# Neuroscience & EH&S Annual Meeting

September 2018



# **Inspection Metrics**





## Annual Lab Safety Report

### Neuroscience

First Inspection: Jan 1, 2018

Last Inspection: Sep 14, 2018

### **Performance Summary**

Overall Department Score

93.5%

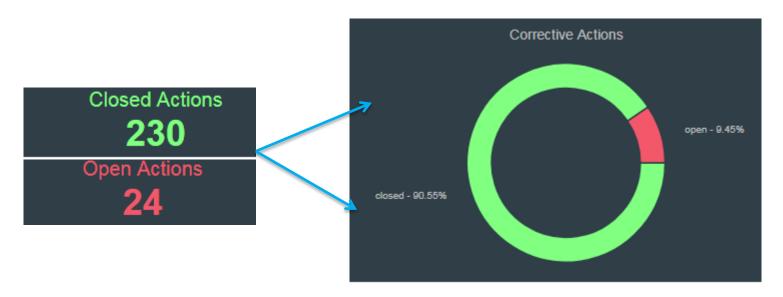
Corrective Actions
Status As Of: Sep 14, 2018 12:00 AM

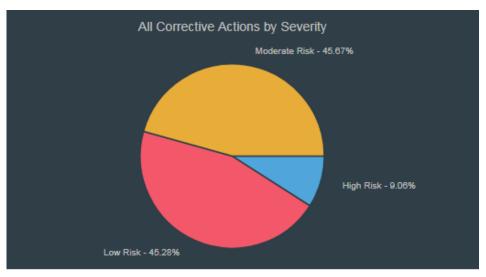
Open - 24 Closed - 230

Average Days to Closure: 7

Research Labs	Cold Rooms	<b>Equipment Rooms</b>
Average Score 93.5%	Average Score 97.1%	Average Score 88.7%
47 Inspections	10 Inspections	2 Inspections

### **Corrective Actions - 2018**





# **Most Common Findings**

Corrective Action	Total Actions	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

### **Corrective Action – Laboratory Signage**

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

### **Corrective Action – Chemical Labeling**

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



Mount Sinai Chemical Name:	
CAS#: Hazard:	

# **Corrective Action – EH&S Trainings**

Current Offered Trainings	Training	Location	Regulatory Agency	Frequency	Population						
	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			OSHA, EPA,	to initial		03013	ratiogens	Hadiation	243013	03013	Itecuies
(New Hire)	X	X	FDNY	Initial	X						
Hazard Communication			OSHA	Annual						1	
Personal Protective Equipment  Laboratory Hazardous Waste		X	OSHA	Annual	X						
Management		Х	EPA	Annual	Х						
Principles of Biosafety		X	OSHA	Initial	X						
Bloodborne Pathogens and Exposure Control in Research Settings		X	OSHA	Annual			X				
Bloodborne Pathogens and Exposure Control in HIV/HBV/HCV Laboratories		Х	OSHA	Annual			x				
Needlestick Injury Prevention and Reporting for Research- Related Activities		X	OSHA	Annual							Х
Proper Use of Chemical Fume Hoods		Х	FDNY	Initial		X					
Compliant Management of Dark Rooms		х	OSHA, EPA, FDNY	Initial						X	
Initial Radiation Safety for Researchers		Х	OSHA	Initial				Х			
Radiation Safety Refresher		Х	OSHA	Annual				X			
Laser Safety for Researchers		Х	OSHA	Initial					Χ		
Laser Safety Refresher		Х	OSHA	Annual					X		

### **Corrective Action – Chemical Storage**

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

- Adequate pressure
- Tepid temperature
- Clear color



#### WEEKLY EYEWASH STATION INSPECTION LOG

Instructions for use by local staff:



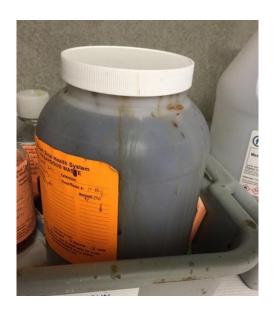
Activate plumbed equipment to ensure compliant operation and to clear any sediment accumulation.
 Record inspection data on log.

