



Safety Promotion

-Department of Photonics, National Cheng Kung University-



Departmental Space

◎ Multifunctional Building I:

First Floor (1F) to Fourth Floor (4F)

(excluding the western part of the first floor and second floor)

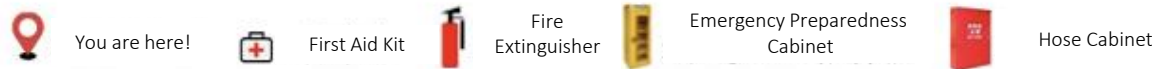
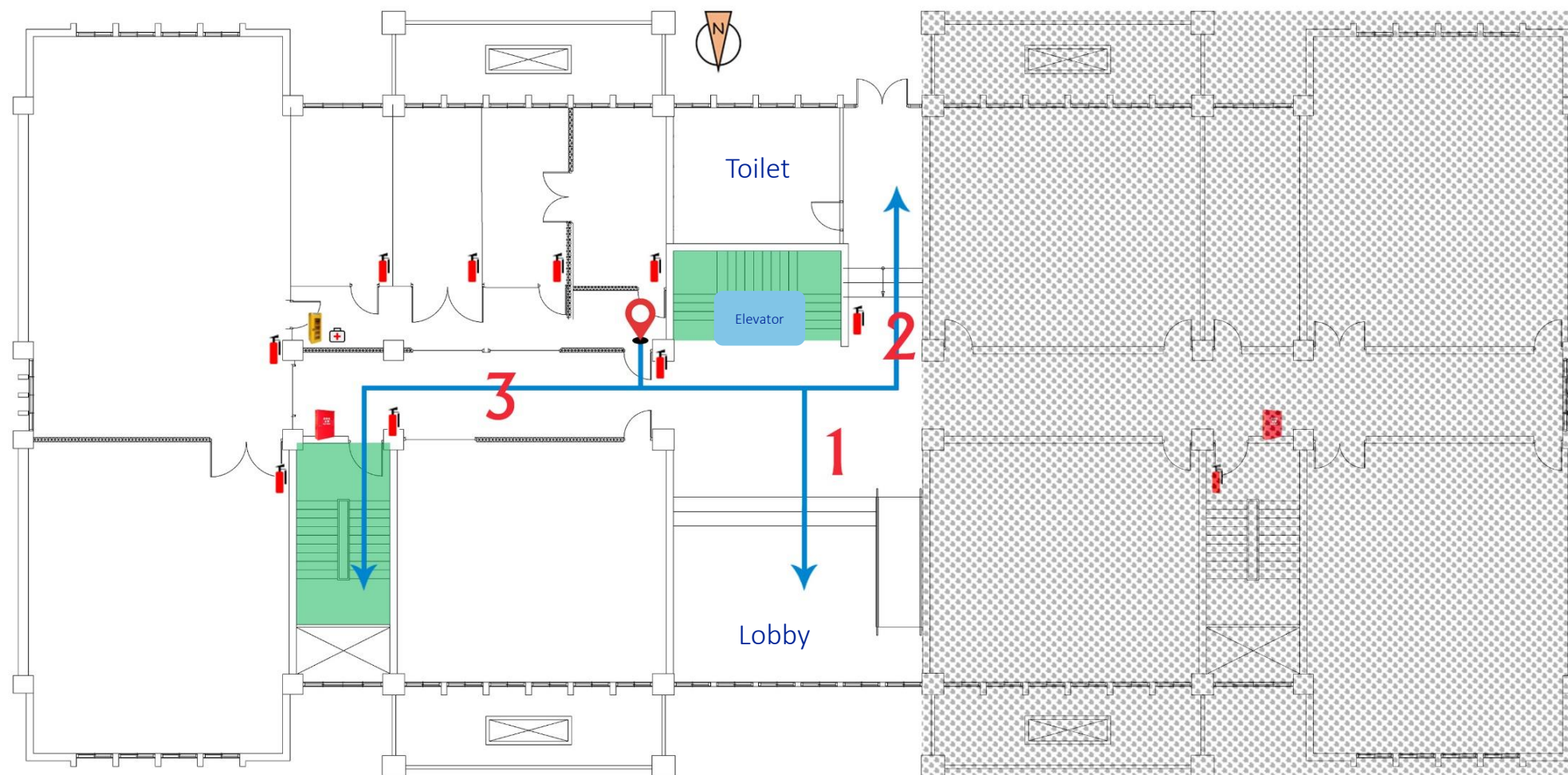
◎ Multifunctional Building II:

