Soochow University Chemical Engineering Research Hazards Safety Report

Location: Soochow University, Dushu Lake Campus
199 Ren'ai Road, Suzhou Industrial Park
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Building: 907
Labs: 1441, 1439, 1436-24 (even room numbers)
Radiolabeling: Building 402 room 2119
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1. Potential hazards related to the research project:

Class A: High pressure – CO2, liquid nitrogen, gaseous nitrogen (Unrelated: argon gas)
Class B: Flammable materials – 95% ethanol
Class D2: Long-term toxic effects – Radioactive isotope Iodine-125
Class D1B: Toxic material causing immediate and serious toxic effects - None
Class E: Corrosive materials - HCl
Radiation: Laser – SEM, AFM, Ellipsometry, fluorescence microscope
Electrical: High voltage enclosed – Laser sources
Extreme low temperature – Liquid nitrogen
Potential falling objects – Items on shelves and cupboards
Biohazards – MCF7 (human breast cancer cells BSL1), HeLa cells (Human cervical cancer cells BSL1)
Very bright light – UV light, light from microscopes
Loud noise - None

2. Routine operating procedures:

Wear appropriate PPE before beginning lab work. Read MSDS of all chemical agents used and review safety measures before conducting the experiment. No contacts may be worn when working in the lab due to risk of them dissolving by gaseous solvents. No headphones, loud noise, videogames, or other modes of distraction that may prevent hearing and response to emergencies are allowed in the lab. No unauthorized visitors are allowed in the lab rooms. Pants and closed toed shoes must be work when working in the lab. Liquid waste must be disposed of in appropriate chemical waste containers; they are not to be poured down the sink.

3. Working after hours:

At least two people must be working together when working during holidays or overnight (after 10 pm). Overnight experiments needs signed approval by immediate supervisor (Dr. Chen) and the department manager. The researcher's and supervisor's telephone number must be on the door of the lab you are working in overnight.

4. Routine operating procedures for use of radioisotopes:

Wear appropriate PPE and put on plastic covers over shoes. Open the lab windows and door for 5 minutes prior to and after use. No items should be removed from the radiolabeling room. Consequently, items brought into the radiolabeling room cannot be removed. Use of isotopes must be documented with the quantity and date used.

5. Safety procedures related to chemistry labs:

Gas tanks should be not be emptied; the gas tank should contain more than 0.5-1 kg/cm^2 of gas. The gas tank pressure should NOT be less than 1-2 kg/cm^2.

Chemical fire extinguishers:

1. Sand fire extinguisher: for metals (Na, K, Mg, NaO_2).
2. Foam fire extinguisher: for liquids lighter than water.
3. CO2 fire extinguisher: for fires started by electrical equipment (can also use the sand fire extinguisher).

6. Emergency numbers:

Police: 110
Hospital: 120
Fire: 119
Radioactive: 67786602
Environmental: 66680765