Date of Inspection	Checked By (Print name)	Checked By visible sign? (Print name)		Is the area well-lit?		Is the path of travel from hazard to equipment free of obstructions?		Is the water clear and tepid to wrist underside?		Is the water pressure adequate (consistent, balanced flow)?		Are the dust caps in place?		Date the problem was reported to Plant Operations and	Date Corrected
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Service Request # (if applicable)	

### **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: Building:	
Chemical Contents	Amount (%)
Please handle with care Contact #EHSwast	ord Class (if known)  RROSIVE



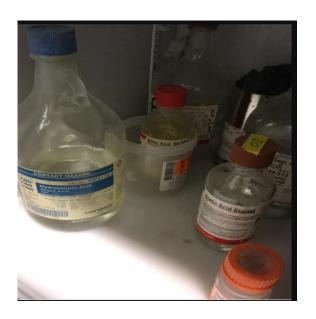


- Refer to "Laboratory Hazardous Waste Management" training on PEAK
- Contact #ehwaste@mountsinai.org for waste collection supplies

### **Corrective Action – Chemical Segregation**

All chemicals must be stored to ensure incompatible materials are separated

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



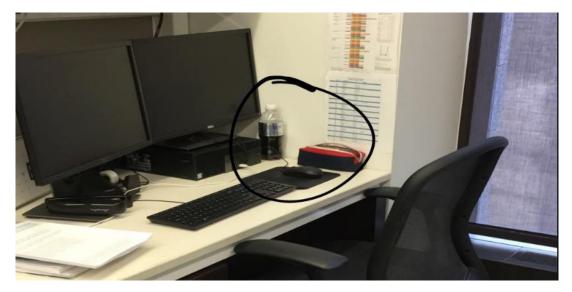
### Chemical Segregation & Storage Chart

Category	GHS Pictogram	DOT Placard	Chemical Hazard	Storage	Example Chemicals	Incompatibles (also check SDS)
		FLAMMARILE GAS	Flammable	Cool, dry area     20 ft. away from oxidizing gases     Secure cylinders upright and immovable     Portable propane gas cylinders cannot be stored indoors	Methane Acetylene Propane	Oxidizing gases Toxic gases Oxidizing solids
Compressed Gas	$\Diamond$	OXIDIZING GAS 2	Oxidizing	Cool, dry area     20 ft. away from flammables or separated by 5 ft. high wall with 0.5hr fire resistance     Secure cylinders upright and immovable	Oxygen Chlorine Fluorine mixtures	Flammable gases
		TOXIC GAS 2	Poisonous	Cool, dry area     Away from flammable gases and liquids     Secure cylinders upright and immovable	Carbon monoxide Hydrogen sulfide	Flammable gases Oxidizing gases
			Inorganic Acids	Separate, protected acid storage cabinet     NOT on metal shelves	Hydrochloric acid Sulfuric acid Phosphoric acid	Flammable liquids Flammable solids Bases Oxidizers Organic acids
			Organic Acids	Separate, protected acid storage cabinet     NOT on metal shelves	Acetic acid Trichloroacetic acid Lactic acid	Flammable liquids Flammable solids Bases Oxidizers Inorganic acids
Corrosives		CORROSIVE 8	Oxidizing Acids	Separate, protected acid storage cabinet     NOT on metal shelves     Away from flammables	Nitric Acid Perchloric acid Chromic acid	Flammable liquids Flammable solids Inorganic acids Organic acids Bases
			Bases	Storage cabinet separate from all acids	Ammonium hydroxide Potassium hydroxide Sodium hydroxide	Flammable liquids Oxidizers Poisons Acids

### **Corrective Action – No Food or Drink**

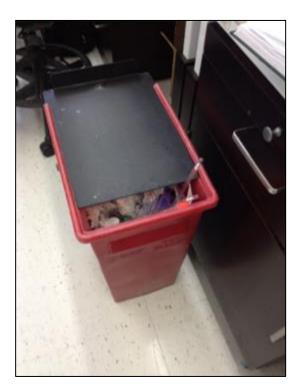
All food and drink should be left outside the laboratory Avoid cosmetics (chap stick, contact solutions, lotions, etc.)



