

Subject: Nitric Acid Security Plan	Date: 5/2021
EH&S Program: Laboratory Safety	Next Review: 5/2024
Scope: University Wide	Original: February 2006

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Policy:

All areas storing or using nitric acid are required to control access to the material by means of administrative and physical controls, monitor all use and maintain a documented inventory, and report any losses to University Police and Environmental Health and Safety (EH&S).

Definitions:

Authorized Users of Nitric Acid (“authorized user(s)”) refers to any individual who has a legitimate need to handle or use nitric acid, such as PIs / Supervisors, or laboratory personnel as documented by the PI / Supervisor, and who has completed Nitric Acid Safety and Security training (ELS 024), Lab Safety Chemical Hazards (ELS002) from EH&S and laboratory-specific training from the PI / Supervisor.

Nitric Acid, for the purposes of this policy, refers to any and all regulated quantities or concentrations of nitric acid (equal to, or greater than, 68%, CAS Number: 7697-37-2).

Procedures:

A. Responsibility

1. Department of Environmental Health and Safety

- a. Ensure compliance with this policy
- b. Provide training for authorized users of nitric acid
- c. Investigate all known or suspected loss of nitric acid
- d. Maintain an inventory of nitric acid, updated at least annually

- e. Report to DHS in compliance with CFATS, as needed

2. PI/Lab Director:

- a. Ensure compliance with this policy within their area(s) of control
- b. Complete the Nitric Acid Safety and Security training (ELS 024)
- c. Control physical access to nitric acid
- d. Establish and maintain a list of authorized users by ensuring those individuals have:
 - i. Completed Nitric Acid Safety and Security training (ELS 024), and
 - ii. Received laboratory-specific training pertaining to nitric acid storage and use
- e. Ensure that all nitric acid purchasing and use is accounted for on a monthly basis
- f. Conduct an annual inventory and report quantities to EH&S
- g. Report any known or suspected loss or theft of nitric acid to University Police and EH&S
- h. Make available to EH&S and/or DHS any documentation specified within this policy upon request

3. Authorized Users:

- a. Complete Nitric Acid Safety and Security training (ELS 024)
- b. Receive laboratory-specific training provided by the PI / Supervisor
- c. Comply with physical access controls for nitric acid
- d. Account for all use of nitric acid
- e. Immediately report any known or suspected missing nitric acid to your PI/Supervisor

B. Access Control

- a. Granting Access

- i. Take the Nitric Acid Safety and Security training (ELS 024) provided by EH&S, including understanding their roles and responsibilities as outlined in this policy
- ii. Control physical access to nitric acid by keeping it in a locked cabinet when not in use.
 1. The cabinet construction must be compatible with nitric acid, and;
 2. must be secured to the wall, floor or by any other means so as to prevent it from being removed from the lab
 3. Access to nitric acid (keys, combinations, or other means) may only be given to authorized users
- iii. Establish and maintain a list of all Authorized Users (see *Form 1: Authorized Users of Nitric Acid*)
 1. Authorized users must have a legitimate need to access nitric acid
 2. PIs / Supervisors are accountable for the use of nitric acid within their area(s) of control. As such, the authorized user designation should only be granted to those individuals who the PI / Supervisor has deemed to be trustworthy and capable of using nitric acid in a responsible manner.
 3. If the PI / Supervisor should decide that an individual is not fulfilling the role of authorized user, they must remove access to nitric acid from that individual (confiscate keys, change combination lock, etc) and update the Authorized Users document immediately
 4. Authorized users may only be added to the form once they have successfully completed ELS 024 training and laboratory-specific training (documented using *Form 5: Nitric Acid Training*)
- iv. The PIs / Supervisors must ensure that the laboratory, or other storage area, is kept locked at all times when not occupied.
 1. This requirement must be communicated to all authorized users as part of their laboratory-specific training
 2. The PI / Supervisor should conduct random checks to ensure compliance

b. Revoking Access

- i. Authorized users who will no longer have access to nitric acid must be documented on the Authorized Users of Nitric Acid form
 1. The PI / Supervisor needs to initial the column for **Revocation of Authorization** and include the date that revocation is effective.
- ii. Access may be revoked for any of the reasons listed below:
 1. The individual no longer has a legitimate need to access nitric acid due to a change in duties/projects/protocols
 2. The individual has displayed questionable judgment and no longer viewed by the PI / Supervisor as trustworthy
 3. The individual has violated any part(s) of this policy
 4. Any other reason the PI / Supervisor deems legitimate
- iii. Reasons for revoking access are not required to be included on the *Form 1: Authorized Users of Nitric Acid* form, but it is best management to document the reason in another format and keep on file for three (3) years
- iv. Upon revocation of access, the PI / Supervisor is responsible for preventing that individual from physically accessing nitric acid
 1. This can include getting copies of keys back from the individual, changing the combination lock on the storage area, or any other means
 2. Individuals who do not give up keys, or who continue to access nitric acid after their authorization is revoked need to be reported to UPD and EH&S

C. Inventory

- a. PIs / Supervisors must establish baseline quantities of nitric acid for each container (see *Form 2: Nitric Acid Running Inventory*)
- b. Authorized users, including PIs / Supervisors, must document all use of nitric acid
- c. Review inventory on a monthly basis, comparing gains/use documented to the previous month's inventory using *Form 3: Monthly Nitric Acid Inventory Certification*
- d. Report any verified inventory loss to University Police and EH&S (see 7.3 below)

e. On a regular basis, PIs / Supervisors should review their inventory and use to determine if the amount of nitric acid being stored is required for continued operation(s). Excess nitric acid should be disposed of through EH&S hazardous waste collections.

