

NRF User Guide

Table of Contents

1.0 [Introduction to the NRF](#)

- 1.1 Obtaining access to the NRF
- 1.2 NRF Safety Class
- 1.3 Key FOB Assignment
- 1.4 Tool Training
- 1.5 Tool usage
- 1.6 Billing

2.0 [Safety](#)

- 2.1 Fire and Hazardous Gas Detection System.
- 2.2 Safety Glasses
- 2.3 Shoes
- 2.4 Personal Chemicals
- 2.5 User Accessible Areas
- 2.6 Evacuation Routes

3.0 [NRF All Users SOP](#)

- 3.1 Chemical Hood Safety
- 3.2 NRF approved materials and User materials
- 3.3 No Cross Training
- 3.4 After hours facility access

4.0 [NRF Clean Room SOP](#)

- 4.1 Items not allowed in the clean room area
- 4.2 Taking your supplies into the clean room
- 4.3 Acceptable clean room items
- 4.4 Tape
- 4.5 Clean Room Entry and Exit Procedure

5.0 [Procedure Violation and Penalties](#)

- 5.1 safety violations

[NRF Afterhours Form](#)

1.0 Introduction to the NRF

1.1 Obtaining Access to the NRF

Visit <https://nrf.aux.eng.ufl.edu/>. Login with your Gatorlink ID and follow the instructions to start the process of obtaining NRF Access.

1.2 NRF Safety Class.

The NRF safety course is required for all persons to become qualified NRF users.

1.2.1 Cleanroom Users - You must complete the NRF Clean Room Safety class before you will be admitted into the clean room. The class lasts approximately 4 hours. Following the online guide to becoming a NRF User and this will generate an email to staff and add you into the queue for safety training. Cleanroom Users are responsible to understand and follow for both "All Users SOP" and "Cleanroom users SOP".

1.2.2 Metrology Users - Metrology Users are those that only use the NRF tools located outside the cleanroom. The general user safety class is still required to become a "metrology user" and access these areas. Metrology Users are responsible to understand and follow the "All Users SOP". Following the online guide to becoming a NRF User and this will generate an email to staff and add you into the queue for safety training.

1.3 Key FOB Assignment

Access to the cleanroom and the building afterhours requires the use of a key FOB. Once the user has completed NRF safety training and their completed user form is submitted, the key FOB request can begin. Key FOB requests are uploaded twice a week and typically take 7 to 10 business days to complete the entire process.

Cleanroom users will be issued a user ID badge and a key FOB. Metrology users will only be issued a user ID badge. Keys and FOBs to the metrology rooms are available for daily checkout at the NRF reception area.

1.4 Tool Training

Tool (resource) training is performed only by NRF staff. User-User training is not permitted, however, new Users are encouraged to observe senior Users to gain insight to tool operations. Standard training is provided at a discounted rate compared to the standard use rate. Ad-hoc or immediate training (i.e. requests outside the normal training schedule) on a specific tool is available at the non-discounted tool rate. See NRF website for all tool training rates.

Please refer to the Training Calendar on the web site for specific training dates for each tool. Find the date that fits your schedule and request training from the main NRF web page. If the requested tool is not on the training calendar, please comment on your availability in your training request. We try to maintain training within 2 weeks of your request. Your PI will be notified via email. If approved by your PI, you will receive an email from NRF staff confirming the date.

NOTES:

- Tool training will be performed using a standard sample. If the user requests training to be performed on their sample, the non-discounted training rate will be applied.
- Cancellation of training must be made **24 hours** in advance or you will be charged the standard training rate. Cancellations made with less than 24 hour notice will be considered based on circumstances.

Example of Main Menu page of NRF Website

The screenshot shows the NRF Main Menu page. On the left is a navigation sidebar with links for About, Resources/Equipment, Safety & Procedures, NRF Main Menu (highlighted), Setup Access, and Links. Below the sidebar is a search bar and a logout message. The main content area is titled 'NRF Main Menu' and includes a header for 'PI Management Pages'. It features two columns of links for 'New Reservation by Instrument' and 'Request Resource/Equip. Training'. Below these are sections for 'Plans Awaiting Approval', 'New PI Requests', and 'Reservations for Today', which contains a table of active reservations.