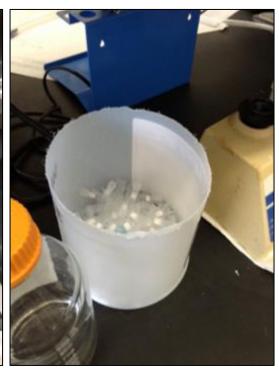


### **Corrective Action – RMW Containers**

# Open Biological/Sharps Containers



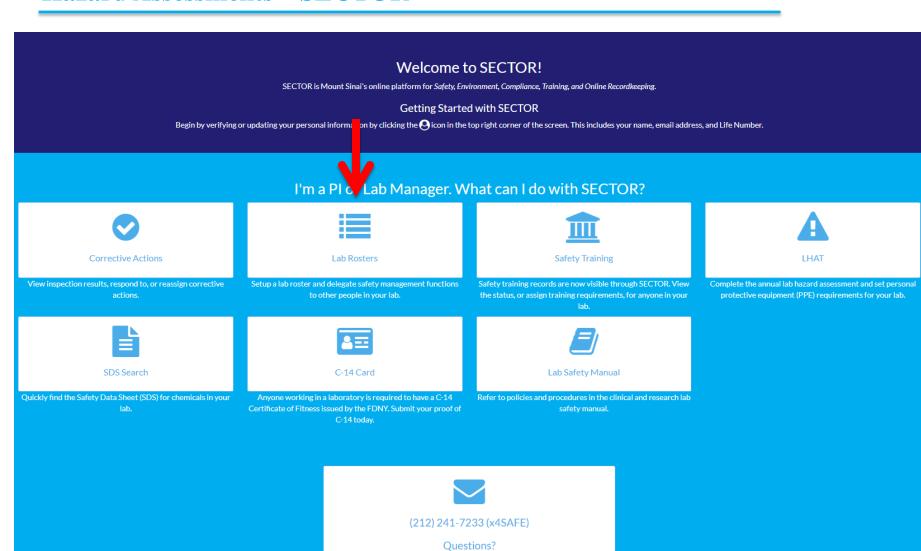




# **Laboratory Rosters**

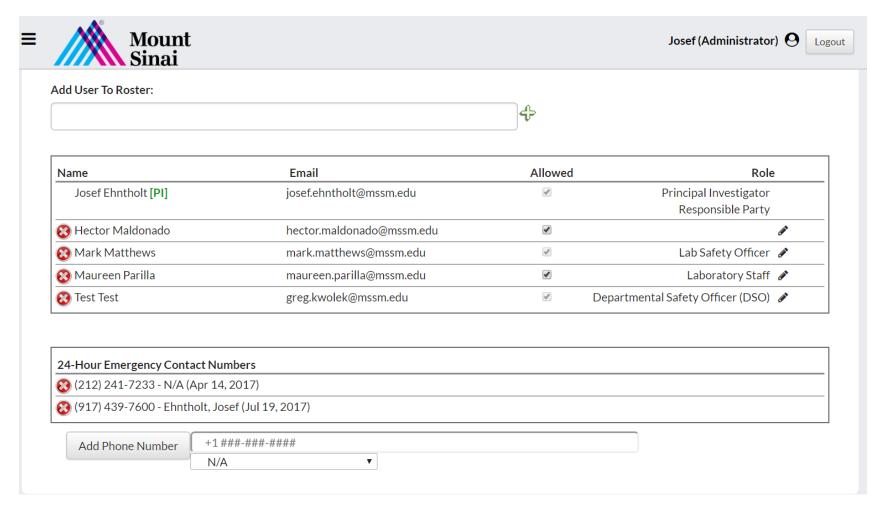


### **Hazard Assessments – SECTOR**



### **Training Compliance – Laboratory Rosters**

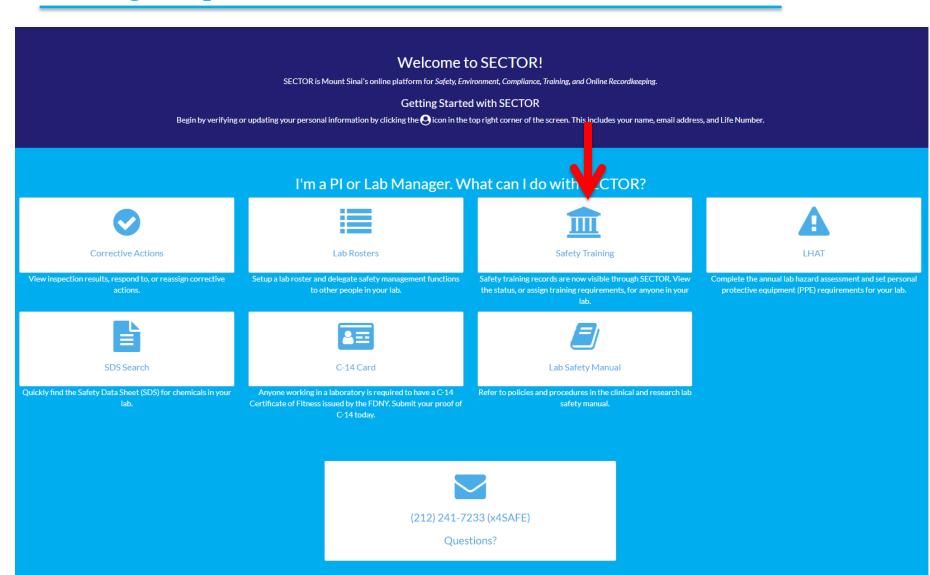
• Principal Investigators and Lab Safety Managers can manage laboratory staff, roles and emergency contact information by leveraging the 'Lab Roster' module



# **Training Metrics**

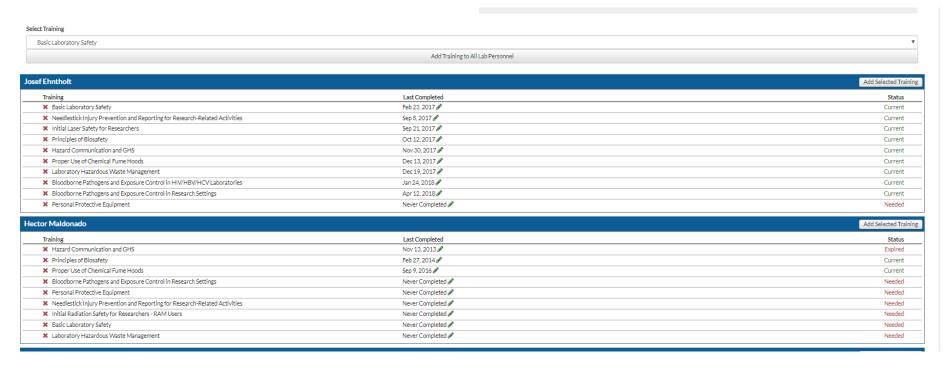


