

國立成功大學核心設施中心 實驗用化學藥品使用守則
Regulations for the Use of Laboratory Chemicals
Core Facilities Center, NCKU

103.03.19 中心會議修訂

110.03.11 幹部會議修訂

114.09.22 中心會議修訂

Amended in the center's meeting on March 19, 2014

Amended in the center's caucus on March 11, 2021

Amended in the center's meeting on September 22, 2025

1. 實驗用化學藥品分為強酸、強鹼、有機溶劑和氫氟酸（HF）等四類。
Experimental chemicals are divided into four categories: strong acids, strong bases, organic solvents, and hydrofluoric acid (HF).
2. 欲攜帶非中心提供之化學品，務必於攜入前完成申請流程，填寫國立成功大學核心設施中心－化學品攜入申請表（附表一）及檢附相關文件。
For chemicals not provided by the Center, an application process must be completed before bringing them in. Please fill out the “Chemical Entry Application Form (Appendix I)” from the Core Facility Center, NCKU, and attach the relevant documents.
3. 若需將含有化學品之燒杯暫時放置於無塵室內，放置時間不得超過 30 分鐘，且必須使用無塵紙清楚標示杯內溶液名稱、放置開始時間、使用者姓名與聯絡電話。
If a beaker containing chemicals needs to be temporarily placed in the cleanroom, the placement time must not exceed 30 minutes. The beaker must be clearly labeled with the solution name, start time of placement, user's name, and contact number using cleanroom paper.
4. 非由本中心提供或經由本中心購買之化學品，不得存放於本中心內部冰箱。若經查獲，將直接丟棄處理。
Chemicals that are not provided or purchased through the Center are not allowed to be stored in the Center's refrigerators. Any such items found will be immediately discarded.
5. 使用所提供的公用化學藥品，務必確實登記使用人的姓名和使用量。
Users must record their name and the amount used when using the shared laboratory chemicals provided by center.
6. 本中心現場備有個人防護器具供使用者使用，請使用者依化學品性質選用適當的個人防護器具。防護器具使用後，應確實清洗乾淨並歸位，以維持設備整潔與安全。
Personal protective equipment (PPE) is available on-site for users at the Center. Users are required to select appropriate PPE according to the properties of the chemicals they are handling. After use, all PPE must be properly cleaned and returned to its designated place to maintain cleanliness and safety of the facility.
7. 抽風櫃分為酸液、鹼液、有機化學及混合型等四種，使用前，須先確認抽風及照明設備已開啟。
There are four types of fume hoods: acid, alkali, organic chemical, and mixed type. Before use, must ensure that the ventilation and lighting equipment are turned on.
8. 處理或使用酸液、鹼液、氧化劑及有機溶劑等必須在專屬之抽風櫃內為之，且其抽風櫃之玻璃

窗高度，應低於人員操作時之呼吸帶高度。

Processing or using acid liquid, base liquid, oxidants, and organic solvents, among others, needs to take place inside the exclusive fume hood and the height of the glass window of the fume hood shall be below the breathing zone of the operators.

9. 抽風櫃內應保持整潔，不可放置與實驗無關之物品。

The interior of the fume hood shall be kept tidy and neat. Do not place items irrelevant to the experiment.

10. 混合酸液時，必須將酸液慢慢倒入水中，絕不可將水倒入酸中，調和後，應使之冷卻之後才能蓋緊存放，否則會因熱膨脹而造成傷害。

To mix acid liquid, it is required to pour the acid liquid slowly into water. Do not pour water into the acid liquid. After it is mixed, it shall be left to cool down before it is covered and stored; otherwise, harm can result due to thermal expansion.

11. 勿將酸液和有機溶劑混合傾倒，以避免爆炸。

Do not dump acid liquid together with organic solvents as explosion might occur.

12. 酸類用完後，若不再用，須待至溫度降至室溫時，加以稀釋後才倒入廢液桶內。

After using the acid, if no longer needed, it is required to wait for the temperature to drop to room temperature, dilute it, and then dump the acid into the waste liquid tank.

13. 稀釋強酸強鹼時，必須戴上抗酸鹼手套並且在專屬抽風櫃內中進行。

Upon dilution of strong acid and strong base liquid, it is required to wear anti-acid or anti-base gloves and perform the process inside an exclusive fume hood.

14. 濺出來的化學藥品必須立即清理；強酸類，可用固體的碳酸氫鈉中和，再用清水清洗；強鹼類，可用清水清洗，再用稀醋酸清洗。

Spilled chemicals shall be cleaned up right away. For strong acids, they may be neutralized with solid sodium bicarbonate before cleaning with water. For strong bases, water may be used for cleaning followed by diluted acetic acid.

15. 氫氟酸 (HF) 的處理應特別小心，勿觸及皮膚，若一旦觸及皮膚或眼睛，則盡速用六氟靈沖洗（放置於抽風櫃左方櫃子裡），再塗上葡萄糖酸鈣軟膏中和，勿塗抹眼睛，然後立刻送醫【氫氟酸 (HF) 最為危險，會吸收身體內的鈣質，使變成軟骨而死亡】。

Hydrofluoric acid (HF) must be handled with extreme caution. Always avoid direct contact with skin. If HF accidentally encounters the skin or eyes:

(1) Immediately rinse the affected area with Hexafluorine solution (stored in the cabinet to the left of the fume hood).

(2) Then, apply calcium gluconate ointment to neutralize the acid.

