

# 高雄醫學大學實驗室安全衛生工作守則

## KMU Laboratory Safety and Health Manual

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# 高雄醫學大學實驗室安全衛生工作守則

## KMU Laboratory Safety and Health Manual

99.12.24 九十九學年度第 2 次環保暨安全衛生委員會議通過  
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### 第一章 總 則

#### Chapter 1 General

第一條 為防止本校所屬實驗室之職業災害，保障從事於實驗工作之教職員工生之安全與健康，依勞工安全衛生法第二十五條規定，訂定安全衛生工作守則(以下簡稱本守則)。

Article 1. The KMU Laboratory Safety and Health Manual (The Manual) was formulated pursuant to Article 25 of Labor Safety and Health Act, to prevent the occupational accidents of school's laboratory, and to ensure the safety and health of the faculties and students engaged in experimental work.

第二條 本守則之適用範圍包括本校各學系及中心、所、科之實驗室、教學實驗室(以下簡稱適用場所)。

本校附屬單位之實驗室另定之。

Article 2. The applicable scope of places (The Places) in the Manual, including Laboratory and teaching laboratories of KMU's Department, Center, Institute and Division.

Laboratory of school's subunits shall be suitable for other regulations.

第三條 本守則所稱適用場所內之工作人員，係指工作性質確須進出前款適用場所，且受本校僱用從事工作獲致工資者、專兼任研究助理及領取工讀津貼之研究生(符合勞工安全衛生法第二條第一項勞工之定義者)。

Article 3. Working staff, as used in the Manual, shall mean a person whose job is needed to performed in the Places and is employed to undertake work in exchange for wages, full-time or part-time research assistants and graduate students receiving work-study allowance (as the Labor Safety and Health Act defined in Article 2, Paragraph 1).

第四條 本守則所稱之職業災害，係指適用場所中因建築物、設備、原料、材料、化學物品、氣體、蒸氣、粉塵等或作業活動及其他職業上原因所引起之疾病、傷害、殘廢或死亡。

Article 4. Occupational accidents, as used in the Manual, refers to buildings, equipment, raw materials, materials, chemicals, gases, vapors, dust or operating activities and other occupational related illness, injury, disability or death in the Places.

第五條 本守則之內容依勞工安全衛生法施行細則第二十七條規定，須訂定下列事項：

- 一、安全衛生管理及各級之權責。
- 二、設備之維護與檢查。
- 三、工作安全與衛生標準。
- 四、教育與訓練。
- 五、急救與搶救。
- 六、防護設備之準備、維持與使用。
- 七、事故通報與報告。
- 八、其他有關安全衛生工作事項。

Article 5. According to the provisions of Article 27 of the Enforcement Rules of the Labor Safety and Health Act, the Manual shall provide for the following items:

- (1) Powers and Responsibilities of Different Levels of Safety and Health Management
- (2) Equipment Maintenance and Examination
- (3) Work Safety and Health Standard
- (4) Education and Training
- (5) First Aid & Emergency Rescue
- (6) Preparation, Maintenance and Operation of Emergency Equipment
- (7) Incident Reporting and Response
- (8) Other Relevant Measures

第二章 安全衛生管理及各級之組織權責

## Chapter 2 Powers and Responsibilities of Different Levels of Safety and Health Management

第六條 本校之安全衛生組織：

- 一、環保暨安全衛生委員會（以下簡稱環安衛委員會）：依其設置辦法組成。
- 二、環保暨安全衛生室環境安全組（以下簡稱環安組）：勞工安全衛生業務主管（組長）一人，勞工安全管理師、勞工衛生管理師及勞工安全衛生管理員若干人。

Article 6. KMU safety and health organization:

1. Safety and Health Committee (SHC) : according to the Regulations for Committee.
2. Office of Safety, Health and Environment (OSHE):

Settings: a director in charge

- (1) Section of Environmental safety and health: with a head person
  - (2) Section of Biosafety: with a head person
  - (3) Section of Radiation Safety: with a head person
- A licensed occupational safety specialist  
A technician of licensed Class B certificate of toxic chemicals  
A contracted personnel

第七條 各級組織之安全衛生職責：

一、環安衛委員會：

- (一)研議本校環安衛有關規定。
- (二)研議健康管理事項及環安教育訓練實施計畫。
- (三)研議各適用場所環安缺失改善對策，防止機械、設備或原料、材料之危害。
- (四)研議適用場所防災與緊急應變計畫及作業環境測定結果應採取之對策。
- (五)審核本校毒性化學物質之輸入、使用、貯存及廢棄。
- (六)其他有關環安衛管理事項。

二、環保暨安全衛生室：

- (一)釐定職業災害防止計畫，並督導相關單位實施
- (二)規劃、督導各單位之環安業務。
- (三)規劃、督導環安設施之檢點與檢查。
- (四)督導各單位業務並實施巡視、定期檢查、重點檢查及作業環境測定。
- (五)規劃、實施學校環安教育訓練。
- (六)規劃健康檢查、實施健康管理。
- (七)規劃、督導各單位毒性化學物質運作與管理，申請運作核可、核備及紀錄申報。
- (八)實驗廢棄物(含廢液)分類、貯存及委外清運與處理。
- (九)擬訂適用場所之環安管理規章、安全衛生工作守則、緊急應變計畫及年度工作計畫等。
- (十)適用場所發生職業災害之調查、分析及統計。
- (十一)向校方提供有關環安資料與建議。
- (十二)其他有關環安管理事項。

三、適用場所單位主管之安全衛生職責：

- (一)指揮、監督該單位實驗、場所安全衛生管理業務。
- (二)責成該單位適用場所負責人辦理環安組所交付之安全衛生管理事項。
- (三)執行巡視、考核該單位安全衛生有關事項。

四、適用場所負責人(指各實驗單位負責人)之安全衛生職責：

- (一)負責辦理管轄範圍內一切安全衛生事項之實施。
- (二)督導該場所內之人員遵守安全衛生守則及相關安全衛生法令規章之規定。
- (三)辦理該單位主管交付之安全衛生管理事項。
- (四)定期檢查、檢點該場所內之環境、機械、儀器、設備之安全衛生狀況並作成紀錄，發現有潛在安全衛生問題立即向上呈報。
- (五)督導所屬人員經常整理、整頓工作環境，保持清潔衛生。
- (六)負責消除管轄範圍內之危險因素或提供安全衛生之建議。
- (七)實施工作安全分析，安全講解與工作安全教導。
- (八)視工作需要購置適當之安全衛生防護具，並督導所屬人員確實配戴。
- (九)該場所內有立即發生危險之虞時，應即要求該場所內人員停止作業，並退避至安

全處所，並管制人員進出該場所。

- (十) 事故發生時迅速向上呈報處理，並採取必要之急救與搶救措施。
- (十一) 經常注意所屬人員之操作情形，並糾正其不安全動作。
- (十二) 經常注意所屬人員健康。
- (十三) 執行其他有關安全衛生事項。

#### 五、適用場所內工作人員之安全衛生工作守則：

- (一) 作業前確實檢點作業環境與設備，發生異常應立即調整或通知該場所負責人。
- (二) 作業中應遵守安全作業標準及安全衛生工作守則之規定，並隨時注意維護作業環境整潔。
- (三) 依規定穿著或配戴必要之安全衛生防護器具。
- (四) 依規定接受必要之安全衛生教育訓練。
- (五) 積極參加安全衛生活動，並提出建議。
- (六) 接受定期健康檢查，並遵守檢查結果建議事項。
- (七) 遵守安全衛生有關法令規章及本校所頒訂之各種安全衛生規定。
- (八) 實驗中不得有嬉戲或妨礙秩序之行為。
- (九) 嚴禁用手觸摸機器轉動部份。
- (十) 嚴禁從各種機具、設備上移除防護設備、標籤或標示。
- (十一) 機器未完全停止前，不得裝卸零件或材料。
- (十二) 勿使用不安全的工具及機械等設備。
- (十三) 熟悉意外傷害之急救方法與程序。
- (十四) 有任何安全、衛生上之問題，隨時請教適用場所負責人或本校安全衛生管理人員。

#### Article 7. Responsibilities of Different Authorities:

##### 1. SHC:

- (1) Consulting the relevant regulations of safety and health.
- (2) Consulting health management issues and safety and health education & training plan.
- (3) Consulting measures to improve the defects of The Places and preventing the harm resulted from machine, equipment or raw materials, and materials.
- (4) Consulting the emergency responses and plans of The Places and take countermeasures according to the results of operating environment inspections.
- (5) Reviewing the input, use, storage and disposal of toxic chemical substances.
- (6) Other relevant issues of environmental, safety and health management.

