

本期重點摘要：

- 毒化物採購流程修正，購買前請確認全系存量符合規定。
- 夥伴關係共同改善實驗室安全、環境與健康：機械系
- 實驗室安衛意外事件報導
- 首次召開各列管系所實驗室環安承辦人會議
- 第 28 次環安委員會及第 2 次毒化物管理委員會會議記錄訊息
- 近期修繕改善本校實驗室廢液暫時貯存室
- 其他學校實驗場所事故案件分析：溫控器失效致持續加熱造成火災
- 最新消息

Highlights:

- New procurement procedure for toxic chemicals: Please verify if the stock amount is in compliance with regulation before ordering.
- Partnership networking to improve the laboratory safety, environment and health: Department of Mechanical Engineering.
- Laboratory accident report.
- The 1st Meeting of all specialists in charge of ESH from each department.
- The 28th Meeting of the Environmental Health and Safety Committee (ESHC) and the 2nd Meeting of the Toxic Chemicals Management Committee.
- Temporary storage chambers for laboratory wastes will be replenished.
- Case of laboratory accidents: Fire resulting from malfunction of a thermostat controller.
- News

毒化物採購流程修正，購買前請確認全系存量符合規定。

本校毒性化學物質採購流程修正如下圖所示，與過去流程最大的不同點為「毒化物請購聯單」經系主任簽核後，需進一步送至環安室審核，以確保本校每項毒化物的運作量不會超過法規規定之 50 公斤限值，初步規劃各系可使用毒化物之貯存及運作量分別為：化工系 20 公斤、材料系 20 公斤及應科所 5 公斤，剩餘之 5 公斤由環安室彈性調配。

保護自己安全與健康，請使用毒化物同學務必確實遵守以下規定：

- (一)、毒化物藥品瓶身應貼有毒化物標示，運作人應維持標示內容清晰、完整。
- (二)、毒化物藥品應集中、貯放櫃上鎖、應由專人妥善管理，櫃外有毒化物標示。
- (三)、製作毒化物清單、物質安全資料表(MSDS)，置於明顯易於取得之處。物質安全資料表(MSDS)定期查閱，內容至少每 3 年更新 1 次。
- (四)、應逐日填寫〔毒性化學物質運作紀錄表〕，每月 15 日前送系環安彙整，〔毒性化學物質運作紀錄表〕應於毒化物運作場所妥善保存 3 年備查。
- (五)、運作場所各出入地點須標示〔毒性化學物質運作場所〕(Handling Premises of Toxic Chemicals) 等字樣。

New procurement procedure for toxic chemicals: Please verify if the stock amount is in compliance with regulation before ordering.

- Properly label containers of toxic chemicals.
- Toxic chemicals should be stored separately in a locked cabinet with label.
- Make an inventory of all toxic chemicals and Materials Safety data Sheet (MSDS), which should be updated every three years.
- Record use of toxic chemicals in log book and report every month.

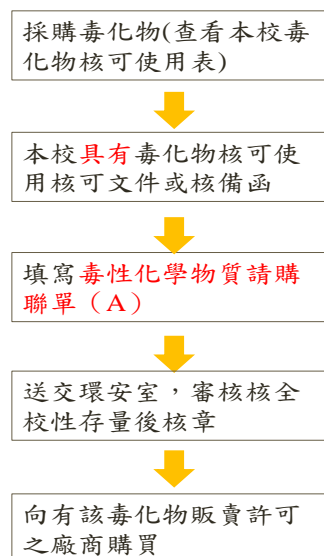


圖 1: 毒化物購買流程



圖 2(右 1)台北市勞動局張逸平先生(前北市勞檢處科長)至機械系輔導檢查

Figures 2

Mr. Yi-ping Zhang of the Bureau of Labor Services walked through and inspected laboratories in the Department of Mechanical Engineering



圖 3 意外發生時，要使用合適的

防護具

Figures 3

When an accident occurs, use suitable protective equipment.

夥伴關係共同改善實驗室安全、環境與健康:機械系實驗室查核

我們於 103 年 2 月 14 日邀請了台北市勞動局服務的張逸平先生(前台北市勞檢處科長)協助輔導本校機械系如何進行實地檢查工作。也感謝機械系修芳仲教授及機械系多位同仁陪同檢查。經由本次檢查，我們發現舊有設置於牆上之滅火器，為了防止被竊等因素，設有玻璃區隔及上鎖功能，須用消防箱上設置的鐵鎚敲碎玻璃取用，不知情或視線昏暗下，不確定能立刻了解這樣的取用方式，而環安室也將陸續辦理消防安全教育訓練課程，使全校師生緊急應變時，可以更清楚了解校內的消防設施環境。

Partnership networking to improve the laboratory safety, environment and health: Department of Mechanical Engineering.

We invited Mr. Yi-ping Zhang of the Bureau of Labor Services of Taipei City Government as our advisor for comprehensive examination on chemical storage, machinery safety, and practice facilities at the Department of Mechanical Engineering on February 14, 2014. We appreciate the assistance of Chairman Fang-Jung Shiou and his colleagues. Through this inspection, several suggestions for improvement were proposed by Mr. Zhang, including the handling of fire extinguishers, better layout of laboratory, and etc. Chairman Shiou promised to take step-by-step actions to improve safety of the Department of Mechanical Engineering. In addition, drill of fire extinguisher will be held routinely for fire safety training course.