Resource	User	Start	Stop	Edit	Delete
Sputter Deposition, KJL	Liu, Wenjing	9:45 AM	10:45 AM	Edit	Delete
Oven, YES	Mckenna, Edward	5:00 PM	5:45 PM	Edit Stop	Delete

1.5 Tool Usage

Tool usage is separated into two sections; Reservations and TUMI operation. The reservations are useful to reserve a tool for your use. The TUMI records resource use time and allows access only to qualified trained users. Both reservations and TUMI are extremely useful and must be managed properly to avoid excessive charges.

NOTE: When making a reservation and using a resource, be sure to use the same project for both. Using different projects for reservation and TUMI login will create two separate transactions

- 1.5.1 Reservations** - Tool reservations are made on the web site by clicking >>“Resources/Equipment” >>select the tool >> click the “nrf” logo at the bottom of the date.

Reservation Creation

Making a reservation is recommended but not always necessary. The following tools must always be reserved: Kurt Lesker Sputter, PVD Ebeam Evaporator, EVG Mask Aligner, Cambridge ALD, SMI MOCVD. If you use a tool without a reservation you may need to give the tool up if another User with a reservation shows up to use the tool. Of course, surrender the tool when it makes sense, i.e. don't stop the tool in the middle of a deposition, exposure, etc. If disputes occur, contact Staff for assistance.

Please make your reservation for the length of time appropriate for your process/characterization. Examples of the reservation pages of the website are shown below.

Reservation Editing/Stopping

If your process run is finished before the end time of your reservation, edit the “stop” time of your reservation. From the main NRF menu click “My Reservations” and click the “stop” link next to the reservation. This will reset the end reservation time as the current time. You may also use the “edit” link to add time to your reservation if needed to insure your time on the tool.

Reservation Cancelations

Unused reservations generate a chargeable transaction calculated based on time reserved and tool (resource) rate, so it is wise to cancel reservations before they go unused. From the main NRF menu click “My Reservations” and click the “cancel” or “delete” link next to the reservation. Please include a comment when prompted.

- 1.5.2 TUMI Operation**- The hourly usage rate for each tool can be found on the web site in the details for each tool. Each tool in the NRF is interlocked by a login computer at the end of each bay or laboratory called the “TUMI” System. You must log on to the TUMI to enable the tool. The TUMI tracks your usage time until you log off.

When something go wrong:

- Immediately log off and include a comment. The comment should include a description of what happened and make it clear that the tool is “Down”.
- Place a note on the tool that it is “Down”. Include a comment if your sample is still inside the tool. Cleanroom paper can be found throughout the cleanroom and in the gown room.
- Notify Staff that the tool is down and let them know if your sample is still inside the tool. Send Staff an email if outside normal work hours.
- Edit your reservation.

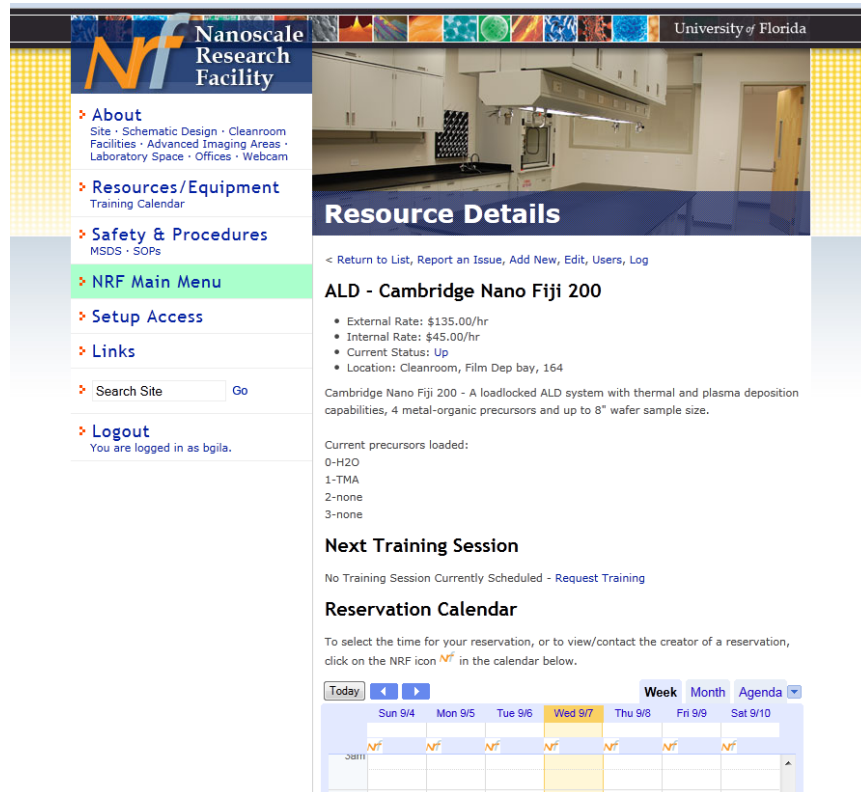
If you log on to a tool and it is not ready (i.e. your targets are not loaded into the sputter system), log back off and provide a comment so the transaction can be flagged. It is a good practice to check the website for reservations, targets and tool status prior to logging in via the TUMI.