##### 2. OSHE:

- (1) Make the project of occupational safety and health, and supervise the execution of relevant units.
- (2) Plan and supervise the executive units of safety and health .
- (3) Plan and supervise the inspection and check of relevant facilities.

- (4) supervise the executive units through touring, routine inspection, major inspection and task focus.
- (5) Plan and implement educational training in occupational safety and health..
- (6) Plan health checks, the implement health management.
- (7) Plan and supervise operations and management of toxic chemical substances, approval of application and records-making and reporting.
- (8) Laboratory waste (including waste liquid) classification, storage and outsourcing treatment.
- (9) Formulate relevant management regulations, health and safety manual, emergency plans and annual work plans.
- (10) occupational accident investigation, analysis and statistics.
- (11) Provide relevant information and advisement.
- (12) other relevant management issues.

3. Unit's Supervisor of The Places:

- (1) Direct and supervise the safety and health management business of the unit's laboratory and workplace.
- (2) Instruct the person in charge of the unit's safety and health to implement relevant issues.
- (3) Perform inspections, assessment of relevant issues of the unit.

4. Superintendents of The Places (laboratory's superintendents):

- (1) responsible for the implementation of all health and safety matters within the jurisdiction.
- (2) supervise the staff to abide by any working guidelines for safety and health and other safety and health related regulations.
- (3) implement relevant management issues assigned by the unit's supervisor.
- (4) Implement a regular inspection and check the safety of the environment, equipment, facilities, and make records; if finding any unrevealed safety problem, immediately report it to the related unit's supervisor.
- (5) supervise the staff to implement a regular inspection and maintenance and renewal of the environment , and keep the workplace clean and hygienic..
- (6) mitigate possible hazard in the laboratory, or provide health and safety advice.
- (7) conduct security analysis, instruction and teaching.
- (8) purchase the appropriate protective equipment, and supervision the staff to wear.
- (9) shall order to stop operating, if there were immediate danger, and retreat to a safe place, and control personnel entering and leaving the workplace.
- (10) Once an incident happens, immediately report it to the related unit's supervisor and take any necessary emergency measures or rescue.
- (11) always pay attention to the operation of staff and to correct the unsafe actions.
- (12) often pay attention to the health of the personnel.
- (13) to perform other relevant matters.

5. Working Staff and personnel:

- (1) Be sure to check completely the working environment and equipment before operation; if finding any unusual conditions, immediately undertake an adjustment of the equipment and report it to the related unit's supervisor.
- (2) During operation, abide by the standard operation procedure and the Manual related regulations, and pay attention to the cleanness of the operating environment.
- (3) Required to wear the necessary safety and health protective equipment according to the regulation.
- (4) Required to accept the necessary safety and health training according to the regulation.
- (5) Actively participate in safety and health activities, and make advices.
- (6) Receive regular health checks, and to follow the suggestions of the inspection results.
- (7) Abide by any working guidelines for safety and health and school's health and safety regulations.
- (8) No playing and disturbing laboratory order
- (9) Do not attempt to touch any moving parts of the machine.
- (10) Do not remove protective equipments, labels from all kinds of machinery and equipment.
- (11) Do not assemble and disassemble any of parts of the machine before it is completely stopped.
- (12) Do not use unsafe tools and mechanical equipment.
- (13) Be familiar with first aid methods and procedures of accidental injury.
- (14) Consult with superintendent or school's safety specialist if there is any problem on the safety and health.

### 第三章 設備之維護與檢查

#### Chapter 3 Equipment Maintenance and Examination

第八條 各單位所屬設備應依「勞工安全衛生組織**管理**及自動檢查辦法」第十四條至第四十三條之規定，對其所有之儀器、設備、機械及車輛實施定期檢查；第四十四至第四十六條之規定實施重點檢查；第四十七條至七十三條之規定對所屬教職員工生於作業前實施作業檢點。

一、儀器設備之維護由各設備保管人為之。

二、危險性設備應經檢查機構檢查合格始得使用，超過規定期間須再檢查始得繼續使用。

三、自動檢查應以系、科所為單位。

四、各適用場所負責人應依勞工安全衛生組織管理及自動檢查辦法之規定，針對該實驗室可能發生危害之工作環境及機械設備實施每月檢查及作業檢點。

五、檢查方式區分為定期檢查、重點檢查及作業檢點，由使用單位研擬，依計畫實施；自動檢查紀錄應包括：

- (一) 檢查年月日。
- (二) 檢查項目。
- (三) 檢查方法。
- (四) 檢查結果。
- (五) 依檢查結果採取改善措施之內容。

(六) 檢查人員及主管簽章。

六、各項檢查紀錄單位自存一份，送環安組一份備查。

七、各單位人員實施檢查檢點發現異常或對教職員工生有危害之虞，應立即檢修並報請單位主管處理。

Article 8. All units' equipments should be in accordance with Articles 14 to Article 43 of "The Labor Safety & Health Organization Managing & Auto-Inspecting Methods": all of its instruments, equipment, machinery and vehicles should be regularly inspected; Article 44 and Article 46: implement the major inspection; Article 47 and Article 73: undertake task focus for faculty and staff every time before operation.

1. All equipments should be maintained by their maintainers.

2. Dangerous machinery or equipment can be employed only after it has passed a satisfactory checking by an examination agency. In case it has been employed over the allowable period stipulated, its re-inspection is necessary to ensure the safety of its re-employment.

3. Automatic inspection units should be implemented by the department or the division.

4. Unit's Supervisor of The Places should implement monthly inspection and undertake key inspection points.

5. Inspections, including routine inspection, major inspection and task focus, should be formulated by units of the Places and implemented in accord with the plan; automatic inspection should keep records of the following entries:

a. inspection date b. inspection items

c. inspection methods

d. inspection results

e. content of improving measures adopted according to inspecting results

f. signatures by the inspector and the unit's supervisor.

6. If finding any unusual conditions or possible hazard, immediately undertake an adjustment of the equipment and report it to the related unit's supervisor.