(1) Western areas (facing Shengli Rd.) on the first floor

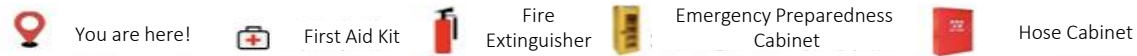
(2) Northern areas (facing the Department of Earth Sciences) on the first floor

(3) Second floor

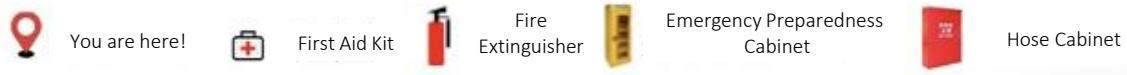
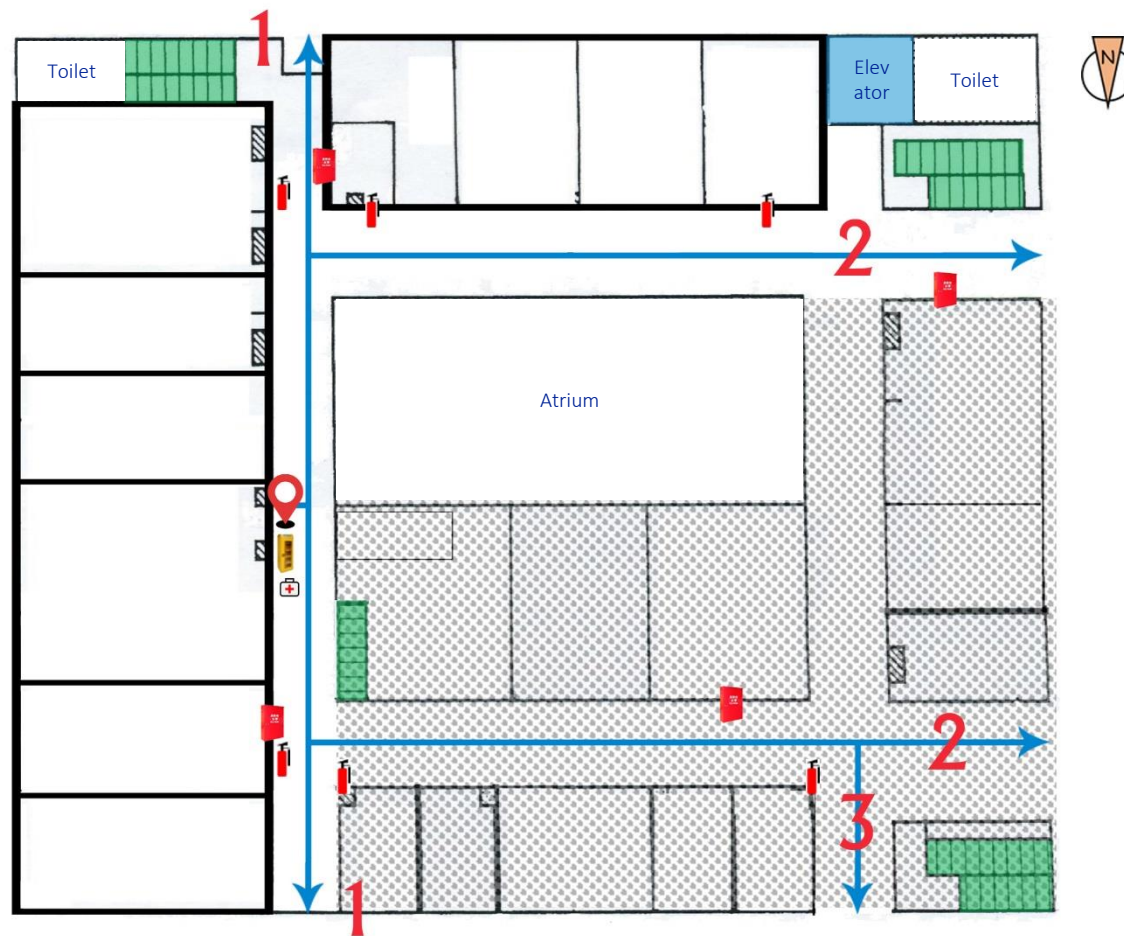
Evacuation Map (1F, Multifunctional Building I)



