

對象:食品安全學系大學部專題研究生

食品安全碩士學位學程 研究生



Experiment Lab Safety Instructions

Target: Undergraduate independent study students in the School of Food Safety

Graduate students in the Master's Program in Food Safety in the School of Food Safety



新進人員安全衛生教育訓練

- 通過環安衛考試,取得證號校環安字第10X-123號,有效期三年
- 安全衛生訓練主要採課堂面授,並於每學年度第一(上)學期開學前 辦理,課後隨即測驗,通過測驗者於網路公告合格證字號;未通 過者應另行補訓、補考,直至通過測驗。



New Personnel Safety and Sanitation Training

- Pass the Environmental Safety and Sanitation Test and obtain the University Environmental Safety Certificate No. 10X-123, which is valid for three years.
- Safety and Sanitation training is mainly conducted in the classroom. The training is offered before the beginning of Semester 1 in each academic year. The test is conducted immediately after the class. Those who pass the test shall have their certification number posted online. Those who fail the test shall have to take make up training and test until they pass the test.



2F食品安全教師研究室門禁管理

• 需當學期有修習「專題研究」課程的學生,方能進出實驗室



Access Control for 2F Food Safety Teacher Labs

• Only students taking independent study courses in the current semester may access the experiment labs.



操作實驗中

須穿著實驗安全裝備



防護三寶



實驗衣



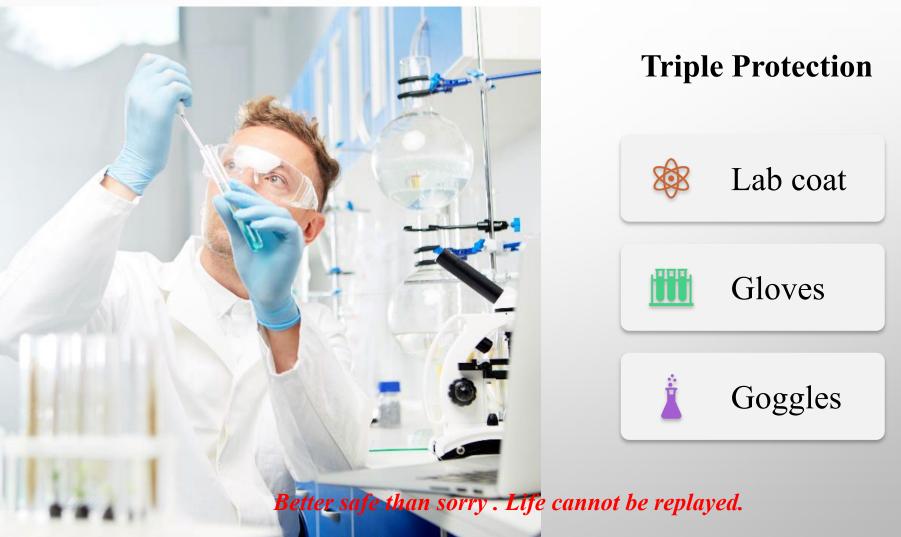
手套



護目鏡

不怕一萬,只怕萬一,人生不能倒帶重來

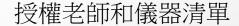
Lab Safety Gears Are Required



操作實驗中



使用前後須登記 使用完須清潔復原 儀器異常須通報



- 離心機-莊老師
- 超純水製造機-侯老師
- 二位數天秤-陳老師
- 四位數天秤-蕭老師
- 分光光度計-蕭老師
- 旋轉濃縮儀-蕭老師
- 凍乾機-蕭老師
- 減壓濃縮機-李老師

Authorization is required to use instruments

Register before and after use Clean and restore after use Report instrument abnormalities



List of teachers for instrument authorization

- Centrifuge-Prof. Chuang
- Ultra-pure water purification system Prof. Hou
- Two-digit scale-Prof. Chen
- Four-digit scale Prof. Hsiao
- Spectrophotometer- Prof. Hsiao
- Rotary evaporator Prof. Hsiao
- Freeze dryer- Prof. Hsiao
- Vacuum evaporator Prof. Lee

藥品、試劑、樣品須確實標示歸位



粉末、液體

辨識

協尋

清除

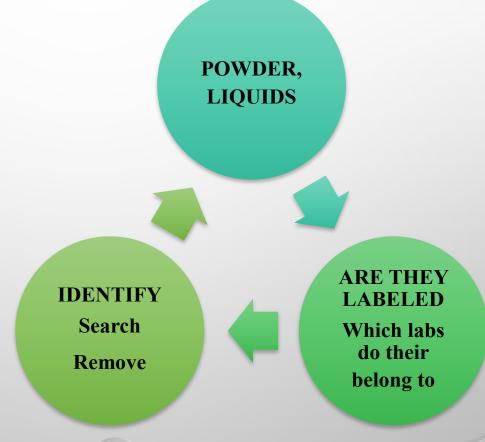
是否有標示

在誰的實驗室

這是共用實驗室,不是你家廚房

Properly label drugs, reagents and sample and return them to their proper places





This is a shared lab, not your personal kitchen

須做好實驗時間規畫管理

• 避免單獨做實驗,尤其是下班時間



你確定旁邊還有人嗎?