#### 第四章 工作安全與衛生標準

#### Chapter 4 Work Safety and Health Standard

##### 第九條 一般安全衛生工作守則：

一、進入實驗場所要先瞭解環境，切記場所負責人提示事項。

二、保持實驗場所整齊清潔，藥品儀器放置定位。

三、工作時要配戴個人必需之安全防護具，並選擇最安全的工作方法。

四、遵照規定操作各項機械設施，機器開動後操作人員不得擅自離開，別人操作中機具不可隨意使用。

五、作業前應充分明瞭工作要領、規定及機具操作方法。

六、非經許可不得自行拆動任何機械安全防護設施。

七、工作完畢或下班時，須清點收妥工具並清理現場。

八、食物飲料不得與化學品同置冰箱內，不可在實驗室飲食。



- 九、不可用手去試探看不見內部的機具。
- 十、不可用腳去試探任何東西或阻擋滾動、滑動的物體。
- 十一、實驗場所禁止跑步嬉戲及從事與實驗無關的活動。
- 十二、實驗室第二個門不得阻塞。
- 十三、機具之最大安全負荷標示應保持清晰可見。
- 十四、實驗前詳細閱讀有關藥品之物質安全資料表。
- 十五、設備、儀器使用前，應詳讀操作手冊，並按正常程序操作，不繼續使用之儀器設備應予以關閉。
- 十六、熟悉實驗場所附近滅火器、急救箱位置及使用方法。
- 十七、避免單獨一人於實驗場所操作危險性實驗。
- 十八、離開實驗場所前要徹底清洗雙手。
- 十九、實驗完畢應檢查水、電、瓦斯及氣體鋼瓶等是否關閉。

Article 9. General Laboratory Safety Guide:

1. Before entering the laboratory, first be familiar with the interior layout, and follow the instruction of superintendent.
2. Keep the workplace clean and put the chemicals or instrument in its place.
3. Work to wear the necessary safety and health protective equipment and select the most secure methods of work.
4. Operate the mechanical facilities according to regulation, and never leave the work post unattended while an experiment is in progress, nor touch others mechanical facilities in process.
5. Before conducting any experiment, it is imperative to understand the work procedure, regulation, and operation of mechanical facility.
6. Do not remove protective equipments from any mechanical facility without permission.
7. After the work is over, conduct tools inventorying and workplace cleaning.
8. Do not drinking or eating in the laboratory or put the food together with chemicals in refrigerator.
9. Do not touch the unknown internal part of equipment with hand.
10. Do not touch anything or block rolling and sliding objects with foot.
11. Do not run or play, nor engage in work unrelated to the experiment. .
12. The second exit door must not be blocked.
13. The maximum safe working load of the equipment should be marked clearly visible.
14. Before experiment, read about the material safety data sheet of chemicals.
15. Before operating any equipments or machinery facilities, read about user's guide and conduct in standard procedure, and always remember to turn off the facilities not in use.
16. Be fully aware of the location and the operating methods of the fire extinguishers and first-aid kit.
17. Refrain from conducting hazardous experiments alone in lab.
18. Wash your hands thoroughly before leaving the lab.
19. Before leaving the lab, make sure to turn off the water, power, gas and close the gas cylinder.

第十條 操作安全：

一、操作過程避免發生危險行為：

- (一)禁止於操作中嬉戲、打鬧。
- (二)遵照正確的酸鹼稀釋順序。
- (三)液體之轉移以安全吸球操作，勿用嘴吸。
- (四)傾注腐蝕性液體時，須藉漏斗轉注，並於水槽上或戴手套進行。
- (五)其他各適用場所自行規範事項。

二、高壓氣體鋼瓶之操作與管理：

- (一)鋼瓶應標示裝戴氣體之種類，避免誤用。
- (二)實驗前應先確認鋼瓶內氣體。
- (三)鋼瓶外表顏色不得擅自變更或擦除。
- (四)鋼瓶應加固定，儲存場所溫度不得超過攝氏 40 度。
- (五)更換鋼瓶後應檢查容器口及配管銜接處是否漏氣。
- (六)鋼瓶非使用中開關扳手應取下。
- (七)鋼瓶應妥善管理，發現變形、漏氣應立即通知場所負責人及維護單位，儘速處理。

三、化學藥品或器材之搬運及儲存：

- (一)以正確的方式搬運，切勿僅以單手提起。
- (二)避免搬運困難或倒塌，化學藥品或器材不可堆放過高。
- (三)用堆疊之化學藥品或器材時，不得由下部抽取。
- (四)維持通風設備正常運轉。

四、電氣災害之防止：

- (一)電氣設備及電線電路維護，應嚴格遵守電氣安全規章程序操作。
- (二)使用延長線不得接裝過多電器用品，以免過載發生火災。
- (三)隨時檢修電器設備，遇有重大電器故障或電器火災時，應切斷電源並立即通報。
- (四)不得以濕手或濕操作棒操作開關，電器設備應遠離水源。
- (五)除特別利用塑膠完全包裹之設備外，實驗室所有電器應接地。
- (六)電器設備或電路著火，立即關閉電源，再以不導電之滅火設備滅火。
- (七)所有電氣設備外殼接地線，不得任意拆掉。

Article 10. Operating safety:

1. Avoid dangerous behaviors in operation:
  - (1) Do not play or chase noisily.
  - (2) Follow correct sequence when running a dilution.
  - (3) Use pipette filler to transfer the liquid, do not use mouth.
  - (4) When pouring corrosive liquids, shall be made by funnel and in the sink or with the gloves.
  - (5) Follow other related regulations of the Places.
2. The operation and management of high-pressure gas cylinders:
  - (1) Cylinders shall be marked its gas type, and to avoid misuse.
  - (2) Confirm what's inside the gas cylinder before experiment.
  - (3) Cylinder exterior colors should not be changed or erased.

- (4) Cylinders should be put in fixed place and the temperature of storage should not exceed 40°C.
  - (5) When replacing cylinders, to check if the connecting part of the pipe its edge is leaking.
  - (6) Cylinder wrench should be removed if not in use.
  - (7) Cylinders should be kept properly, and should notify the superintendent or maintenance unit immediately to deal with the situation of deformation and leak.
3. Carrying and storage of chemicals or equipment:
- (1) Carrying properly, do not lift with only one hand.
  - (2) Avoid lugging or collapsing, while not stacking chemicals or equipment too high.
  - (3) Do not retrieve the stack of chemicals or equipment from the bottom.
  - (4) Maintain the normal operation of ventilation equipment.
4. Prevent electrical hazards:
- (1) Electrical equipment and wiring circuit maintenance operations should strictly comply with electrical safety regulations procedures.
  - (2) Do not tipping too many electrical appliances when using an extension cord so as not to overload and cause fire.
  - (3) Make safety check of electrical equipment at any time, and once a major electrical fault or electrical fire occurs, should turn off the power source and immediately file a report.
  - (4) Do not operate switches with wet hands or wet operating rod, and keep all electrical equipments away from water.
  - (5) Except for the special equipments wrapped with plastic, all electrical appliances in lab should be grounded.
  - (6) In the event of an electric wire fire, turn off the power source at once, and put out the fire with dry powder fire extinguisher.
  - (7) Ground wires of all electrical equipments shall not be removed.