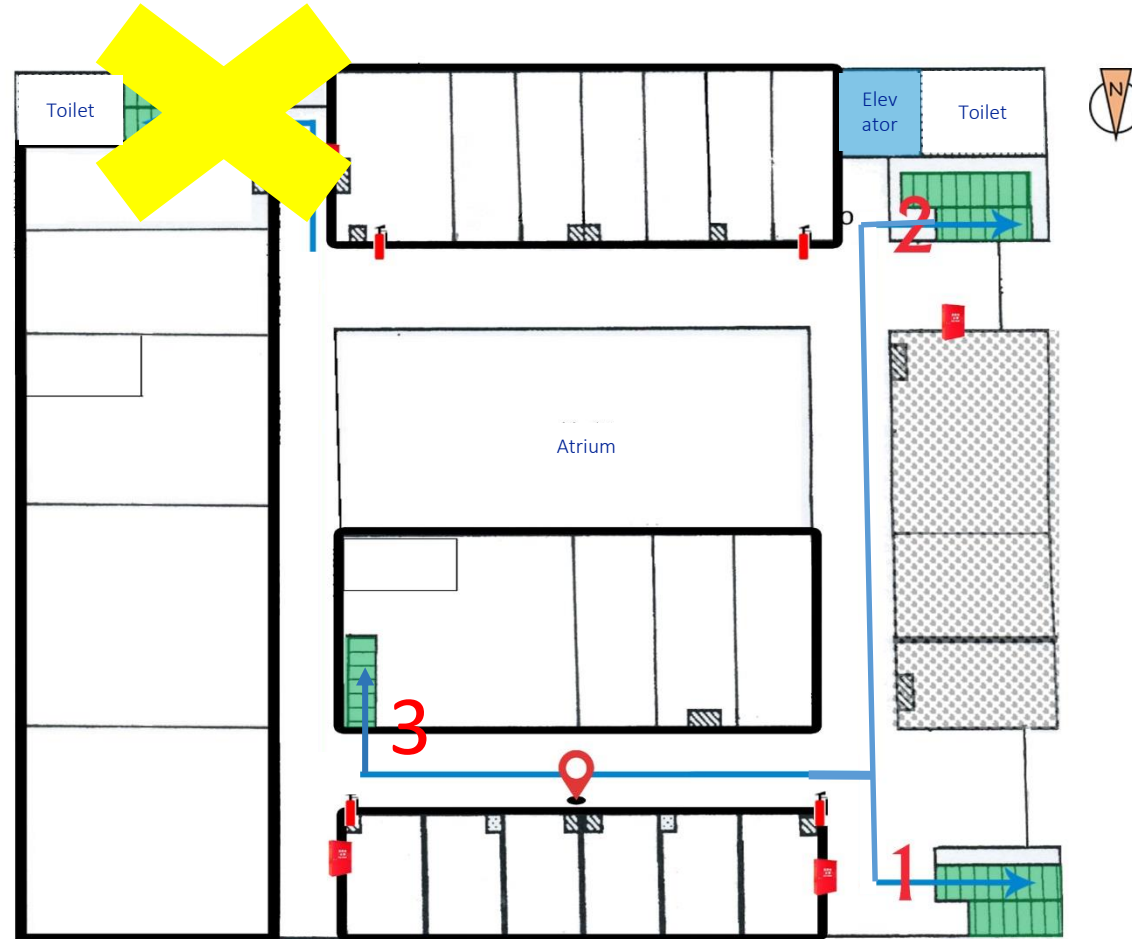
The evacuation maps of the Third Floor and Fourth Floor are similar to those of the Second Floor.



Evacuation Map (1F, Multifunctional Building II)



Evacuation Map (2F, Multifunctional Building II)



You are here!