Plan and Manage Experiment Time

• Avoid conducting experiments alone, especially after office hours.



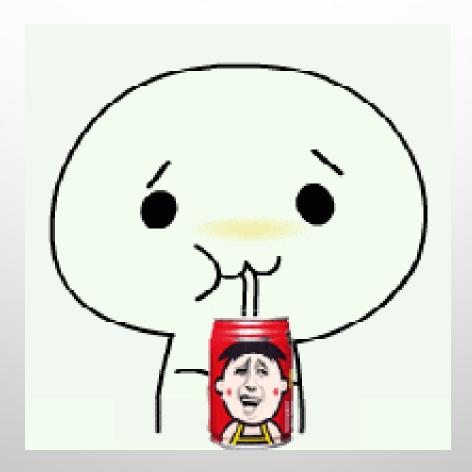
Is there anyone else around?

操作實驗中

實驗區禁止飲食



Food and Beverages Are Prohibited in Lab Areas



操作實驗完

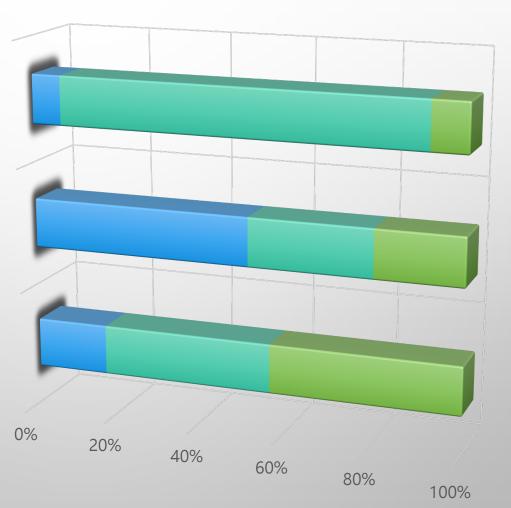
廢液、垃圾須分類回收

廢棄食品、飼料 實驗室外垃圾桶



化學廢液

生物醫療廢棄物



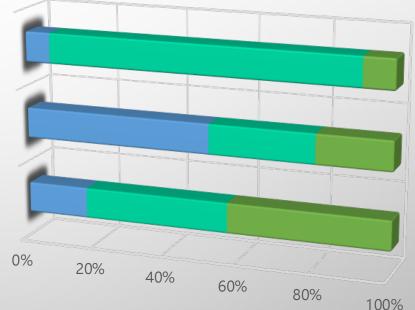
實驗室請勿飼養寵物和餵食

Sort and Recycle Waste Liquid, Garbage

Waste food, feed **Trash can outside the lab**

Liquid chemical waste

Biomedical waste





Do not keep pets or feed animals in the labs

操作實驗完

環境復原SOP

實驗區巡視

- 地板殘渣掃乾淨了嗎?
- 桌子殘渣擦乾淨了嗎?
- 水槽排水孔更換濾水網了嗎?
- 溶劑、廢液倒了嗎?
- 實驗器材清洗乾淨了嗎?
- 晾乾的實驗器材歸位了嗎?
- 樣品、試劑、藥品標示歸位了嗎?
- 推車歸位了嗎?

公用實驗區巡視

- HOOD燈和抽氣關了嗎?
- · HOOD清潔了嗎?
- 廢液桶歸位蓋緊了嗎?
- 冰箱、烘箱物品擺放整齊、確實標示了嗎

儀器區巡視

- 記錄本登記了嗎? 異常通報了嗎?
- 天秤區上方、底部殘渣清乾淨了嗎?
- 離心機關機、內部物件擦乾歸位了嗎?
- 減壓濃縮機冷凝、加熱器、幫浦關了嗎? 有倒廢液、換水、洗緩衝瓶了嗎?
- 分光光度計、電腦關機了嗎?
- LC關機了嗎? 廢液桶倒完密閉了嗎?

離開前

- 冷氣、燈關了嗎? 水龍頭關緊了嗎?
- 垃圾丟了嗎?
- 實驗桌淨空了嗎?
- 進行中的實驗有貼提醒標示了嗎?
- 用完的藥品、耗材訂了嗎?

SOP for Restoring the Environment

Experiment Area Inspection

- Are residues on the floor cleaned up?
- Are residues on table tops cleaned up?
- Is the drain filter in the sink replaced?
- Are solvent or waste liquid poured out?
- Are experiment equipment cleaned up?
- Are dried lab equipment returned to the proper places?
- Are samples, reagents and drugs labeled and returned to their proper places?
- Are carts returned to their proper places?