第十一條 個人防護設備之使用：

- 一、實驗時應佩戴必要之個人防護具，如安全眼鏡、安全鞋、防護手套及防毒面具等。
- 二、化學藥品濺灑時之處理：
  - (一)熟悉洗眼器與緊急淋浴裝置之位置與使用方法。
  - (二)先用大量清水沖洗患部後儘速送醫處理。
- 三、有毒氣體之防護：
  - (一)有毒氣體外洩時，應立即關閉該氣體鋼瓶。
  - (二)緊急用的空氣面罩僅能供應純空氣一段時間。
  - (三)根據危害物與危害型態，選擇適當功能呼吸防護具。
- 四、抽氣櫃之正確使用：有毒性、可燃性及揮發性藥品材料應置於抽氣櫃操作，抽除危險氣體，以免人員直接接觸。
- 五、操作時之衣著：有噴濺危險時，眼部、身體、手部及足部應有適當防護；若衣物著火，可利用防火毯、實驗衣等裹身並滾動身體滅火，或利用緊急淋浴裝置沖洗滅火。

Article 11. Personal protective equipment:

1. It is imperative to wear personal protective gears such as safety goggles, safety shoes, lab gloves and gas masks, etc.
2. Chemical spill treatment:
  - (1) Be fully aware of the location and use of eyewash and emergency rinsing devices.
  - (2) Rinse the skin with ample amount of water, and seek medical attention at once.
3. Toxic gas protection:
  - (1) If toxic gas is leaking, immediately turn off the gas cylinder.
  - (2) Emergency air mask only supply the pure air for some time.
  - (3) Select the appropriate respirator according to the hazards.
4. Correct use of exhaust fume hood: toxic, flammable and volatile chemical substances should be placed in a fume hood, exhausting dangerous gases, and to avoid direct contact.
5. operation clothing: be in danger of splashing, the eyes, body, hands and feet should be appropriate protected; if the clothing were on fire, use extinguishing fire blankets, lab coat or something like to wrap and scroll your body, while using emergency rinsing devices to extinguish fire.

第十二條 化學藥品管理：

一、每一化學藥品應標示：

(一)圖式。

(二)內容。

1. 名稱。
2. 主要成份。
3. 危害警告訊息。
4. 危害防範措施。
5. 製造商或供應商之名稱、地址及電話。

二、每一危害物質應製作物質安全資料表(簡稱MSDS)，提供勞工必要之安全衛生注意事項。

三、製作危害物質清單：以控制數量，方便管理。

四、特殊化學藥品之正確操作方法與順序如下：

- (一)鹼金屬與水反應有起火與爆炸之危險。
- (二)鹼金屬接觸皮膚會灼傷。
- (三)鹼金屬須貯存於輕質油中，銷毀須於酒精中冷卻。
- (四)灑出之水銀可用真空吸取法清除或硫磺粉覆蓋。
- (五)強酸、強鹼濺出時可用中和劑中和後再予清除。

五、可燃性液體之正確儲存與處理方式：

- (一)標示應明確。
- (二)正確的分類與存放。
- (三)注意可燃性液體儲存相容性。
- (四)遠離火焰。

六、使用化學藥品，必須了解化學藥品之毒性，依照安全操作方法，以免危害自己與他人。

七、每日最後離開實驗室者，須確定關閉所有電源及氣源。

Article 12. Chemicals management:

1. Each chemical should be marked:
  - (1) Schema.
  - (2) Content.
    - a. Name.
    - b. Main ingredients.
    - c. Hazard warning message.
    - d. Hazard precautions.
    - e. Manufacturer or supplier name, address and telephone number.
2. Each hazardous substances should be made the material safety data sheets (MSDS), providing labor necessary safety and health precautions.
3. Make a list of hazardous substances: to control the number for management.
4. Correct method and sequence in conducting specialty chemicals:
  - (1) Alkali metals will react with water to cause fire and explosion.
  - (2) Alkali metals contact the skin will cause burning.
  - (3) Alkali metals have to be stored in light oils, and destroyed in the alcohol for cooling.
  - (4) Spill-out mercury would use vacuum pick-up method to clear or cover with sulfur powder.
  - (5) strong acid, or alkali spills can be used the neutralizer to neutralize first and then to clean.
5. Proper storage and handling of flammable liquids:
  - (1) Label should be clear.
  - (2) Correct classification and storage.
  - (3) Note that the flammable liquid storage compatibility.
  - (4) Keep away from the flame.
6. Must be aware of the toxicity of chemicals and conduct in safe operation method, so as not to endanger ourselves and others.
7. Once completing a laboratory session and before leaving the lab, make sure to turn off the water, power and gas..

第十三條 廢棄物管理：

- 一、廢棄物平時暫存於合格之貯存容器中，容器外觀應標示廢棄物種類。
- 二、廢溶液應依「學校實驗室廢棄物暫行分類標準」分類，傾倒廢溶液於瓶內或安全桶內並留下紀錄，必要時使用雙層容器以防洩漏。
- 三、各單位需自行將實驗廢液運送至廢溶液暫貯室，環保暨安全衛生室定期委外清理處理。
- 四、不相容之廢棄物，切勿混合貯存；是否具混合危險性，可查閱物質安全資料表(MSDS)。
- 五、各單位感染性廢棄物收集後，環保暨安全衛生室定期委外清理。

Article 13. Waste management:

1. The waste usually temporarily stored in qualified storage containers, while the container should be marked with the waste type.

2. Waste liquids should be classified in accordance with the "School Laboratory Waste Temporary Classification Standard" while dumping waste solution in the bottle, or the safety barrel and leave a record, if necessary, use a double container to prevent leakage.
3. All units should transport their experimental liquid waste to the waste liquids storage room, OSHE will outsourcing cleanup process on a regular basis.
4. Incompatible waste, never mix storage; to check the mixed risk information from material safety data sheets (MSDS).
5. After collecting infectious waste of the units, OSHE will regularly outsourcing cleanup.

第十四條 安全監測：

- 一、排氣櫃之風速應定期檢測，以維持法定值以上；通風需保持良好，隨時有新鮮空氣供應。
- 二、滅火器應定時檢測或更換藥劑，以維持滅火功能。
- 三、鋼瓶更換時應測漏且定期檢測接頭，以防止氣體外洩；連接鋼瓶之管線應定期檢測，並防止腐蝕或破裂。

Article 14. Security monitoring:

1. Wind speed of the exhaust fume hood should regularly test to maintain in statutory value; always keep good ventilation with fresh air.
2. Fire extinguishers should be regularly testing or replacement of pharmacy, to maintain the fire fighting capabilities.
3. Take leak tests when replacing cylinder and regularly test the joints to prevent gas leakage; the pipeline connected to the cylinders should be monitored regularly, and to prevent corrosion or cracking.

第十五條 環境清潔維護：

- 一、實驗場所應隨時保持整齊清潔。
- 二、實驗場所放置實驗有關之儀器、設備及器材外，不可放置雜物。
- 三、地板、通道及水槽不可任意堆放雜物。
- 四、各機械、設備間通道不得小於八十公分，工作場所主要人行道不得小於一公尺，不可濕滑。
- 五、垃圾要分類置放，資源垃圾不可與一般垃圾混裝，垃圾桶須加蓋。

Article 15. Environmental cleaning and maintenance:

1. Lab should always keep clean and tidy.
2. Lab shall place only the experiments related instruments, equipments, and tools while odds or debris is not allowed.
3. Do not pile up debris on the floor, passage and sink.
4. Machinery, equipment passage shall not be less than 80 cm, and in the workplace sidewalks shall not be less than one meter, and not be slippery.
5. Classify the waste, while the resource garbage can not be mixed with ordinary garbage, and trash can must be covered.