### **Training Compliance – SECTOR**



### **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



### **Training Compliance – SECTOR**

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



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

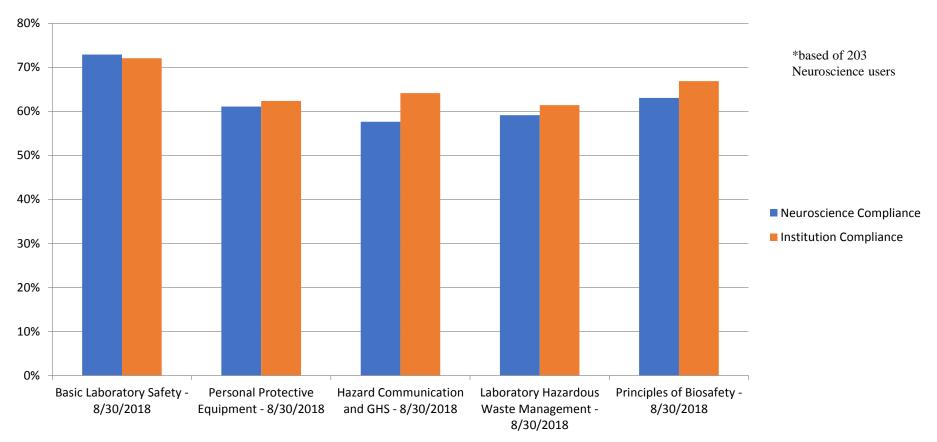
Please visit <u>PEAK</u> to take the required training courses at your earliest convenience. For more information about safety training, please visit the <u>Environmental Health and Safety website</u>. Please note that training records may take up to 24 hours to update in SECTOR after you have completed the training course.