Common Experiment Area Inspection

- Are HOOD lights and exhausts turned off?
- Is the HOOD cleaned up?
- Are the lids on waste containers tightly closed?
- Are items in refrigerators and ovens neatly returned and labeled?

Instrument Area Inspection

- Is the logbook signed? Has abnormality been reported?
- Are residues on and beneath the scales cleaned up?
- Is the centrifuge turned off and the internal components dried and returned to their proper places?
- Are the condensate, heater and pump in the vacuum evaporator turned off? Are waste liquid emptied out, water changed and buffer bottles washed?
- Are the spectrophotometer and computers turned off?
- Is the LC turned off? Are the waste liquid containers tightly sealed?

Before leaving

- Are air conditioners and lights turned off? Are faucets turned off tightly?
- Has the garbage been disposed?
- Is the experiment table cleared off?
- Are ongoing experiments marked?
- Have orders been placed for used up drugs and consumables?

實驗室化學品之管理原則

• 臺北醫學大學食品安全學系實驗室管理辦法

第七條

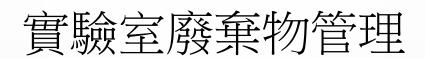
- 一、 化學品 (含毒化物) 採購、運送、使用、貯存、標示、管理及廢棄應依臺北醫學大學環保 暨安全衛生處相關規定辦理。
- 二、 實驗室應管理危害性化學品之使用,包含製作危害性化學品清單,並備妥安全資料表, 提供操作人員必要之安全注意事項。
- 三、 實驗室人員應遵守特殊化學品之正確操作方法與順序。

LABORATORY CHEMICALS MANAGEMENT REGULATIONS

• Taipei Medical University Master's Program in Food Safety Laboratory Management Regulations

Article VII

- 1. The procurement, transportation, use, storage, labeling, management and disposal of chemicals (including toxic chemicals) shall be handled in accordance with the regulations of the University's Office of Environmental Protection and Occupational Safety.
- 2. The labs shall manage the use of hazardous chemicals, including making an inventory of hazardous chemicals, constructing safety information charts and providing operating personnel with necessary safety reminders.
- 3. Lab personnel shall observe the correct operation method and sequence when using special chemicals.



• 臺北醫學大學食品安全學系實驗室管理辦法

第八條

- 一、實驗室所產生之廢棄物應依規定分類,一般廢棄物由清潔人員清運處理,有害廢液及生物醫療廢棄物依臺北醫學大學規定之時間清運,委託合格廠商處理。
- 二、 具危險性(毒性)之廢液,應收集於明顯標示的特定收集容器,並填寫「臺北醫學大學實驗室廢液分類貯存紀錄表」。
- 三、生物醫療廢棄物應置於明顯標示之特定收集容器(袋),並於貯存期限內依規定清運。生物醫療廢棄物於常溫下貯存者,以一日為限,於攝氏五度以下冷藏者,以七日為限。

化學廢液清運時間:每月第一個週四 下午 2:00 ~ 2:30 生物醫療廢棄物清運時間:每週四 下午 2:30 ~ 3:00

LABORATORY WASTE MANAGEMENT

• Taipei Medical University Master's Program in Food Safety Laboratory Management Regulations

Article VIII

- 1. Waste generated in the labs shall be sorted according to regulations. General waste shall be disposed by cleaning personnel; hazardous waste liquid and biological medical waste disposal shall be entrusted to qualified vendors according to the time prescribed by Taipei Medical University.
- 2. Hazardous (toxic) waste liquid shall be collected in clearly marked designated containers, and recorded in the Taipei Medical University Laboratory Waste Liquid Classification and Storage Record Form.
- 3. Biomedical waste shall be collected in clearly marked designated containers (bags) and disposed within stipulated time. Biomedical wastes stored at room temperature may be kept for a maximum of one day, and storage below five degrees Celsius may be kept for a maximum of seven days.

Liquid chemical waste disposal schedule: $2:00 \sim 2:30$ on the first Thursday of each month. Biological medical waste disposal schedule: $2:30 \sim 3:00$ each Thursday.



月份	實驗室值日生				
	А	В			
<u>=</u>					
四					
五六七					
六					
八					
九					
十					
+ - +=					
十二					

註:凡持有門禁卡之研究生(含共同指導)及研究助理等,皆應輪值



Month	Lab On-duty Student					
	A	В				
January						
February						
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						

Note: All graduate students (including joint advisees) and research assistants holding access cards shall take turns to be on duty.

大學部專題生進出實驗室簽到表

		簽到		簽退			
日期	所屬Lab (PI姓名)	時間	簽名	Lab人員 check簽名	時間	簽名	Lab人員 check簽名

Lab access form for undergraduate independent study students

		Sign-in		Sign-out			
Date	Lab (PI Name)	Time	Signature	Signature of checking lab personnel	Time	Signature	Signature of checking lab personnel