第十六條 局部排氣裝置安全管理：

- 一、每日作業前檢查電源開關及保險絲是否正常。
- 二、作業中發現馬達有異響或震動現象時，應立即暫停作業，按停馬達，待馬達修復後才能繼續作業。
- 三、定期檢查馬達與排氣機之塵埃聚積情形。
- 四、每週定時注加排氣機之潤滑油，保持潤滑良好。
- 五、定時檢查導管接觸部分之狀況是否良好。
- 六、局部排氣裝置及其空氣清靜裝置應每年定期依下列規定實施檢查一次：
  - (一)氣罩、導管及排氣機之磨損、腐蝕、凹凸及其他損害狀況及程度。
  - (二)導管或排氣機塵埃聚集狀況。
  - (三)排氣機注油潤滑狀況。
  - (四)導管接觸部分狀況。
  - (五)連接電動機與排氣機之皮帶鬆弛狀況。
  - (六)吸氣及排氣能力。

Article 16. Local exhaust ventilation systems security management:

1. Check if the power switch and the fuse is normal before daily operational.
2. During operation, if the motor is found abnormal sound or vibration, one should immediately suspend the job, and stop the motor until it is repair to continue operating.
3. Regularly check the dust accumulation of motor and exhaust.
4. Add the machine oil to exhaust for every week, to keep it well-oiled.
5. Regularly check the joint parts being in good condition.
6. Local exhaust system and its air cleaning device should be implemented the annual inspection in accordance with the following provisions:
  - (1) Wear, corrosion, bump and other damage condition of the hood, pipe and exhaust.
  - (2) Dust accumulation of pipe or exhauster.
  - (3) Lubrication of exhaust machine.
  - (4) Condition of the joint part of pipe.
  - (5) Condition of the machine belt connecting the motor and exhaust.
  - (6) Air suction and exhaust capacity.

第十七條 特定作業人員工作安全管理及標準：

- 一、使用有機溶劑及特定化學物質人員工作標準：
  - (一)有機溶劑使用前應檢視通風設備是否良好。
  - (二)有機溶劑之容器不論是否使用中，都應隨手蓋緊。
  - (三)實驗場所只存放當日作業所需使用之有機溶劑量，其餘應儲放於規定位置。
  - (四)盡可能在上風位置工作，以避免吸入有機溶劑蒸氣。
  - (五)盡可能避免皮膚直接接觸。
  - (六)貯存有機溶劑之空容器應加蓋密閉或置於室外；有機溶劑污染之抹布等廢棄物應置於有蓋之密封容器內，不得任意棄置。

- (七)有機溶劑作業中應穿戴適當之手套、護目鏡等防護器具，以避免皮膚直接接觸。
- (八)離開有機溶劑作業場所前，應確實將手部清洗乾淨。
- (九)有機溶劑作業中突感身體不適，應立即停止作業，並報知作業主管。
- (十)作業時應使用局部排氣裝置，並戴用正確之呼吸防護具、防護衣著、防護手套及塗敷劑等。

## 二、壓力容器作業人員工作標準：

- (一)第一種壓力容器(如滅菌鍋)使用人，對於安全閥及其附屬配件之管理，應負責維持下列事項：
  - 1. 安全閥有二具時均應調節在限制壓力下跳開，經檢查後其中之一應予固定，非經檢查員同意不得變動。
  - 2. 壓力錶應設法在使用中不致震動，且其內部不致凍結或溫度不致達到攝氏 80 度以上。
  - 3. 壓力表應在刻度板上易見處，標示最高使用壓力。
  - 4. 壓力容器操作人員應負責擔任有關防止災害發生事項，發現有異狀時，應立即採取適當之措施。
  - 5. 確認安全閥壓力表及其他安全設備無異狀後方予使用。
  - 6. 盡量避免激烈之負載變動。
  - 7. 保持壓力在最高許用壓力下。
  - 8. 保持安全閥機能之正常。
  - 9. 注意自動控制裝置之機能是否正常。
  - 10. 置有冷卻水回收裝置，應保持其機能正常。
- (二)對第一種壓力容器其使用操作人員應就下列事項每月定期實施檢查：
  - 1. 本體有無損傷。
  - 2. 蓋版螺栓有無損耗。
  - 3. 管及閥等有無損傷。
  - 4. 管路是否漏氣。
  - 5. 壓力表是否正常。
- (三)從事第一種壓力容器之清掃、修理或保養時，操作人員如需進入該容器內時，應採取下列措施：
  - 1. 冷卻壓力容器。
  - 2. 實施容器內部換氣及安全檢查。
  - 3. 確實隔斷與其他設備之聯絡管線及電源。
  - 4. 進入容器內之人員，須事先申請許可。
  - 5. 除了進入容器內之人員外，容器外應另有監視人員，保持聯絡。
- (四)第二種壓力容器，應每年依下列規定定期實施檢查：
  - 1. 內、外面是否有顯著損傷、裂痕、變形及腐蝕。
  - 2. 蓋、凸緣、閥、旋塞等有否異常。
  - 3. 第二種壓力容器之壓力表應設法保持在使用中不震動，且內部不致凍結或溫度不至達到攝氏 80 度以上。



4. 應將該容器之最高使用壓力標示於壓力表上易見之刻度盤上。
5. 管路是否漏氣。
6. 壓力表是否正常。
7. 閥壓力錶與其他安全裝置等有否異常。

三、離心機械作業人員工作標準：

- (一)離心機械應裝置覆蓋及連鎖反應裝置。
- (二)機械停止運轉後才能取出離心機械內裝物。
- (三)使用離心機械不得超越該機械之最高回轉速。
- (四)非經主管同意，操作過程禁止使用手動方式控制。

四、儀器維修人員工作標準：

- (一)維修必須由專人負責，並依據各式儀器保養及操作手冊步驟執行。
- (二)接有管路、高壓氣體、液體、蒸汽及電路等之電器維修時，不可任意觸動或更改線路，必須會同相關單位，共同進行維修工作。
- (三)維修固定放射線儀器設備，必須知會該儀器之操作者，確認無輻射或雷射暴露之危險性再進行維修。
- (四)未接受原廠維修訓練及資格認證者，禁止對放射或雷射設備儀器進行維修。

Article 17. Specialized personnel working security management and standards:

1. Working standards for personnel using organic solvents and specific chemical substances:

- (1) Before using organic solvents, one should examine if the ventilation is good.
- (2) Turn the organic solvent container readily tightly, whether in use or not.
- (3) Retrieve and place only the amount of organic solvents needed for the experiment, and the rest should be stored at the fixed position.
- (4) Work in the upwind position to avoid inhalation of organic solvent vapors.
- (5) If possible, avoid direct contact with the skin.
- (6) Empty containers of organic solvent should be stored in a sealed container or placed outdoors; organic solvent contaminated rags and other waste should be placed in a sealed container with cover, and should not be arbitrarily abandoned.
- (7) During operation of organic solvent, one should wear appropriate gloves, goggles and other protective gears, to avoid direct contact with skin.
- (8) Before leaving the organic solvent workplaces, one should wash hand thoroughly.
- (9) During operation of organic solvent, if suddenly felt unwell, one should immediately stop the operation, and report to the supervisor.
- (10) During operation, one should use local exhaust, and wearing the correct respiratory protective equipment, protective clothing, protective gloves and coating agents.

