</b> ISSUED <b>04</b> /	345678 12/2018 EXPIRE	N S 04/12/2021	
NAME SAM HOME 2919 ADDR. ASTO	UEL STEWART 24TH AVE DRIA, NY 11101	NOT FDNY	C 2 D
FEE \$ 25	CAT. F91 TYPE	EMPLOYEE Fitness	Manual Manual And
ESSC CON	FG H/OB		AnnaleSterryford
WORK LOCATION	30 ROCKEFELLE MANHATTAN, N	ER PLZ NY 11019	

# **Certificate of Fitness**

• Laboratory Staff can now track C-14 permits and expirations using SECTOR

### User

Search for User	
Greg Kwolek [greg@safetystratus.com]	\$

Add Comment

## C14 Number

12345678

P Add Comment

### Issue Date

09/13/2017

P Add Comment

### **Expiration Date**

09/13/2020

Generation Add Comment

### Attach C14 Card



# Laboratory Safety Manual and CHP



## Hazard Assessments – SECTOR

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# **Laboratory Safety Manual – Distribution**



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# **Safety Data Sheets**



# **Safety Data Sheets**

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#### Getting Started with SECTOR

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**Questions?** 

Safety Cente	Mount Sinai
All Products Locations Manufacturers MSD Sonline Search	MSDS Search     Search by Product Name, Manufacturer, CAS#, and/or Product Code or search by indexed fields, Ingredient, Ingredient CAS#, UN/NA#, D     C        Locations:     Select Location:     Select Group     Product Data:     Select Croup     Ustom Module:     Search     Reset                    Product Status:     Search     Reset               Product name starts with: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 0-9 #+=

# How to Access SAFETY DATA SHEETS (SDS)

# Primary Method: EH&S Intranet

- Navigate to the EH&S Intranet page at http://intranet1.mountsinai.org/compliance/env\_health\_safety.asp
- Click on the MSDSonline link

# Alternate Method #1: Smart Phone

- Android: Open 'Optical Reader', scan code
- Apple: Open 'Camera', scan code

# Alternate Method #2: Phone & Fax

- Call MSDSonline
- The SDS will be faxed or emailed



# For all spills contact: Security (x60) 24/7

Contact EH&S for questions at x4SAFE or askEHS@mssm.edu



1-888-362-7416

MSDSonline

Contact MSDS an line 24hrs/day, 74ays/week Provide Product Name, Manufacturer & your Rox #



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# **Emergency Management**



# **Transition to Plain Language – Badge Distribution**



### Emergency Management will be invited to future LSO/DSO meeting

# **Transition to Plain Language – Badge Distribution**

# **Emergency Alert** System



Effective May 17, 2018, the Mount Sinai Health System will transition from color codes to a standard Plain Language Emergency Alert System. The new alerts have been simplified into three types: Facility, Medical, and Security. The language we use to communicate emergencies has changed, but not the way we receive messages or respond.

> Fire Alerts > 4-FIRE (212) 241-3473 Cardiac Arrest Emergencies > 4-7000 (212) 241-7000 Security Emergencies and Hazardous Materials Spills > 60



#### What you will hear:

Facility Alert + Alert Type + Location + Instructions Medical Alert + Response Team + Location



Security Alert + Alert Type + Location + Instructions

Facility Alerts (Examples)		
Previous Alert	New Alert	
Code Red	Facility Alert + Code Red + Location + Instructions	
Code HICS	Facility Alert + Emergency Plan Activated + Location + Instructions	

#### Medical Alerts (Examples)

Previous Alert	New Alert
Team7000	Medical Alert + Hospital Code Team + Location

#### Security Alerts (Examples)

Previous Alert	New Alert
Code Silver	Security Alert + Armed Intruder + Location + Instructions
CodePink	Security Alert + Intant/Pediatric + Location + Instructions

Code Clear (For All Alert Types): All Clear + Alert Type + Resolved Message



Security Alert For incidents affecting safety Alert Type + Location + Instructions

Facility Alert For incidents affecting the building Alert Type + Location + Instructions

Medical Alert For patient care emergencies Alert Type + Response Team + Location



Sinai

Confine

#### Fire Alerts will be messaged as follows:

Facility Alert: Code Red [Name of] Building, [#] Floor, and will be followed by instructions

#### In case of fire: Rescue Alarm

Extinguish/evacuate

Pull Aim Squeeze

Fire extinguisher procedure:



In case of fire or smoke, pull the nearest fire alarm box, call your Facility's emergency number and dial 9-1-1.

Sweep



# **Emergency Information**

- Do all staff know the location of the nearest safety equipment (spill kit, safety shower, eyewash) and egress routes?
- Who to call in the event of smoke or a burning smell?

- x4Fire

- Who to call in the event of a fire?
  - x4Fire
- Who to call in the event of a chemical spill?
  - X60 (Security)
- Who to call in the event of suspicious activity or staff?
  - X60 (Security)
- Who to call for general EH&S inquiries?
  - x4Safe

**Thank you for your Participation!** 

Josef Ehntholt Assistant Director, Environmental Health & Safety Office: 212.241.5915 josef.ehntholt@mssm.edu

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