



***A Node of National Nanotechnology Infrastructure Network (NNIN)
(www.nnin.org)***

Cleanroom User Orientation Form

Instructions:

1. Please print out this form, read in its entirety, and bring form with you to your Orientation.
2. Upon the completion of the Orientation, please fill out and sign the last page of this form, and return it to CNS administration office (LISE 306).

Major Orientation Topics:

Gowning – Tool Usage – Chemical Handling

Gowning

The gowning procedure is covered during the Cleanroom Orientation. The procedure is described in detail in the Cleanroom User Protocol (CUP), which you have already read at this point in the process. However, it can always be reviewed on-line at:

<http://www.cns.fas.harvard.edu/facilities/Cleanroom/User%20Protocol.pdf>

Please note that no food or beverages are allowed in the cleanrooms or gowning areas at any time.

Tool Usage

Tool usage is covered during the Cleanroom Orientation. Some equipment can be used once you become a General Nanofabrication Facility User, while other tools require extra training which is performed by CNS staff. The tool descriptions on the Facility section of the CNS website explain who to contact for training on each tool, if necessary. If you have any questions on this matter please contact Steve Shepard at 617-495-9012.

Chemical Handling Overview

Most common chemicals used in the CNS cleanrooms are supplied by CNS. It is important to know and understand proper use and handling procedures to help ensure the safety of all cleanroom users. Some processes require special chemicals or mixtures of chemicals that are supplied by the user's group, and these have some special handling criteria that will also be addressed in this document. Also refer to the User Supplied Chemical Protocol.

1. Storage Locations

- a. There are several chemical storage cabinets in each cleanroom. The contents of each cabinet are listed on the front door of that cabinet. Please take care to return chemicals to their proper location.
- b. Chemicals brought into the cleanroom by users must be stored in designated areas, and fall under special guidelines. Refer to "User Supplied Chemical Protocol" for important handling information if you are going to bring your own chemicals into the cleanroom. If you need help finding a designated area, please ask one of the CNS staff.

2. Handling and Working with Chemicals

- a. Please observe safe lab work practices when handling chemicals. All beakers should be marked with their contents. Use a wipe underneath the beaker and mark the contents on the wipe. If you are going to move away from the fume hood where the chemical is being worked with, mark your name and contact information as well. Use gloves, face shield, apron and sleeves when working with acids. Proper clean-up after you have finished (including processing of waste) is required of all users (see below).
- b. When using the spinner bowls, it is a good idea to line the bowl with aluminum foil before spinning to catch any excess chemical, or, clean the bowl after you are finished spinning.

3. Clean-up and Processing of Waste: After your work is done, clean-up and processing of waste must include:

- a. Beakers (cups): pour any leftover chemical (solvent, resist, SU8, developer, etc.) into the properly labeled waste container. If a properly labeled waste accumulation container is not available for the chemical you are using, begin one yourself. If you are not sure how to do this, contact one of the CNS staff before proceeding. Containers for waste must have a properly filled out hazardous waste tag and the original label must be completely defaced (placing a CNS provided contents label over the original accomplishes this). Proper processing of waste is a crucial matter and must be held in compliance with Harvard EH&S (Environmental Health & Safety) standards, which are determined by law.
- b. Pipets: Drain any remaining chemical into the properly labeled container (or coinciding beaker or cup before it is emptied), as described above. Glass pipets are to be put in a sharps container (located inside the spinner vent hood) while plastic pipets are disposable and are discarded in the trash once they are empty.
- c. Throw in the trash any empty cups, disposable pipets, wipes, aluminum foil, etc. that you have used. Do not leave any of these items in the fume (vent) hoods. Please leave the area in good condition for the next person.
- d. Fill out the Log Book

If you have any questions about chemical handling issues, please contact Ed Macomber at 617-384-5227.

If you have any question about these procedures and guidelines please do not hesitate to contact CNS staff.

Users found to be in non-compliance with these procedures and guidelines may be subject to loss of cleanroom privileges.

Cleanroom User Orientation Form – cont.

Certification of Completion:

User Name:	
PI Name:	
Institute/Organization:	
Phone	e-mail:
Subjects Covered (to be filled out by CNS Nanofabrication Facility Staff)	

By signing this document, the User certifies that they have fully completed all of the steps required to become a General Nanofabrication Facility User and will abide by all of the rules, policies, protocols, and procedures contained therein. User also agrees to follow the policies that are part of the general user information and policies section of the CNS website. CNS reserves the right to change, add, delete, alter or amend the protocols regarding use of the Nanofabrication Facility at any time with or without written notice. User, by signing this form, agrees to follow the direction of CNS Nanofabrication Staff at all times in regards to use of the facilities.

User Signature

User Name (please print):	
Signature	Date

CNS Staff Signature

Staff Name	
Signature	Date