2. Working standards for personnel operating pressure vessels:

- (1) User of the first type pressure vessel (such as autoclaves), concerning with the management of the safety valve and its accessories, shall be responsible for maintaining the following matters:
  - a. If there are two safety valves, both should be adjusted to limit pressure to pop up, and after

- inspection, one of which should be fixed, unless the inspector agrees to changes.
- b. Gauges should try to use against vibration, and will not freeze while its internal temperature will not reach over 80 °C.
  - c. Gauges should be marked maximum operating pressure at scale plate to be easily seen.
  - d. Pressure vessel operator shall be responsible for preventing hazards, if found anything unusual, it is required to take appropriate procedures immediately.
  - e. Confirm that the pressure gauge of safety valve and other equipment are safe to use.
  - f. Try to avoid the intense changes in the load.
  - g. Keep the pressure under the allowable maximum pressure.
  - h. Maintain the normal function of the safety valve.
  - i. Make sure the automatic control device function normally.
  - j. Equipped with a cooling water recovery, should maintain its function normal.
- (2) User of the first type pressure vessel shall be responsible for the monthly inspections as the followings:
- a. Body is injured or not.
  - b. Bolts with or without weariness.
  - c. Pipe and valve are injured or not.
  - d. Pipe leaks or not.
  - e. Pressure gauge is normal.
- (3) Staff of cleaning, repairing or maintaining the first type pressure vessel shall take the following measures while entering inside the vessel:
- a. Cooling the pressure vessel.
  - b. Implementing ventilation and safety inspection of the interior.
  - c. Thoroughly cut off connecting pipelines and power with other equipment.
  - d. All staff should apply for permission before entering inside the vessel.
  - e. When one enters inside the vessel, there shall be another surveillance personnel outside to keep in touch.
- (4) The second type pressure vessel shall be implemented the regular inspections as the followings::
- a. If there is significant damage, cracks, deformation and corrosion inside or outside.
  - b. If covers, flanges, valves, cocks, and so on are normal
  - c. The second pressure vessel pressure gauge should try to use against vibration, and will not freeze while its internal temperature will not reach over 80 °C.
  - d. Gauges should be marked maximum operating pressure at scale plate to be easily seen.
  - e. Pipe leaks or not.
  - f. Pressure gauge is normal.
  - g. Valve pressure gauge and other safety devices are normal or not.
3. Working standards for centrifugal mechanical workers:

- (1) Centrifugal mechanical device should equipped with coverage and chain reaction devices.
  - (2) Only to remove the contents of centrifugal machinery until the operation is fully stopped.
  - (3) Do not exceed the highest return speed of the centrifugal machine when using it.
  - (4) Prohibit use of manually controlled without the permission of supervisor during operation.
4. Working standards for instrument maintenance personnel:
- (1) Repairs must be done by the appointed person and follows the steps of different manual instructions for instrument maintenance and operation.
  - (2) One should not touch or change the line while repairing electrical maintenance equipped with connected piping, high-pressure gas, liquid, steam and circuit, and must be together with the relevant units to jointly repair.
  - (3) One should notify the instrument operator while maintaining the fixed radiographic equipment, to confirm that no radiation or laser exposure risk.
  - (4) Without receiving the original maintenance training and certification, it is prohibited to maintain the radiation or laser equipment and instruments.

第十八條 安全衛生設備：

- 一、緊急沖淋及洗眼設備。
- 二、收集廢液及廢棄物之廢棄桶。
- 三、有機溶劑危害標示。
- 四、滅火器。
- 五、個人防護設備。
- 六、排氣櫃及換氣裝置。
- 七、急救箱。

Article 18. Health and safety equipment:

1. Emergency shower and eyewash equipment.
2. Collection of waste and waste disposal barrel.
3. Organic solvent hazards marks.
4. Fire extinguisher.
5. Personal protective equipment.
6. Exhaust cabinets and ventilation devices.
7. First aid kit.

第五章 教育與訓練

Chapter 5 Education and Training

第十九條 依勞工安全衛生法第二十三條及勞工安全衛生教育訓練規則之規定，本守則適用人員有接受一般安全衛生教育訓練課程之義務。

一、依勞工安全衛生教育訓練規則 **第二條規定**，下列人員應分別施以從事工作及預防災變所必要之安全衛生教育訓練：

- (一)安全衛生人員。

- (二)安全衛生相關作業主管。
  - (三)危險性機械設備操作人員。
  - (四)特殊作業人員。
  - (五)一般作業人員。
  - (六)其他經行政院勞工委員會指定之人員。
- 前項人員，應依其作業性質施以安全衛生再教育或訓練。

二、訓練種類：

- (一)一般安全衛生教育訓練三個小時課程。
- (二)使用危險物、有害物除接受一般安全衛生教育訓練外，須再接受至少三個小時專業安全衛生教育訓練。
- (三)危險性機械設備(如第一種壓力容器)操作人員必須經過政府認可機構受訓並測驗合格，始能擔任。
- (四)有機溶劑作業、特定化學物質作業、粉塵作業、鉛作業、四烷基鉛作業、高壓氣體作業之適用場所作業主管應接受作業主管安全衛生教育訓練。
- (五)急救人員訓練，並取得執照。

Article 19. Pursuant to the provisions of Article 23 of Labor Safety and Health Act and Regulations for Labor Safety and Health Education and Training, the applicable staffs in the Manual are obligated to receive the general health and safety training courses.

1. In accordance with Article 2 of the Regulations for Labor Safety and Health Education and Training, the following personnel shall be subjected to receive safety and health education and training necessary to perform duties and to prevent accidents.

- (1) Health and safety personnel.
- (2) Supervisors for operations relating to safety and health.
- (3) Operators for Dangerous Machinery and Equipment.
- (4) Personnel for special tasks.
- (5) General operators.
- (6) Other personnel designated by central competent authorities.

The above personnel should receive continuing health and safety education or training according to their specialized operations.

2. Training types:

- (1) A 3-hour education and training program for safety and health.
- (2) Those who have to conduct dangerous materials, or handle hazards are required to add a 3-hour specialized health and safety training.
- (3) Those who have to operate hazardous machinery and equipment (such as the first type pressure vessel), must receive safety and health education and trainings and pass the test hold by the units with recognition of government in advance
- (4) All superintending personnel specialized in the operation of organic solvent, specific chemical substance, hazardous dust, lead, methyl lead and high-pressure gas are required to receive a

safety and health education and trainings for supervisors.

(5) First aid personnel training and to obtain a license.

## 第六章 急救與搶救

### Chapter 6 First-Aid and Rescue

第二十條 適用場所如發生職業災害時，相關人員應立即採取必要之急救、搶救措施，並實施調查、分析及作成紀錄。

Article 20. If there were any occupational accidents in the Places, personnel should immediately take the necessary first aid and rescue measures and implement the survey and make a record.

第二十一條 各單位應派適當人員接受急救人員訓練，以利辦理傷患救護事宜。

Article 21. Each units should send appropriate personnel to receive first aid training, to handle injuries and rescue matters.

第二十二條 事故發生時，應即時救助傷患，救護人員在適當防護裝備下，須迅速趕至現場執行任務。

Article 22. Once the accident occurred, one should immediate rescue the injured while the ambulance personnel with proper protective equipment, should quickly rushed to the site to perform tasks.

第二十三條 火災或有毒物質洩漏或有洩漏之虞時，搶救人員須著適當之防護具。

Article 23. In danger of the fire or leakage of toxic substances, rescue personnel shall wear appropriate protective gears.

第二十四條 救護人員任務編組：

- 一、事故單位：事故單位主管負責指揮事故搶救，其他人員分工擔任事故搶救與傷患救護工作。
- 二、通報班：適時通知其他支援救護單位，請求救援。
- 三、救護班：負責事故現場傷患救助與救護指揮工作。
- 四、避難班：搶救與協助事故現場之人員逃生與疏散。
- 五、單位安全衛生人員：事故搶救、傷患救護及防護具、救生器具調派供應，並輔導使用。

Article 24. Ambulance staff task forces:

1. Accident Unit: head person of the accident unit take in charge of directing rescue while the other personnel should share rescuing the injured to ambulance.
2. Notification squad: timely notice other support ambulance units to request rescue.
3. Ambulance squad: responsible for the accident site injuries relief and rescue command.
4. Refuge squad: rescue and assist the staff of the accident site to escape and evacuation.
5. Health and safety staff of the unit: accident rescue, casualty first-aid and assignment and supply of protective gear and lifesaving appliances while help to use.