Log off the TUMI when your process run is complete. If your process run is done before the end time of your reservation, edit the “stop” time of your reservation. From the main NRF menu click “My Reservations” and click the “stop” link next to the reservation. This will change the end reservation time to the current time.

Examples of the NRF website and TUMI software interface are shown below.

TIP - Usage time is charged in ½ hour increments. If you plan to use a tool multiple times in a short period (i.e. less than an hour), it’s usually best to stay logged onto the tool since you are charged in 30 minute increments. There is a minimum charge of 30 minutes each time you log on.

Example of NRF Resource Page



Examples of Reservation Calendar from NRF website

Next Training Session

No Training Session Currently Scheduled - Request Training

Reservation Calendar

To select the time for your reservation, or to view/contact the creator of a reservation, click on the NRF icon **N^r** in the calendar below.

Today [Navigation] Week Month Agenda [Dropdown]

	Sun 8/28	Mon 8/29	Tue 8/30	Wed 8/31	Thu 9/1	Fri 9/2	Sat 9/3
10am	N ^r	N ^r	N ^r	9:30 - 11 Reserved	N ^r	N ^r	N ^r
11am							
12pm			11:30 - 1 Reserved		10 - 12p Reserved		
1pm					12p - 1p Reserved		
2pm		2p - 2:45 Reserved					
3pm			3:15p - R				
4pm		3:45p - 4 Reserved					

Events shown in time zone: Eastern Time [Google Calendar]

NRF Nanoscale Research Facility University of Florida

- About: Site · Schematic Design · Cleanroom Facilities · Advanced Imaging Areas · Laboratory Space · Offices · Webcam
- Resources/Equipment: Training Calendar
- Safety & Procedures: MSDS · SOPs
- NRF Main Menu
- Setup Access
- Links
- Search Site [Input] Go
- Logout: You are logged in as bgila.

New Reservation

* Start Date:	9/8/2011 [Calendar]
* Stop Date:	9/8/2011 [Calendar]
Start:	10:00:00 AM [Dropdown]
Stop:	10:30:00 AM [Dropdown]
User:	Gila, Brent [Dropdown]
Work For:	None [Dropdown]
Additional Info:	[Text Area]
Project:	Please Select a Project [Dropdown]
Resource:	ALD - Cambridge [Dropdown]

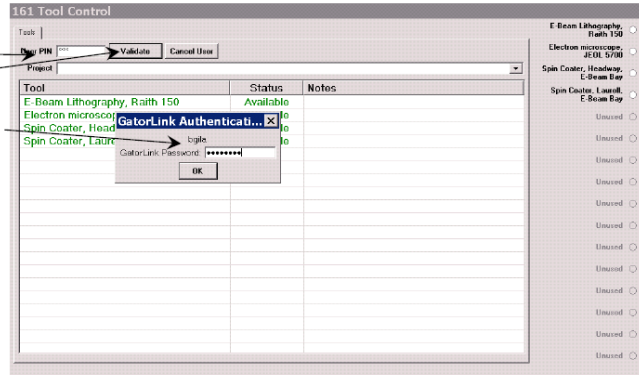
[Submit]