If you have any questions regarding your safety training, please contact Mount Sinai Environmental Health and Safety at AskEHS@mssm.edu or by calling x4SAFE.

Mount Sinai Environmental Health and Safety

## **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 (autoclave, Bunsen burner, water bath, oil bath).	11
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!



						•	
hnth	olt, Josef	[MSH&ISMMS] Environmental He	ealth and Safety		Ehntholt, Josef	Sign	P
	By signing below and clicking 'Save' you are certifying that you h	ave read and understood the LHAT. You may sign	n with a mouse or use a touchscreen on supporter	d devices.			

After review, please sign and date below.

Name	Email	Signature	Date
Mark Bailey	mark.bailey@mssm.edu		
Ma Behzadi	ma.behzadi@mssm.edu	MA BATT	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	7/5/18

# **Certificate of Fitness**



### **Hazard Assessments – 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.

### I'm a PI or Lab Manager. What can I do with SECTOR?



View inspection results, respond to, or reassign corrective actions.



Quickly find the Safety Data Sheet (SDS) for chemicals in your





Anyone working in a laboratory is required to have a C-14
Certificate of Fitness issued by the FDNY. Submit your proof of
C-14 today.



Safety training records are now visible through SECTOR. View the status, or assign training requirements, for anyone in your lab.



Refer to policies and procedures in the clinical and research lab safety manual.



Complete the annual lab hazard assessment and set personal protective equipment (PPE) requirements for your lab.



(212) 241-7233 (x4SAFE)

Questions?

### **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 # 12345678 N ISSUED 04/12/2018 EXPIRES 04/12/2021

NAME SAMUEL STEWART HOME 2919 24TH AVE ADDR. ASTORIA, NY 11101

NOT FDNY

FDNY EMPLOYEE

FEE \$ 25 CAT. F91 TYPE Fitness ESSC CON FG H/OB

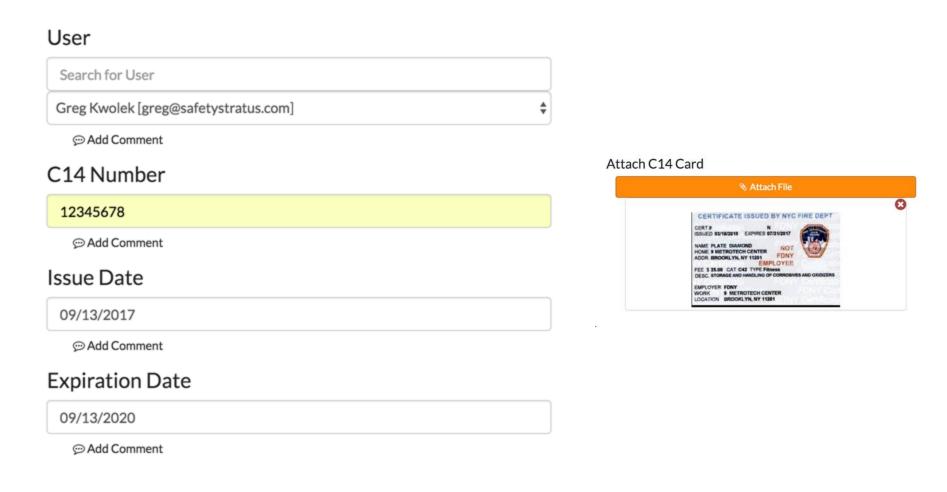
Saud Strufa

EMPLOYER JOHN SMITH

WORK 30 ROCKEFELLER PLZ LOCATION MANHATTAN, NY 11019

### **Certificate of Fitness**

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



# Laboratory Safety Manual and CHP



### **Hazard Assessments – SECTOR**



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Corrective Actions

View inspection results, respond to, or reassign corrective actions.



SDS Search

Quickly find the Safety Data Sheet (SDS) for chemicals in your



Setup a lab roster and delegate safety management functions to other people in your lab.



Anyone working in a laboratory is required to have a C-14 Certificate of Fitness issued by the FDNY. Submit your proof of C-14 today.



