

CBC LABORATORY SAFETY

PPE: Personal Protective Equipment EYE PROTECTION and CLOTHING

Always wear eye protection in the lab, even if you are not doing an experiment. Hazards can come from other students experiments – not just your own.

Ordinary glasses do **not** provide adequate protection.



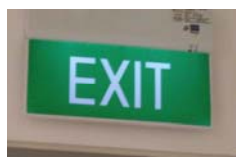
Always wear appropriate clothing covering exposed parts of the body; the wearing of shorts and open footwear is not permitted in laboratories. Wear lab coats.

For special laboratories (laser, biological, radioactive) your professor will inform you about additional PPE.

FIRE

Fire prevention: keep all sources of ignition well away from any flammable solvents. Examples of sources of ignition include naked flames and hot surfaces, such as heat guns.

Minimise the quantities of solvents stored in the laboratories – store in the solvent rooms.



Be prepared: know the location of all safety equipment (fire extinguisher, fire alarm, fire blanket, eye wash, safety shower etc) and know the location of the nearest emergency exit. Keep fire doors closed at all times – this includes the doors at the rear of the labs.

If a small fire occurs either use the fire extinguishers or the fire blanket to extinguish it if it is safe to do so. All research workers **must** be able to operate a fire extinguisher. Report all use of fire extinguishers, so that they can be refilled. If the fire cannot be extinguished push the fire alarm.

EVACUATION

NTU has a two stage alarm system. Know what to do at each stage.

Stage 1: On hearing the announcement of an emergency check that the fire is not within your immediate area of work if you are handling chemicals, return all chemicals to their proper position and secure them. Shut down or ensure that all experiments are safe to leave.

Stage 2: Upon instruction to leave the building, close fume cupboard sashes, turn off equipment and leave the building in an orderly manner. Do not panic. Do not run. Leave the building via the nearest fire escape and close all doors behind you. Use the stairs. Do not use the lift. Assemble under EEE (Block S2) and await further instructions.

CHEMICALS IN THE EYES

Hold your face over the emergency eye wash. Keep your eyes open or blink while spraying water. Wash your eyes continuously for at least ten minutes.

CHEMICALS ON CLOTHES

If you have a large volume of chemicals spilled over your clothes or any parts of your body, use the emergency shower located in the "wet" corridor. Flush for at least ten minutes

EATING, DRINKING and SMOKING



No food or drink is permitted in the lab or the wet corridor. Smoking is prohibited throughout the building.



WORKING

Working alone in the lab is not permitted. Undergraduate students are **not** allowed to work without the presence of a graduate student, research staff member or professor.

Always assess the level of hazard for each experiment before starting (Risk Assessment) and be ready for any accident, spillage or fire involving the chemicals to be used. Check the CBC website for any SOP (standard operating procedure) for any of the chemicals.

MEDICAL PROBLEMS

For minor cuts, use the lab first aid kit. For more serious incidents, the Medical Centre in South Spine is open Monday-Saturday, from 8.30 am-1pm and 2pm-5pm. Call them at 6793 6828 to inform them that an emergency case is coming. Out of office hours, go to National University Hospital Walk-in emergency unit. If symptoms are serious (e.g. bleeding profusely, coma, burns to more than 5%), call for CBC first aiders immediately and **995** for an ambulance.

SPILLED CHEMICALS

For spilled acids, use alkalis such as Na_2CO_3 . For spilled organic chemicals, use absorbent material such as that provided in the spill kit or vermiculite. Double bag the absorbent after clean up. All labs handling chemicals should have these absorbent materials in stock in suitable quantities.

WASTE DISPOSAL

All chemical waste shall be disposed of according to the proper procedures. Waste chemicals, especially waste solvents, will **not** be poured into the sinks.

REPORTING

Report all non-trivial accidents, so that we can improve our safety record.