[Return to Resource Details](#)

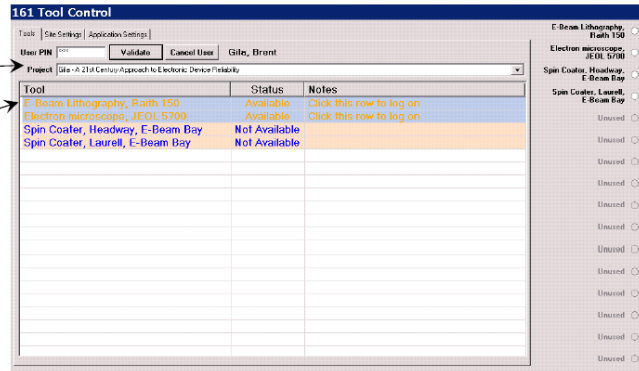
Examples of the TUMI user interface

To use a tool

- Step 1: Enter your NRF PIN
- Step 2: Validate
- Step 3: Enter your GatorLink password

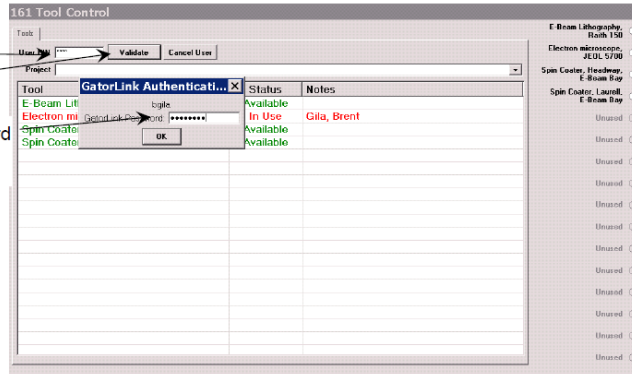


- Step 4: Select /check the project
- Step 5: Click on the row of the tool

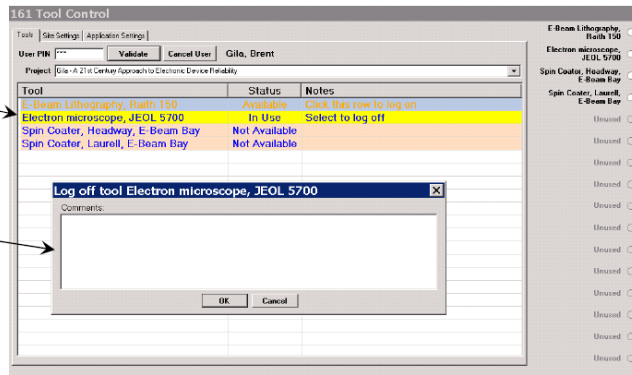


To logoff a tool

- Step 1: Enter your NRF PIN
- Step 2: Validate
- Step 3: Enter your GatorLink password



- Step 4: Click on the row of the tool
- Step 5: Enter comments and click OK



1.6 Billing

The invoicing for the NRF is performed monthly and reflects the transactions incurred during the previous month.

Transactions include:

- Clean room entry fees (daily)
- Tool (resource) charges
- Consumables
- Training
- Staff time

The transaction time for tool (resource) use is determined by the following:

- The start time of the TUMI login or the start time of the calendar reservation, whichever occurs first.
- The stop time of the TUMI logoff or the stop time of the calendar reservation, whichever occurs last.

This policy is in place to deter Users from reserving excessive tool time and to properly manage their reservations.

PLEASE NOTE: unused reservations will incur a tool transaction charge. The reservation establishes a user's right to access a tool and this reservation blocks other users from creating overlapping reservations (refer to Section **1.5.1**).

2.0 Safety

All safety information provided by NRF Staff, including this document and the NRF Safety Training class is supplemental to the UF EH&S Lab Safety Program. It is your responsibility (with the guidance of your Principle Investigator) to read and conform to the EH&S UF Laboratory Safety Manual located at <http://www.ehs.ufl.edu/Lab/LabSafe.pdf> and the EH&S UF Chemical Hygiene Program located at <http://www.ehs.ufl.edu/Lab/CHP/default.asp> at all times while using NRF facilities. The UF EH&S web site can be found at <http://www.ehs.ufl.edu/>. All UF EH&S Training must be done BEFORE entering the NRF Facility.