D. Reporting

a. Report to University Police Department (UPD) and EH&S within two (2) hours of discovery of:

- i. missing or unaccounted loss of nitric acid, or
- ii. access to nitric acid by unauthorized users, or
- iii. access by users who have had their authorization revoked

1. Call the University Police Department (UPD) (x333 from any campus phone or 631-632-3333 from a cell phone)

2. Complete *Form 4: Nitric Acid Exception Report* and submit via Fax or e-mail to EH&S (fax 631-632-9683, e-mail EHSafety@stonybrook.edu)

b. Report nitric acid inventory to EH&S at least annually.

- I. Reports can be made using *Form 3: Monthly Nitric Acid Inventory Certification*, or

- II. Using *Form 6: Annual Nitric Acid Inventory Certification*.

E. Training

a. All Authorized Users of Nitric Acid, including PI/Supervisors, must complete annual Nitric Acid Safety and Security training (ELS 024) provided by EH&S

b. PIs / Supervisors must train all authorized users on laboratory-specific compliance requirements. This training must be documented using *Form 5: Nitric Acid Training*.

- i. Any additional training information provided during this step should be noted on the form, or attach additional pages as needed.

F. Recordkeeping

a. All forms and documentation related to this policy and the use of nitric acid shall be maintained on file by the PI / Supervisor for a period of three (3) years past the date

the documentation was generated. These materials must be made available to EH&S and/or DHS upon request.

b. Containers which are discarded as waste, either by being emptied or through a change in process no longer requiring nitric acid, must still be documented on the Nitric Acid Running Inventory form and that form must still be kept for three (3) years from the date it was disposed of

c. Instances where unaccounted nitric acid are reported must be documented and kept for three (3) years. In addition to the Nitric Acid Exception Report, any documentation on changes made to process, access control, or any other steps taken to prevent recurrence (if applicable) must also be maintained for three (3) years.

Forms:

Form 1: Authorized Users of Nitric Acid

Form 2: Nitric Acid Running Inventory

Form 3: Monthly Nitric Acid Inventory Certification

Form 4: Nitric Acid Exception Report

Form 5: Nitric Acid Training

Form 6: Annual Nitric Acid Inventory Certification

Policy Cross Reference:

Relevant Standards/Codes/Rules/Regulations/Statutes:

References and Resources:

CFATS web page: <http://www.dhs.gov/chemical-facility-anti-terrorism-standards>

EH&S web page: http://www.stonybrook.edu/ehs/lab/dhs_chem_sec.shtml

Form 3: Monthly Nitric Acid Inventory Certification

PI:	Inventory for the Month of:
Building:	Room #:
Inventory Witness Submitting Report (print):	
<p>By signing here, you certify that you have diligently conducted a survey of all Nitric Acid in your lab. All quantities are true and accurate as of this date for this location. All containers are kept secured and only authorized users have access to them.</p>	
Date:	Signature:

Container ID	Concentration	Loss (Units)	Gain (Units)	Balance (Units)**

****Immediately report any discrepancy between calculated balance and actual balance****

EH&S Fax #: 631-632-9683

Form 4: Nitric Acid Exception Report

When Nitric Acid is missing or unaccounted for, the Principal Investigator or Supervisor is required to notify University Police (333 from campus phone, 631-632-3333 from a cell phone) and Environmental Health and Safety (631-632-6410) within two (2) hours of discovery. This report must be completed and emailed (labsafety@stonybrook.edu) or faxed (631-632-9683) to EH&S.

Date of event:		Time of discovery:	
Principal Investigator:			
Building:		Room/Lab:	
Telephone number:		Email:	
Size of container (mL/L):	Concentration(%/M):	Volume missing(mL/L):	
Description of what happened (include statement of whether the missing nitric acid is a result of a deliberate or non-deliberate action):			
Description of property damage, if any: <input type="checkbox"/> None			
Personnel casualties/injuries/exposure, if any: <input type="checkbox"/> None			
Any other pertinent information:			

Person completing this report:

Name:	Title:
Phone number:	Email:

By completing this form, I certify that I have included all available information related to this unaccounted loss of nitric acid.

Signature: _____

Date: _____

Form 5: Nitric Acid Laboratory-specific Training

CERTIFICATE OF TRAINING

All Authorized Users must complete this form annually.

Principal Investigator:	
Authorized User:	SBU ID:
Position/Title:	
Supervisor Name:	Date:

This is to certify that above named person has been instructed, trained and understands the following:

Topic	Initials
1. Nitric acid is a Chemical of Interest (COI) according Dept. of Homeland Security which requires extra measures to ensure only authorized personnel have access to the COI.	
2. Stony Brook University has a policy requiring restricting access, strict inventory controls and reporting for areas using nitric acid.	
3. No one is allowed access to nitric acid without the written consent of their Principal Investigator or Supervisor.	
4. All nitric acid containers must be kept locked in a secured cabinet when not in use.	
5. All quantities used of nitric acid must be recorded.	
6. All quantities added to laboratory's inventory must be recorded.	
7. Nitric acid inventories must be visually confirmed at least once per month.	
8. Inventory discrepancies must be reported to the proper authorities with 2 hours of discovery.	
9. Persistent violation of this policy is reason for termination.	
10. The EH&S course <i>Nitric Acid Safety and Security</i> (ELS 024) must be completed annually, in addition to this lab specific training.	

Your signature confirms that you have read and understand your responsibilities as outlined by this policy and agree to comply with them. All items noted above have been communicated during a training session administered by the Principal Investigator, Laboratory Trainer or Supervisor, and that you have had the opportunity to ask questions.

Authorized User Signature: _____

Date: _____

Training administered by: _____

Date: _____