第二十五條 一般急救原則：

- 一、事故發生，人員受傷時，事故單位應即派員搶救傷患脫離危險地區，施以急救；救護車

或醫護人員未到達前，不可離開傷患。

二、臉色潮紅傷患應使其頭部抬高，臉色蒼白有休克現象者，應使其頭部放低。

三、神智不清、昏迷、失去知覺及可能需要接受麻醉者，不可給予食物或飲料。

四、熟練心肺復甦術，以維持傷患呼吸及血液循環。

五、現場急救者，應協助傷患述說傷害狀況及傷害媒介物質，以幫助醫護人員及醫生診斷與治療。

六、傷害之緊急搬運：搬運傷患前需先檢查其頭部、頸、胸、腹部及四肢之傷勢，並加以固定。讓傷患儘量保持舒適之姿勢。若需將患者搬運至安全處，應以身體長軸方向拖行。搬運器材必須牢固。

#### Article 25. General emergency rescue principles:

1. When accident occurred, personal were injured, accident units shall swiftly move the injured patient from a high-risk area to impose first aid; before the arrival of an ambulance or medical personnel, don't leave the injured patient.

2. Lift the head of injured patients who appear to have a flushed complexion, and lower the head of the injured patients who appear to be pale or in a state of shock.

3. Do not administer food or beverage to individuals who are unconscious, or in a coma, or have lost consciousness, or to those likely to receive anesthesia.

4. Be familiar with the cardiovascular resuscitation techniques in order to maintain an injured patient's respiration and blood circulation.

5. Onsite emergency rescuers should assist the injured patient to recount injury status and injury mediators to help the diagnosis and treatment of health care workers and doctors.

6. Emergency transport of injured patients: before moving, check the state of injury in the patient's head, neck, chest, abdomen, and four limbs, stabilize where injured, and making sure to securely strap the transport equipment. Keep the injured patient in a comfortable position. When in need of moving the injured patients to a safe place, drag the patient in the length-wide direction of the body.

#### 第二十六條 特殊傷害急救原則：

##### 一、灼燙傷急救原則：

(一)沖：身體用清水沖洗至少三十分鐘。若眼部受傷，撐開眼皮自內而外緩慢沖洗五分鐘以上。

(二)脫：傷害皮膚若有衣著，一面沖水，一面剪開衣服，避免皮膚組織持續受損或擴大傷處面積。

(三)泡：傷處泡於水中，其水泡不可壓破。

(四)蓋：使用乾淨潮濕紗布輕輕覆蓋，避免感染。

(五)送：儘速送醫。

##### 二、吸入中毒：

(一)搶救者應穿戴適當的呼吸防護具進入災害現場，先打開通風口。

(二)若毒性氣體屬可燃性氣體不可任意開啟電源開關。

(三)搬移患者至新鮮空氣流通處，鬆開衣服，使其呼吸道暢通。

- (四)意識不清，呼吸困難者，應給與氧氣。
- (五)呼吸停止者應施予人工呼吸，維持呼吸系統運作。
- (六)心跳停止者應施予心臟按摩，維持循環系統運作。
- (七)送醫急救，注意保暖，以免身體失溫。

### 三、誤食：

- (一)若食入非腐蝕性毒物，先行催吐。
- (二)若食入腐蝕性毒物，不可催吐；患者若尚能吞嚥，則可給予少量飲水。
- (三)若昏迷抽搐，不可催吐，依其心肺狀況，施以一般急救。
- (四)保留中毒物，與病人一起送醫檢驗。

### 四、外傷出血：

- (一)抬高出血部位，使之高過心臟，勿除去傷口處之凝血，以防持續出血，消毒傷口預防感染。
- (二)任何止血法均需每隔十至十五分鐘放開十五秒，以防組織壞死。
- (三)一般性出血：以直接止血法處理，乾淨之紗布或毛巾覆蓋傷口，以手加壓至少五分鐘。
- (四)動脈出血：以間接止血法處理，直接以指頭壓在出血處的近心端止血點，減少傷口血液流出量，最好與直接加壓止血法同時進行(大腿止血點：鼠蹊部中心，頭部止血點：頸側動脈，上臂止血點：上臂內側肱動脈)。
- (五)傷患大量出血且無法以直接或間接止血法止血時，應使用止血帶止血法。止血帶要綁在傷口較近心臟部位，且要標明包紮時間。
- (六)鼻子出血時，應使患者半坐臥且頭稍向前，壓迫鼻子兩側止血，十分鐘後鬆開，若仍未止血應再壓十分鐘。
- (七)若四肢有斷裂情形，立即以清潔塑膠袋隔離斷肢，並用冰塊冷藏，與病人一同送醫縫合。

### 五、觸電傷害：

- (一)先關閉電源，確定自己無感電之虞，用乾燥的木棒或繩索將觸電物撥離。
- (二)依一般急救原則，進行急救。

### 六、骨折：

- (一)避免折斷的骨骼與鄰近關節再次移動。
- (二)以夾板固定傷肢，以擔架運送。
- (三)抬高固定的傷肢，以減少腫脹與不適。
- (四)送醫治療。

## Article 26. Unique injury emergency rescue principle:

### 1. Burn emergency rescue principle:

- (1) Rinse: Rinse with water for at least thirty minutes. If injuries should occur to the eye, open the eyelid from the inside out and rinse slowly with water for more than five minutes.
- (2) Removal: if the injured skin is stuck with clothing, rinse with water and try to cut open the clothing to avoid the skin from being damaged or the injured surface from spreading.
- (3) Soak: Soaked the injured spot in water, and do not squeeze the blisters to avoid infection.

(4) Cover: Gently cover the injured spot with clean, wet bandage to avoid infection.

(5) Send: send for medical attention as soon as possible.

2. Inhalation of poison's emergency rescue principle:

(1) The rescuer should be attired in suitable respiratory protective gears before entering the disaster site, and is to open the ventilation first.

(2) Do not willfully turn on any power source or light source if the toxic gas is flammable.

(3) Move the injured patient to a place with fresh air ventilation, loosen the clothing to allow a smooth passage of the respiratory track.

(4) Oxygen should be administered to victims who fall unconscious or having difficulty breathing.

(5) Those who stop breathing should be administered with cardiovascular pulmonary resuscitation in order to maintain the respiratory system functioning.

(6) Those who stop breathing should be administered with pulmonary massage to keep the circulatory system functioning.

(7) Send for medical first-aid attention: caution to keep warm to avoid hypothermia to the body.

3. Erroneous swallowing emergency rescue principle:

(1) First try to induce vomiting if non-corrosive toxins were injected.

(2) Do not try to induce vomiting if corrosive toxins were injected; administer a small amount of water to the patient if the patient is able to swallow

(3) It is prohibited to induce vomiting if an individual is in a coma and experiencing spasm; administer the general first-aid procedure depending on the patient's cardiovascular conditions

(4) Retain the toxin and send for medical analysis along with the patient.

4. External injury hemorrhaging emergency rescue principle:

(1) Keep the bleeding spot above the position of the heart and remove the blood clot at where injured to avoid bleeding, and disinfect the injured spot to avoid infection.

(2) Any blood stopping method calls for releasing 15 minutes at the interval of every 10 to 15 minutes to avoid the tissue from damaging.

(3) Direct blood stopping treatment for general hemorrhaging: cover the wound with clean gauze dressing or towel, and press down with your hand for at least five minutes.

(4) Indirect blood stopping method for arterial hemorrhaging: Press the blood stopping point near the heart at where the bleeding occurs with your fingertips to reduce the blood flow, and it is best to incorporate the direct pressure blood stopping method at the same time. (The blood stopping point at the thigh: the center point of the groin; the blood stopping point of the head: the artery vein along the side of the neck; the blood stopping point in the upper arm: the artery on the inside of the upper arm).