Process equipment specific Safety Instructions are included at the beginning of each Process Equipment SOP and will be covered by the hands on training provided for each tool by NRF Staff. NRF Equipment SOP's are located at <https://nrf.aux.eng.ufl.edu/safety/sops.asp>

2.1 Fire and Hazardous Gas Detection System.

- 2.1.1 **GENERAL.** There are flashing white strobe lights and voice speakers for audible annunciation of alarm conditions (Fire and/or gas detection). If you hear an alarm message over the speaker system AND see the white flashing strobes, IMMEDIATELY stop all activity and exit the building. Gather outside the building at the main entrance/stairway on the West side of the building. If you are in the clean room, proceed directly out of the gowning room, through the lobby, and out the West entrance doors. Do not stop to remove your cleanroom garments.
- 2.1.2 **POST ALARM GATHERING.** After you have evacuated from the building and gathered at the main entrance/stairway, do not leave the area until everyone has been accounted for. If you have knowledge of the incident or any helpful information please step forward and speak to one of the staff members, UPD officers, or firefighters. You can re enter the building only when you hear an 'All Clear' message from a staff member or firefighter.
- 2.1.3 **CLEANROOM HAZARDOUS GAS ALARMS.** The facility was designed with separate air handling and exhaust systems for the cleanroom, isolating it from the rest of the building. If a gas leak is detected in the cleanroom, only the cleanroom and north service hallway are evacuated. The alarm message over the speaker system and white flashing strobes will activate only in these areas. Each tool in the cleanroom using hazardous gas has orange strobes near the tool on the bay and chaise sides. These strobes will flash to alert you the tool or area the gas leak has been detected. If you are in the cleanroom or north service hallway, follow the procedures outlined in 2.1.1 and 2.1.2. If you are in the office areas or lab areas, you do not need to evacuate and can continue working.
- 2.1.4 **MAINTENANCE NOTIFICATIONS.** There are also gas sensors located in the exhaust ductwork at each tool and gas cabinet. If gas is detected within the exhaust ductwork, but not in the room itself, the tool will shutdown, and the orange strobes for that tool will flash. A warning message will sound over the speaker system to alert staff of the problem. THE WHITE STROBE LIGHTS WILL NOT FLASH. You are not required to evacuate the area and may continue working.

**REMEMBER—IF YOU SEE THE WHITE STROBE LIGHTS FLASH—
IMMEDIATELY EVACUATE.**

2.2 Safety Glasses

Safety glasses must be worn at all times in the clean room. The only exception will be when looking through microscope objectives.

2.3 Shoes

Sandals, high heels or open toed shoes are prohibited inside the clean room and the entire NRF facility. Your shoes must completely cover your feet

2.4 Personal Chemicals

You may not bring chemicals or substances of any type into the clean room or NRF User Lab without approval of NRF Staff. Please make an appointment with Staff if you would like to use a non NRF approved substances. If approved, you will be shown where to store the substances inside the clean room.

ABSOLUTELY NO CHEMICALS MAY BE STORED INSIDE YOUR CLEAN ROOM SUPPLIES BASKET.

ABSOLUTELY NO CHEMICALS MAY BE LEFT NEAR EQUIPMENT (INCLUDING WET HOODS) INSIDE THE CLEAN ROOM. VIOLATORS WILL LOSE ACCESS TO THE CLEAN ROOM.

2.5 User Accessible Areas

Users may only access the blue highlighted laboratories and spaces and the green highlighted “process bays” inside the cleanroom. See the colored floor plane on the following page. You may not access the service areas which are highlighted yellow. There are service areas inside and outside the cleanroom.



Entering the service area without permission of the NRF staff will cause your NRF access privileges to be revoked. This policy is in place to protect Users and the equipment and is strictly enforced.