First Aid Kit



Fire Extinguisher



Emergency Preparedness Cabinet



Hose Cabinet



光電科學與工程學系

Department of Photonics, NCKU

Fire Safety Awareness

- Please **do not** use elevators when a fire or earthquake inside the building. Please evacuate through the emergency exits. The emergency exits in the Multifunctional Building I are at the east and west staircases.
- When the fire alarm rings inside the building, please stop your work immediately and evacuate outside. Only return inside after understanding the situation and confirming it is safe.
- If a fire occurs, please press the manual alarm immediately to activate the fire alarm system and call for assistance loudly.
- If it is a small fire (flame height below 150 cm), you may extinguish it. If it is a big fire, please evacuate by closing doors and report to the NCKU School Security Center ([Phone: 06-2757575 ext.55555](tel:06-2757575)) and Fire Bureau ([Phone: 119](tel:119)).
- **Do not** use the stairs near the elevators in Multifunctional Building I and the stairs at the northwest corner in Multifunctional Building II as emergency exits.





Emergency Response Facility

◎ Emergency Shower

Room 48106, 1F, Multifunctional Building I
Accessible toilet, 2F, Multifunctional Building II
Western Corridor, 1F, Multifunctional Building II

◎ Emergency Preparedness Cabinet

Front of Room 48103, 1F, Multifunctional Building I
Front of Room 48201B, 2F, Multifunctional Building I
Front of Room 48303, 3F, Multifunctional Building I
Front of Room 49107, 1F, Multifunctional Building II

◎ Chemical sorbent pad, Diphoterine, etc.

Room 48106, 1F, Multifunctional Building I

◎ Fire Extinguisher

Corridors on Each Floor :

Dry powder fire extinguisher / FM200 fire extinguisher

Entrances to Each Laboratory :

Co2 fire extinguisher

Entrances to the Public Laboratory :

Dry powder fire extinguisher

◎ First Aid Kit

Front of Room 48103, 1F, Multifunctional Building I
Front of Room 48208, 2F, Multifunctional Building I
Front of Room 48316, 3F, Multifunctional Building I
Front of Room 48422, 4F, Multifunctional Building I
Department Office, 4F, Multifunctional Building I
Front of Room 49107, 1F, Multifunctional Building II

Emergency Shower & Eyewash

Instructions:

1. Pull down the emergency shower handle to rinse the entire body.
2. Position the eyes near the eyewash, then press the switch to rinse the eyes.
3. After use, please go to the hospital as soon as possible for further medical treatment.

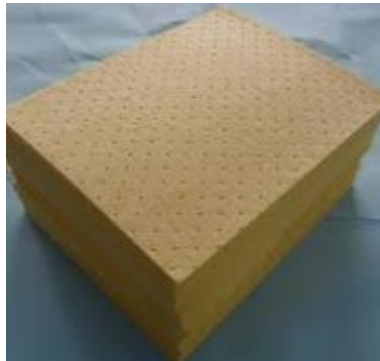


Emergency Preparedness Cabinet [In case of emergency, please break the glass directly.]

Face shield	2
Dual cartridge respirator	2
Dust mask	1 box
First aid kit	1
Protective suits (level C)	2
Solvent resistant gloves	2 pairs
Heat resistant gloves	2 pairs
Safety glasses	2
Helmet	2
Chemical sorbent pad	1 box
Flashlight	2
Caution warning tape	1
Fire blanket	1
Chemtape	1
Safety boots	2
Chemical resistant apron	2
Waste disposal bag	2
Emergency eyewash	2



Chemical sorbent pad & Diphoterine



The principles of using Diphoterine are as follows:

1. When exposed to splashes, it is crucial to use Diphoterine within one minute.
2. First, apply it to uncovered areas.
3. Remove clothing and contact lenses.
4. Rinse the areas where clothing has been removed as quickly as possible.
5. Do not put on clothing contaminated with chemicals again.
6. Seek advice from poison control professionals as soon as possible.