(5) When an injured patient is bleeding profusely and the homeostasis cannot be stopped using the direct or indirect blood stopping method, it is prudent to stop the blood flow by using the tourniquet, with the tourniquet strapped at the wound closer to the position of the heart, and also marked down the wrapping time.



- (6) In the case of a nosebleed, keep the injured patient in a semi-sitting position with the head slightly inclined forward, with pressure applied to the two sides of the nose to stop the bleeding; release in 10 minutes, and exert the pressure once more if the bleeding does not stop.
  - (7) In the case of severed limbs, clean the severed limbs at once and segregate with a plastic bag in cold storage with ice cubes, and send the severed limbs along with the patient for reconstructive procedures.
5. Electrocution injury emergency rescue principle:
- (1) Turn off the power source first and make sure you are not at risk of being electrocuted. Use a dry wooden stick or rope to separate the electric conductive object from the injured patient.
  - (2) Administer emergency rescue procedure to the injured patient using the general emergency rescue principle.
6. Bone fracture emergency rescue principle:
- (1) Avoid shifting the fractured bone and nearby joints.
  - (2) Stabilize an injured limb with crimping board, and transport with a gurney.
  - (3) Lift the anchored injured limb to avoid swelling and discomfort.
  - (4) Send for medical first-aid attention.

## 第七章 防護設備之準備、維持與使用

### Chapter 7 Preparation, Maintenance and Use of Protective Equipment

第二十七條 各適用場所負責人應充分供應所屬人員適當之個人防護具及安全衛生設施，並定期保養、維護及更新安全衛生設施。

- 一、個人防護具應正確佩戴使用，保持清潔並自我檢查，保持防護具之性能。
- 二、從事搬運、處置或使用刺激性、腐蝕性、毒性物質時，要確實使用手套、圍裙、過腳安全鞋、防護眼鏡、防毒口罩及安全面罩等安全護具。
- 三、接觸皮膚致傷害、感染或穿透吸收，而發生中毒之虞時，應使用不浸透性防護衣、防護手套、防護靴及防護鞋等適當防護具。
- 四、暴露於游離輻射線、生物病原體、有害氣體蒸汽、粉塵或其他危害性物質作業場所，應確實使用安全面罩、防塵口罩、防毒面具、防護眼鏡及防護衣等。

Article 27. Each laboratory's superintendent shall adequately provide related personnel with the individual's protective equipment and safety and health facilities, and routinely implement the maintenance, repair and renewal of the equipment and facilities mentioned above.

1. The individual protective equipment shall be properly applied when necessary, and shall be maintained the cleanliness and the well function by regular self-examination.
2. When engaging in carrying, handling or using irritant or corrosive toxic substance, be sure to wear protective equipment such as protective gloves, protective clothing, safety shoes, protective goggles, protective oral-nasal mask and safety mask.
3. Those who may be injured due to skin contact with chemical substances in use, or suffer poisoning phenomenon by infection or skin penetration and absorption of any form of hazardous substance

capable of producing intoxication at work are required to adequately wear the protective equipment such as non-penetrating protective clothing, protective gloves, protective boots and protective shoes.

4. Those exposed to ionizing radiation, bio-pathogen, pernicious gases, vapor or dust, or other hazardous substances in the workplace are required to wear safety mask, dust mask, gas mask, protective goggles and protective clothing and so forth.

## 第八章 事故通報與報告

### Chapter 8 Accident Notification and Report

#### 第二十八條 事故通報：

- 一、發生職業災害，依照本校「緊急應變計畫」應對。
- 二、依本校「災害緊急通報系統」程序，通報各相關單位。
- 三、通報力求簡短、清楚，內容應包括：
  - (一)通報人姓名及電話。
  - (二)災害發生時間。
  - (三)災害發生地點。
  - (四)傷害媒介物。
  - (五)傷害人數。
  - (六)處置情形。
  - (七)所需支援。

#### Article 28. Incident Notification:

1. In the event of an occupational hazard occurring, follow the school's emergency response plan to deal with.
2. Notify the related units through the school's emergency notification system.
3. Notification should be as brief and clear as possible, and should include:
  - (1) reporter's name and telephone.
  - (2) hazard occurrence time.
  - (3) hazard occurrence location.
  - (4) incident-causing medium.
  - (5) number of injured person.
  - (6) emergency response situation.
  - (7) emergency support needed.

#### 第二十九條 事故報告：

- 一、不論火災大小，有無損失，發生場所應於三日內提出火災報告。
- 二、發生下列職業災害之一，應即報告單位所屬學院轉陳校長，校方應於二十四小時內報告檢查機構：
  - (一)發生死亡災害者。
  - (二)發生災害之罹災人數三人以上者。

(三)其他經中央主管機關指定公告之災害。

三、發生前款之職業災害時，除必要之急救、搶救外，非經司法機關或檢查機構許可，不得移動或破壞現場。

Article 29. of the incidents have been reported:

1. Regardless of fire size, whether the loss occurred to make the report should be made within three days of fire.
2. the occurrence of one of the following occupational hazards should be reporting unit belongs College turn, President Chen, school inspection agency should be reported within 24 hours:
  - (1) the occurrence of death disaster.
  - (2) disasters suffer disaster number three of the above.
  - (3) specify the announcement by the central competent authority disasters.
3. the occurrence of the occupational hazards of the preceding paragraph, in addition to the necessary first aid, rescue outside non-judiciary or inspection agencies permission shall not move or destroy the scene.

第九章 其他有關安全衛生工作事項

Chapter 9 Other Relevant Measures

第三十條 適用場所教職員工生對於體格檢查、定期健康檢查及特定項目之健康檢查有接受的義務。

一、新進人員：應於就職前辦理體格檢查。

二、在職人員：未滿三十歲，每五年健康檢查一次；未滿三十歲以上四十五歲，每三年健康檢查一次；四十五歲以上，每二年健康檢查一次。

三、特殊危害作業人員：每年健康檢查一次。

前項檢查紀錄應至少保存十年。

Article 30. Faculties and students of the Place are obligated to undergo general and specific physical examination and health examination.

1. New employees: should have finished the physical examination before assuming the post.
2. Serving staff: less than 30 years old, get a health check for every five years; under the age of 30 and over the age of 45 years old, get a health check for every three years; aged 45 or above, get a health check for every two years.
3. Special hazards workers: get annual health check.  
The previous inspection records should be kept for at least ten years.

第三十一條 適用場所教職員工生應確實遵守本守則，對於教育訓練與健康檢查有接受之義務，違反者依勞工安全衛生法第三十五條規定，處新台幣參仟元以下罰鍰。

Article 31. Faculties and students of the Place should follow the rules in the Manual, and are obliged to participate in safety and health education and training as well as accept the examinations, while any act in violation of Article 35 of Labor Safety and Health Act shall be subject to a fine of not to exceed

NT\$

3,000.

第十章 附則

Chapter 10 Supplementary Notes

第三十二條 本守則未盡事宜，依相關規定辦理。

Article 32. Other related regulations that are not stipulated in the Manual are subject to the relevant regulations.

第三十三條 本守則經本校環安衛委員會審查通過並經行政會議通過，陳請校長核定，並報經高雄市政府勞工局勞動檢查處備查後公布實施，修正時亦同。

Article 33. The Manual is reviewing and approved by the SCH and University Administrative Meeting, and have been implemented upon the approval of the President, and reported for approval to Labor Standards Inspection Office, Labor Affairs Bureau, Kaohsiung City Government. The amendment procedure shall be the same.