2.6 Evacuation Routes

The emergency evacuation routes are shown on the floor plan drawing below and are highlighted in red. Two of the cleanroom evacuation routes pass through service areas that are normally off limits to users. These evacuations routes are to be used as secondary evacuation routes. The primary evacuation route for the cleanroom is the main gown entrance. The secondary evacuation routes are to be used in the event that the gown room entry is not accessible.

For all evacuation routes, the building gathering point is on the outside main building steps (west side of building). The service drive/parking lot is to remain free of evacuees in the event emergency vehicles need to gain access.



3.0 NRF All Users SOP

3.1 Chemical Hood Safety and Procedures

3.1.1. Chemical Hood Facts

Laboratory fume hoods are designed to protect you by providing an enclosed work area that has an air barrier between you and the hazardous materials you work with in the hood. The fume hood directs airflow to carry harmful contaminants away from you toward the rear of the hood and out through the exhaust duct.

Fume hood airflow velocities are relatively low (approximately 100 feet per minute) and airflow can be easily disrupted. Avoid making rapid movements while working in a fume hood and avoid walking close to a fume hood that is being used by a coworker.

Working with the sash at the proper level provides protection against inhalation of hazardous vapors, chemical splashes and splatters, fire, or explosion. The sash should be opened only as far as necessary to access your work.

3.1.2. Personal Protection Equipment (PPE)

The following is a list of personal protection equipment required for use of any hood when working with acids or bases.

- Full length vinyl apron with attached sleeves
- Long chemical resistant gloves
- Full face shield

Lack of PPE use is very dangerous and will result in suspension of access to the NRF.

3.1.3. Best Practices for Chemical Hood Safety

1. Before starting any chemical work in a hood (or anywhere else), be sure to have the following in place:
 - user contact information and date on a visible note, wipe or cleanroom paper with chemicals listed
 - waste bottle(s)
 - all required samples
 - sample containers
 - proper forceps for sample handling
 - rinse water
 - wipes
 - any other required supplies

Retrieving items during the processing can create accidents and spread contamination.

2. Know where the closest spill kit and wash stations are located.

3. Chemicals should be placed no closer than 6 inches from the front opening of the fume hood. Placing them closer to the front opening interferes with the airflow and reduces the level of contaminant protection for individuals working at the fume hood.
4. When possible, work in an area providing secondary containment within the hood.
5. Place heating units at least 12 inches behind the sash opening.
6. Place equipment so that it does not block airflow to slots or vents in the baffle plate at the back of the hood. When possible, elevate bulky equipment to allow air to flow under the equipment, as well as around and over it.
7. Minimize the quantities of materials that might be involved in a fire or explosion by limiting the amount of chemicals used in the hood.

3.1.4. Warnings

1. Do not lean into the hood to work with hazardous chemicals. This negates the protection the hood provides against inhalation of hazardous vapors.
2. Do not use fume hoods to evaporate hazardous wastes. This practice is illegal. It violates the Clean Air Act and is punishable by large fines.
3. Do not store chemicals inside a fume hood.
4. Run all equipment underneath the hood airfoil, along the front edge of the fume hood, to external electrical outlets. In an emergency the sash can be closed completely and cords can be unplugged without reaching into the hood or creating the potential for sparks inside the hood.
5. Gas, vacuum and water hoses that are required to operate equipment used inside the hood should be routed under the airfoil, along the front edge of the fume hood, so the sash may be closed completely. It will also permit disconnection of equipment in the event difficulties occur with an experiment.

3.1 NRF Approved Materials and User Material

- 3.2.1** You may not bring chemicals or substances of any type into the clean room without approval of NRF Staff. All NRF Approved materials will have a MSDS posted at <http://nrf.aux.eng.ufl.edu/safety/msds.asp> . If the MSDS for the material you would like to use is not listed you may submit a “New material Request Form” found at <http://nrf.aux.eng.ufl.edu/safety/default.asp>. Click and download the “MS Word” file “New Material Request Form”. Fill out the form and follow instructions on the form.

- 3.2.2** If you need to bring a container of your approved material into the clean room, notify NRF Staff and fill out the Chemical log in/out sheet located in the NRF Gowning Room. Staff will let you know where to store the bottle inside the clean room. **NO USER CHEMICALS MAY BE STORED INSIDE YOUR GROUP BASKET.**
- 3.2.3** Personal use chemicals/substances that have been approved by NRF Staff may be stored only in the appropriate chemical storage location. NRF Staff will show you where.