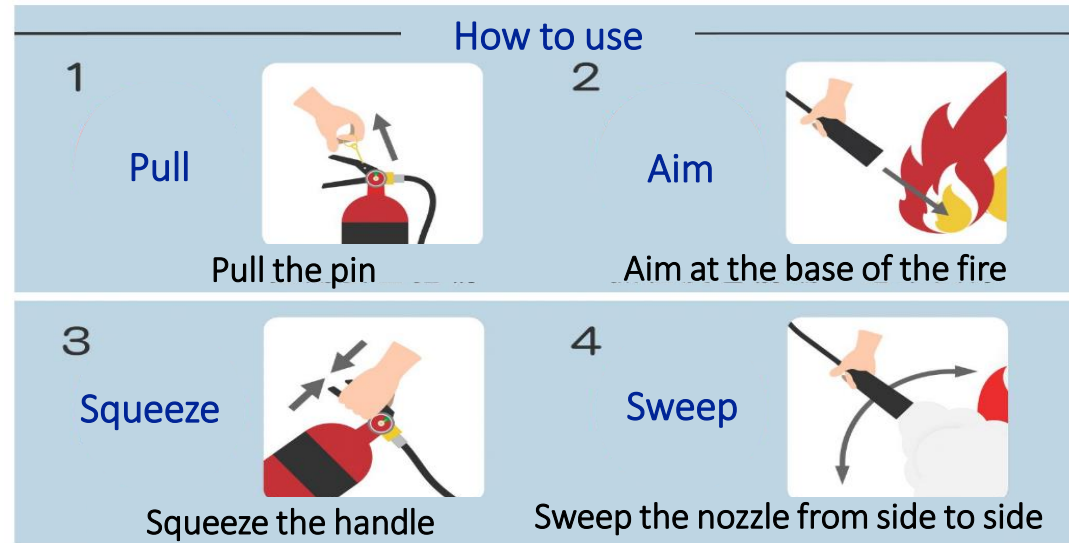
When eyewash is delayed by more than 15 minutes, it is not recommended to use Diphoterine. Please go to the hospital immediately.

First Aid Kit

1	Iodine
2	Alcohol
3	Elastic bandage
4	Breathable tape
5	Gauze
6	Cotton swabs (large, medium, small)
7	Sterile gloves
8	Scissors
9	Tweezers
10	Safety pins
11	Tourniquet
12	Mentholatum
13	Normal saline
14	HAKU SOLUTION "OMI"
15	Band-aid (Adhesive bandage)



After use, please return items to the first aid kit. If supplies need to be replenished, please inform the department office.



Fire Extinguisher

Below is an example using a dry powder fire extinguisher:

「Pull, Aim, Squeeze, Sweep」

- Pull (the pin): Lift the extinguisher and "pull out" the safety pin.
- Aim (at the base of the fire): Grip the nozzle and aim at the "base" of the fire.
- Squeeze (the handle): Squeeze the handle firmly, and spray towards the area 2-3 cm above the base of the fire.
- Sweep (from side to side): Sweep the nozzle from side to side while spraying.

Electrical Safety/Overloading Extension cords

For example, let's consider a rice cooker with an electric power of 660W, requiring a current of 6A. When three appliances are simultaneously plugged into the extension cord, the required current is 19A, exceeding the load capacity of the extension cord (12A) and the allowable current of the socket (15A).

Pay Attention to Six Points

- Sockets in the hallway must have protective covers.
- For high-power-consuming devices, please calculate whether the total power consumption is overloaded.
- Please do not daisy-chain electrical wires.
- Simply tidy up the wiring; please refrain from using cable ties.
- Extension cords are prohibited for use with 220V sockets. Special power sources are required.
- Replace old extension cords when they become worn out.