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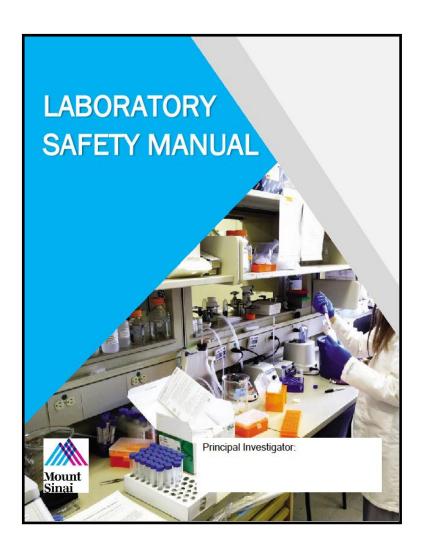
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(212) 241-7233 (x4SAFE)

Questions?

# **Laboratory Safety Manual – Distribution**



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# Safety Data Sheets



### **Safety Data Sheets**



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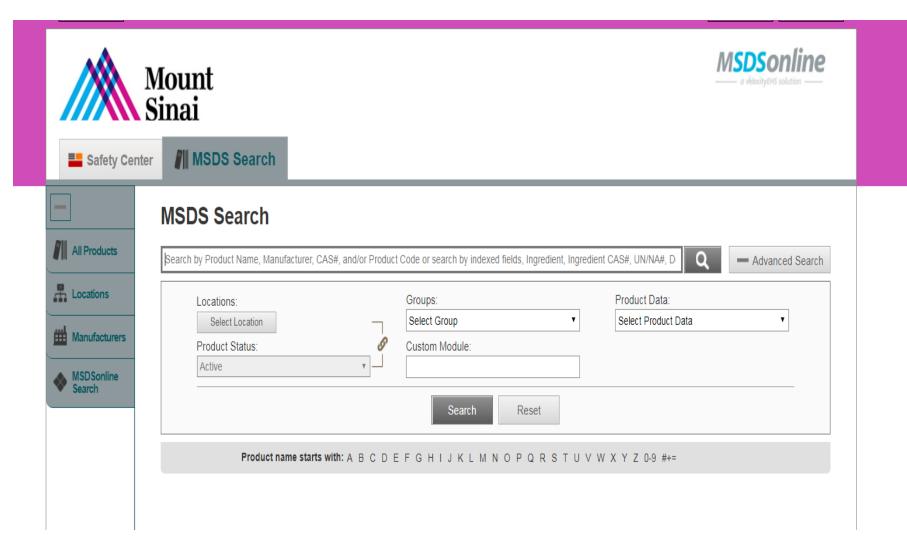
omplete the annual lab hazard assessment and set personal protective equipment (PPE) requirements for your lab.



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Questions?

### **Safety Data Sheets**



# 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



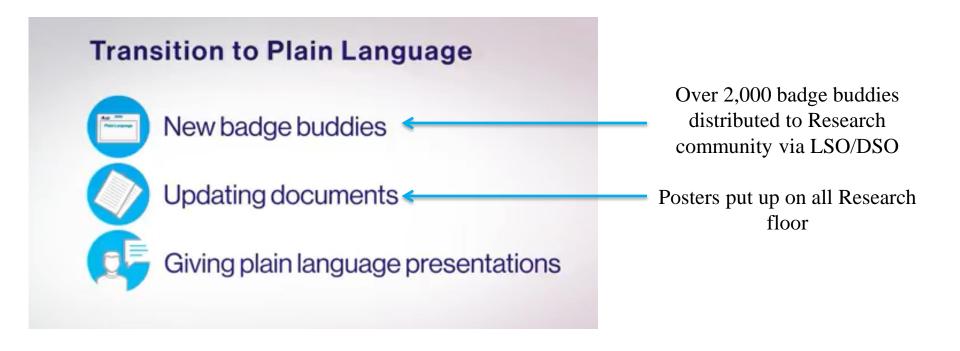
# For all spills contact: Security (x60) 24/7

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

# **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

-Vert



### Mount Sinai Health System Emergency Alert System Messaging

In the event of an emergency please listen for the following

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

#### 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: Fire extinguisher procedure:

Rescue Pull
Alarm Aim
Confine Squeeze
Extinguish/evacuate Sweep



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

### **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!

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Mark A. Matthews, Sr.

Director, Environmental Health & Safety

Office: 212.241.5909

mark.matthews@mssm.edu