Brookhaven National Laboratory/National Synchrotron Light Source			
Subject:	**Operation of Nano-material Glove Box in Room 1-128**		
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Prepared By:	Approved By:	Approved By:
Keith Klaus	John Aloi	Syed Khalid

*Approval signatures on file with master copy.

Purpose

The purpose of this procedure is to provide guidance on the use of the HEPA filtered glove box for nanomaterial use in the National Synchrotron Light Source in order to control dispersible nanoparticles. The requirements below are intended to ensure that no nano-particulate is released from the glove box into the laboratory room during operation and transfer of materials in and out of the box.

Scope

This procedure applies to the HEPA filtered glove box for nanomaterial use installed in lab 1-128 in building 725.

Procedures

Before working in the HEPA filtered glove box the user is responsible to ensure all operations (opening the antechamber, purging the vessel, etc.) are conducted in accordance with manufactures instructions, located adjacent to the glove box.

Notes:

1. Glove box cannot be left unattended while the antechamber is open.
2. If at any time an alarm sounds on the glove box, contact the Lab Steward. Only the Lab Steward can return the glove box to service after alarm condition has been satisfied.
3. Before any use of the glove box, ensure that the system pressure is within expected limits.
4. All nano-particulate waste, including potentially contaminated surface coverings, is to be disposed as “hazardous waste containing nanomaterials”. Waste must be removed from the satellite accumulation area upon completion of the experiment.

Requirements for working with nanoparticles within the glove box:

1. All work must be conducted over a disposable surface such as blotter paper or an absorbent pad. Any spilled material must be immediately contained within zip lock bags.
2. Ensure sufficient consumable supplies such as waste containers or zip lock bags, blotter paper or other disposable working surface are in the glove box prior to initiating work. Zip lock bags and other containers are available in the NSLS stock room.
3. Containers may only be open (uncapped, uncovered) for the time necessary to transfer material. Containers must be kept closed except when actually transferring or working with nanomaterial.
4. Once work is complete, collect all waste including the disposable surface coverings, and place in zip lock bag or other sealable container for transfer out of the box as described below.
5. Upon completion of work in the box, all containers must be sealed and all used surface coverings must be sealed in waste bags.

Requirements for inserting or removing dispersible nanomaterials into the glove box:

1. Only clean, sealed containers may be placed in the antechamber (samples or waste). Waste may be double bagged to assure no nano-particulate contamination on exterior bag surfaces.
2. Seal all containers and collect and bag all potentially nano-particulate contaminated surface coverings before opening either interior antechamber door. Once containers are closed and surface coverings are sealed in bags, wait at least three (3) minutes to allow the atmosphere within glove box to be filtered through the HEPA filters before opening an interior antechamber door.