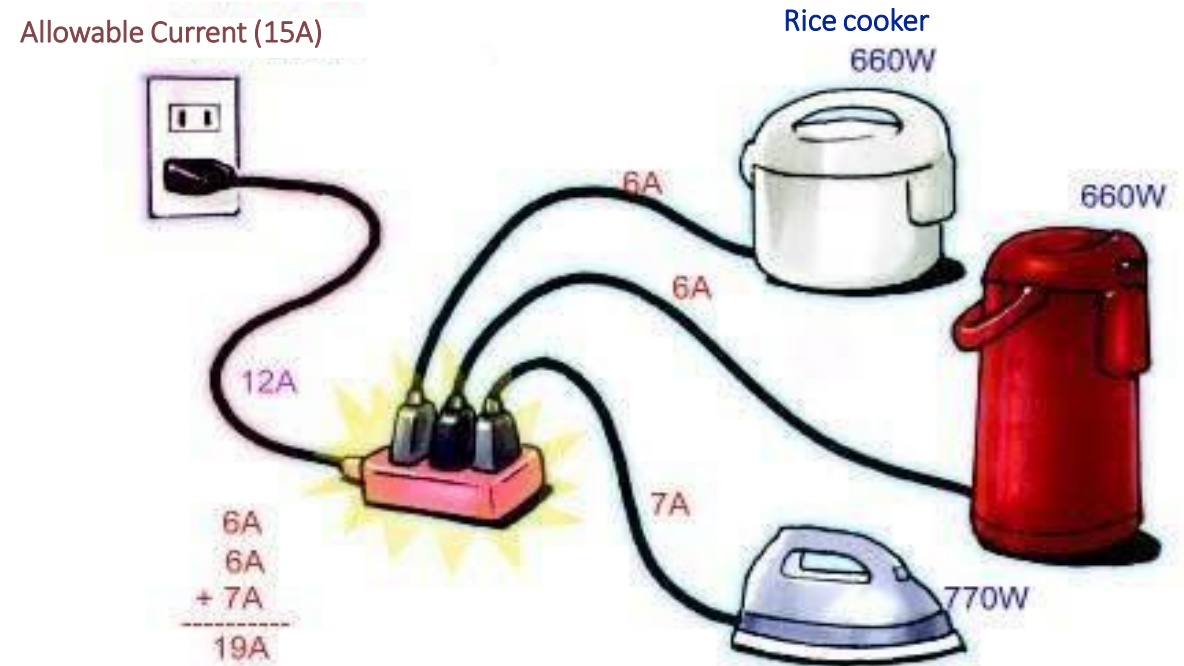


Image Source : <http://www.klfd.gov.tw>



Emergency Response :

How to handle a broken bottle of strong acid?

1. Check yourself:

If exposed, rinse with an emergency eyewash for 10 minutes or use Diphoterine for treatment.

2. Call for emergency assistance:

Inform the laboratory or other classmates of the situation.

3. Protect yourself before handling:

Please use personal protective equipment (including lab coat, gloves, shoe covers, respiratory protection, etc.)

4. Emergency Response:

Use a chemical sorbent pad and Diphoterine for adsorption for 10-15 minutes, then place it in hazardous waste bags for disposal by the Center of Occupational Safety and Health and Environmental Protection.

5. If injured, be sure to go to the hospital immediately.

Chemical Compatibility Chart

No.	Reactivity Group Name	
1	Acids, Mineral, Non-oxidizing	1
2	Acids, Mineral, Oxidizing	2
3	Acids, Organic	3
4	Alcohols and Glycols	4
5	Pesticides, Asbestos	5
6	Amides	6
7	Amines, Aliphatic and Aromatic	7
8	Azo Compounds, Diazo Compounds and Hydrazine	8
9	H ₂ O	9
10	Alkaline	10
11	Cyanides	11
12	Dithiocarbamates	12
13	Esters	13
14	Explosives (solvents, discarded explosives, petroleum waste, etc.)	14
15	Oxidizing agents	15
16	Hydrocarbons, Aromatic	16
17	Halogenated Organics	17
18	Metals	18
19	Al, K, Li, Mg, Ca, Na and other flammable metals	19

Color	Consequences
Yellow	Heat Generation
Pink	Fire
Light Blue	Innocuous and non-flammable gas generation
Purple	Toxic Gas formation
Orange	Flammable Gas formation
Red	Explosion
Green	Violent Polymerization
Dark Blue	May be hazardous, but Unknown

• **Important:**

1. Please confirm the properties and compatibility of the medications before disposing of waste liquids.

2. Medications should be stored in medication cabinets and sorted properly. Please do not place them randomly.

Organic acid + Inorganic acid
=Heat + Non-flammable non-toxic gas

Strong acid / Strong oxidant + Organic solvent = Explosion
DO NOT PLACE TOGETHER!

NOTICE!
Strong acid, Strong oxidant, and light metal
Please store them separately !

Reminders

- ◎ Equipment not in use should be shut down, especially heating devices.
- ◎ Keep gas cylinders away from heat sources. When not in use, please close the valve on the cylinder and purge the pipeline of residual gas.
- ◎ Please prepare and wear the necessary protective equipment during the experiment.
- ◎ After the experiment, please clean up the environment. This can help reduce accidents.
- ◎ If you have any questions, please feel free to ask the teacher or classmates for assistance.



Accident Reporting

- ◎ When coming to school at night, please travel with a companion.
- ◎ In case of any accidents, please report to the Department Office and NCKU School Security Center ([Phone: 06-2757575 ext.55555](tel:06-2757575)) within 8 hours.



Stay calm in case of
any accidents.

[Thank you!](#)