3.2 No Cross Training

Users may not train peer Users without permission from a NRF Staff member. You may not operate any equipment in the NRF just because a fellow group member showed you how. Observation is OK. Users will never be allowed to “Qualify” other Users on any equipment.

3.3 After Hours Clean Room and Lab Acces

- 3.4.1** After hours is defined as weekends, UF holidays and from 5PM to 8AM Mon.-Fri.
- 3.4.2** Users may request after hours clean room access if they have no documented Procedure Violations as described in section **5.0**. The form is located at the end of this document.
- 3.4.3** After hour access does not include the following equipment and processes:
- a) Red Tagged Material
 - b) Acid Benches
 - c) Acids and strong bases
 - d) Any process that requires the Buddy System
- 3.4.4** Each User that enters the clean room after hours must have authorization i.e. a fellow user may not follow you into the clean room.

4.0 NRF Clean Room SOP

4.1 Items not allowed in the clean room area:

- **Regular paper , wood based paper products**
- Laptop Computers
- Chewing gum or Tobacco products
- Facial make up
- Lab tissues, tissues, cardboard, books, and magazines.
- Styrofoam products.
- powders
- Erasers, pencils, felt-tipped pens (other than Sharpie markers).
- Anything that can easily shed particles or aerosolizes; i.e., anything that may serve as a source of particles.

4.2 Taking your supplies into the clean room.

- 4.2.1 All items entering the clean room must be wiped down with a clean wipe before entering. 2-Propanol or DI water bottles and wipes are provided in the gown room.
- 4.2.2 A basket to hold your samples and supplies will be provided and are located in the gown room. You may not bring your own container into the clean room. Only small sample boxes or wafer containers are allowed.
- 4.2.3 Your supply basket may be stored inside the clean room in the basket provided. Space on a wire rack will be provided for your basket inside the clean room. See NRF Staff for directions. If you bring your supplies out of the clean room, return the basket to the gown room.
- 4.2.4 **ABSOLUTELY NO CHEMICALS MAY BE STORED IN YOUR CLEAN ROOM GREEN PI BASKET OR NEAR EQUIPMENT.**

4.3 Acceptable Clean room items:

- Clean room notebooks and clean room paper. Single sheet clean room paper is provided.
- Your samples and tweezers, in clearly labeled small boxes.
- Pens (preferably, ball-point).
- Materials with smooth, hard surfaces such as plastic, which can be easily cleaned with moist wipes.
- Cell phone or PDA only if it is wiped down each time you enter the clean room

4.4 Tape

The only tape that will be allowed in clean room is polyimide tape. If you absolutely must use another type, discuss it with NRF Staff. Do not leave tape stuck to the tables and equipment. Please remove it when you leave.

4.5 Clean Room Entry and Exit Procedure

Day use personal lockers located outside the gown room. They are for **DAY USE ONLY**. Place items such book bags, hat, coat, umbrella and any other unnecessary street garments. To use the locker, place you items inside the locker and enter any 4 digit code of your choosing. The locker will be locked until you re-enter that same 4 digit code. If you leave your items for more than one day, they may be discarded. When your work is complete, leave the locker unlocked for the next user.

No one is allowed to follow you inside the gowning room without swiping their FOB. If you see someone entering without swiping their FOB, please notify NRF Staff.

Absolutely no FOB sharing is allowed between Users. If your FOB is not working, see the NRF Reception Desk for help.