⚠ Do not apply the ointment to the eyes.

(3) Seek emergency medical attention without delay.

⚠ Warning: HF is extremely hazardous. It can be absorbed through the skin and binds with calcium in the body, potentially leading to severe injury or even death due to calcium depletion and cartilage degradation.

16. 已倒出之化學藥品不可再倒入原來的容器（即使未曾使用過）。

Do not return poured chemicals into their original containers (even if they are not used).

17. 未倒出使用之剩餘化學藥品，必須歸回原位。

Remaining chemicals in the containers shall be returned to where they were.

18. 化學藥品用完之空瓶應放到空瓶回收處（廢液槽旁）。

Empty bottles after chemicals are used up shall be collected in the empty bottle recycling tank (next to the waste liquid tank).

19. 化學藥品用完之空瓶內，不得放入任何種類的不名液體而留放在工作台上或附近之處。

It is disallowed to place any unknown liquids in empty bottles after chemicals are used up and keep the bottles on the workbenches or in an adjacent area.

20. 使用過的化學藥品，必須依各類化學藥品廢液種類倒入專屬回收桶（回收桶在抽風櫃下方）。

Used chemicals shall be dumped in the exclusive waste liquid tanks (underneath the fume hoods) according to the category they belong.

21. 絕不可用口、鼻去嘗、嗅化學藥品，也不可以口就吸量管吸取藥品。

Never try to taste or smell chemicals with your mouth or nose and do not suck up chemicals through a pipette in contact with your mouth.

22. 加熱器、烘箱等加熱設備旁嚴禁放置易燃性及易爆性化學藥品。

It is strictly prohibited to place inflammable and combustible chemicals next to heating equipment such as heaters and ovens.

23. 從事任何實驗前，應確認做好安全評估，充分了解使用設備之安全狀況及使用藥品之毒性、物性、化性及正確使用方法，並對製程可能發生之中間產物及危害提出預防方法，並採取適當的防護措施。

Before any experiment begins, make sure that safety assessment is completed as well as that you have a sufficient understanding of the safety status of the equipment and the toxicity, physical and chemical property, and correct usage of the chemicals and have preventive measures ready for possible intermediates and hazards during the process and apply proper protection.

24. 如有違反上述規範者，將依據「國立成功大學核心設施中心微奈米科技組使用者違規裁罰準則」進行論處。

Any violation of the above regulations will be handled in accordance with the “Guidelines Governing Users’ Violation Penalties of Micro/Nano Science and Technology Group, Core Facility Center, NCKU.”

國立成功大學核心設施中心－化學品攜入申請表

114.09.22 修訂

申請流程		☐ 申請人→ ☐ 指導教授/單位主管→ ☐ 環安人員	
申請編號 (由本中心填寫)		申請日期	
申請人		申請單位	☐ (校/系所) ☐ (公司名稱)
聯絡電話		E-mail	
使用目的或用途			
化學品使用期間			
化學品名稱 (中文)			
化學品名稱 (英文)			
化學品容量 (ml)			
化學品濃度 (須註明濃度單位)			
供應商/製造商/代理商			
化學品分類	☐ 非列管化學品	☐ 酸類 ☐ 鹼類 ☐ 有機化學品 ☐ 無機化學品	
	☐ 列管化學品	☐ 酸類 ☐ 鹼類 ☐ 有機化學品 ☐ 無機化學品 ☐ 危害性化學品 ☐ 毒化物() W/W%	
重要規定	1. 請確認瓶身已張貼 GHS 標籤。 2. 申請時請檢附紙本或電子檔乙份，供環安衛工程師審閱存查。 3. 未使用完畢之化學品，嚴禁暫存於無塵室（實驗室）及冰箱內。		
指導教授/單位主管		環安衛工程師	微奈米組 組長老師
		☐ 通過 / ☐ 退件	
(簽章)		(簽章)	(簽章)

Chemical Entry Application Form – Core Facilities Center, NCKU

114.09.22 修訂

Application Procedure		☐ Applicant→ ☐ Advisor/Unit Supervisor→ ☐ Environmental Health and Safety (EHS) Engineer	
Application Number (Filled in by CFC)			Application Date
Applicant		Unit	☐ (School/Department) ☐ (Company Name)
Phone		E-mail	
Purpose or Intended Use			
Usage Period			
Chemical Name (Chinese)			
Chemical Name (English)			
Chemical Volume (ml)			
Chemical Concentration (Unit must be specified)			
Supplier/Manufacturer/Agent			
Chemical Classification	☐ Non-Regulated Chemical	☐ Acid ☐ Base (Alkali) ☐ Organic Chemicals ☐ Inorganic Chemicals	
	☐ Regulated Chemical	☐ Acid ☐ Base (Alkali) ☐ Organic Chemicals ☐ Inorganic Chemicals ☐ Hazardous Chemicals ☐ Toxic Substances () W/W%	
Essential Guidelines	1. Please ensure that a GHS label is properly affixed to the bottle. 2. When submitting the application, please include either a hard copy or an electronic file for review and recordkeeping by CFC-EHS engineer. 3. Partially used chemicals must not be temporarily stored in cleanrooms, laboratories, and refrigerators.		
Advisor/Unit Supervisor		CFC-EHS Engineer	CFC-Lab Supervisor
		☐ Approved / ☐ Rejected	
(Signature)		(Signature)	(Signature)