Cleanroom entry procedure:

1. Use the shoe brush cleaner by pushing on the top handle and pushing your foot through the brushes, toe first.
2. Put on blue shoe covers provided. Do not step on the tacky mat without blue booties on your feet.
3. Put on a white hair bonnet. Tuck all hair inside the bonnet.
4. Swipe your FOB key across the FOB reader. **YOU MUST SWIPE YOUR FOB EVEN IF THE DOOR TO THE GOWN ROOM IS ALREADY OPEN.**
This must be done so that we know you are in the clean room in the case of an emergency. A daily clean room access charge is also applied once every 24 hours. A new day starts at 12AM.
5. Put on a clean hood and facial veil. If a veil type facial cover is not yet available for your hood type, use a white beard cover over your nose and mouth.
6. Put on a clean room jumpsuit. Gather arms before placing your feet inside jumpsuit. Don't allow the suit to touch the floor.
7. Put on your safety glasses.
8. Put on clean booties. Use the lean rail as shown in the gowning video.
9. Put on gloves last.
10. Clean any items you're taking into the clean room and place them in the red basket provided.
11. For safety reasons, no sandals or open-toed shoes (Section 2.3).

While in the clean room, keep your hands away from your face and safety glasses. Facial oils will easily transfer to the gloves and subsequently to the clean room equipment and your sample.

When you are ready to leave the clean room **PICK UP ALL OF YOUR PERSONAL ITEMS BEFORE YOU LEAVE.**

When exiting the clean room remove garments in the reverse order.....1. booties
2. jump suit 3. Hood. Place booties in the bootie holder located at the bottom of the gown rack. Do not snap your booties around the jump suit hanger. Drape your hood around the bottom of the gown hanger.

The blue booties and hair net should remain in place until you have exited the gown room. Once outside the gown room, these can be removed and discarded.

Note: all gowns will be pulled from hangers once per semester and sent out for laundry service. Notices for gown removal will be posted on the gown room entry sliding doors. If your gown, hood and boots have been removed, please use new items located on the wire racks in the gown room and mark the hanger sheet accordingly, indicating your user number, hanger number, and date you obtained the gown.

5.0 Violations and Penalties

5.1 Safety Violations

All NRF safety rules and equipment operation procedures must be followed without exceptions.

- 5.1.1** Violations of safety and equipment procedures will be documented by NRF Staff. NRF Staff reserves the right to revoke User privileges based on the severity of the violation. Three documented violations will automatically cause loss of all NRF privileges.
- 5.1.2** Users that witness unsafe operations such as other users not wearing proper PPE or performing improper equipment procedures should immediately notify NRF Staff via telephone. If Staff cannot be contacted immediately, ask the User to stop what they are doing until Staff can be contacted.
- 5.1.3** Users that find an unsafe condition such as unlabeled containers inside an acid bench should immediately notify NRF Staff.

Example Safety Violations

- Not wearing safety glasses (or other appropriate eyewear per a specific equipment SOP)
- Entering the clean room without swiping your FOB or sharing your FOB with someone else.
- Wearing open-toe shoes or sandals
- Bringing regular paper or notebooks into the cleanroom
- Not wearing proper Personal Protective Equipment per specific equipment SOP
- Using unapproved chemicals in any equipment
- Improper chemical waste disposal
- Not cleaning up after equipment and workspace use.
- Leaving unlabeled experiments, especially those that pose a risk to others
- Not labeling chemical names, contact info, date, and time when leaving chemicals unattended
- Taking open containers of chemicals out of the fume hood
- Failure to store chemicals in the assigned storage container or storage cabinet
- Entering the cleanroom "service areas".
- Leaving metallic items, such as keys or tools, around the magnetics equipment
- Bringing a food or drink into the clean room or laboratory

NRF After Hours Request Form

After hours is defined as weekends, UF holidays, and 5PM to 8AM Mon – Fri.

Please print and fill out this form and leave in the mail slot outside NRF room 203.

This form must be submitted by 5PM Wednesday to obtain access for the upcoming weekend.

Name _____ Date _____

NRF ID# _____

Email address _____

You will be notified by email or verbally if approved.

1. List all process steps performed after hours that include the use of chemicals or gases. If you need to use additional chemicals or gases in the future you are responsible for submitting an updated version of this form for approval.

2. Do you need access to NRF Equipment outside the cleanroom? _____
If yes, list the equipment name(s) and room(s)

3. I understand that no red tagged materials or processes and equipment defined in section 2.9 may be used after hours.

4. I understand every User entering after hours must swipe their personal FOB to access the clean room.

Users Initials here _____

Staff Approval _____ Date _____

FOB enabled date _____

The form will be kept on file at the NRF Reception desk.