實驗室安衛意外事件報導- 103/1/22 化工系實驗室廢酸液噴濺

Laboratory accident – Nitric acid spill, Department of Chemical Engineering, February 22, 2014

發生時間：103 年 2 月 22 日上午 10：00

發生地點：化工系 E2 502 實驗室

災害經過：疑似廢酸液桶日前倒入大量硝酸廢液後，久放經由光照或廢酸桶內有水分或雜質導致產生褐色氣體(NO₂)，造成廢液桶異常膨脹，導致無法承受壓力而噴濺，僅有一條電線及部分地板被酸液腐蝕，無人員受傷。

災害預防對策：

1. 廢液桶移至陰暗處或拉上遮蔽物減少光照。
2. 傾倒廢液時，要查閱化學廢液相容表降低意外危害。
3. 處理化學品或不明液體噴濺意外時，應緊急通知系所承辦人，必要時通知毒化災中心，同學現場簡易處理時應著全身防護衣、手套、口罩等設備並使用化學吸收棉，保護自身安全，再交由專業人員處理後續事宜。

Time: 10:00 AM, February 22, 2014.

Location: Laboratory E2- 502, Department of Chemical Engineering.

Accident: Plastic container of waste acids expanded and deformed several days after ca. 3-4 liters of waste nitric acid was poured in. It burst and **nitric acid spilled** out when alerted graduate students and the technician, wearing safety goggles, gloves, and lab coat, tried to loosen the screw cap. No one was hurt, except that a cable and the floor were corroded. It was speculated that nitrogen dioxide (NO₂) was generated when nitric acid in the container was exposed to sunlight, and induced the deformation of the container and spill.

Lessons learned and prevention measures:

- a. Waste containers should be placed under shaded area to reduce illumination.
- b. Whenever pouring waste chemicals to the waste container, always check the compatibility chart and take necessary precautions to reduce risk.
- c. When handling chemical spill, notify the department staff first, and if necessary, inform the Toxic Chemicals Contingency Center of the Government. Always fully cover yourself with protective clothing, gloves, masks, and adsorption agents for chemicals. The first priority is self-protection during simple, preliminary control and abatement of chemical spill. Then, leave the rest to professionals.

首次召開各列管系所實驗室環安承辦人會議

各系所實驗室環安承辦人環境保護暨安全衛生第1次會議，目前已於2月13日召開，內容提到實驗室安全衛生的管理、毒化物管理說明，並提及危險機械設備重新盤查事宜。未來我們也將定期召開會議，讓實驗室的環安衛管理可以更落實完善，也感謝各系所的承辦人和老師共同用心維護我們校園安全。其他詳細會議記錄請見環安室網頁 <http://goo.gl/7sCxbE>。

The 1st Meeting for all staff specialists in charge of ESH from each department

The 1st Meeting for all staff specialists in charge of environment, safety and hygiene (ESH) from each department was held on February 13. Agenda included general laboratory safety and health issues, revised procurement procedure of toxic chemicals, and experiences in practice for ESH. It is aimed to establish the network among each department, so that environment, safety and health could be better guaranteed in our campus in the future. We appreciate these staff specialists' effort. For detail information of the meeting, please visit our web site at: <http://goo.gl/7sCxbE>



圖 4:2/13 第一次各系所實驗室承辦人環安會議。
Figures 4 The 1st Meeting for all staff specialists in charge of ESH from each department.



圖 5:2/19 環安委員會召開現場。
Figures 5 President Liao chaired the 28th Meeting of the Environmental Health and Safety Committee (EHC) on February 19.

環安委員會暨毒化物管理委員會會議記錄訊息

環境保護暨安全衛生委員會第28次會議，已於2月19日召開會議，並針對兩個提案進行討論，提案題目及議決如以下說明：

- (1) 持續針對本校圖書館的空氣品質進行管理。
- (2) 通過本校103年度環安衛教育訓練計畫。
- (3) 其他詳細會議記錄請見環安室網頁 <http://goo.gl/hZuAiF>。

毒性化學物質管理委員會第2次會議，也同時於環安會議時間召開，並因應環保法規針對兩個提案進行討論，提案題目及議決如以下說明：

- (1) 修訂「國立臺灣科技大學毒性化學物質運作管理委員會設置辦法」通過，並送第518次行政會議審議通過。
- (2) 修訂「本校毒性化學物質運作管理辦法管理原則」通過。
- (3) 其他詳細會議記錄請見環安室網頁 <http://goo.gl/k0NIGJ>。

Resolutions and Record of the 28th Meeting of the Environmental Health and Safety Committee (EHC) and the 2nd Toxic Chemicals Management Committee

The 28th Environment, Safety and Hygiene Committee (EHC) convened on February 19, and resolved on the following two proposals:

- a. Management plan for the indoor air quality of the campus.
- b. Approve the annual education and training plan in 2014 on ESH.
- c. For detailed information, please visit our web site at: <http://goo.gl/hZuAiF>

The 2nd Toxic Chemicals Management Committee convened on February 19, and resolved on the following two proposals:

- a. Amendment of the "Organization Regulation of the Toxic Chemicals Management Committee of the National Taiwan University of Science and Technology".
- b. Amendment of the "Principles and Regulations for Use and Management of Toxic Chemicals".
- c. For detailed information, please visit our web site at: <http://goo.gl/k0NIGJ>

近期修繕改善本校實驗室廢液暫時貯存室

本校研揚大樓旁設有兩座實驗室廢液暫時貯存室的貨櫃屋，使用逾 10 年。經過環安室與化工系、材料系及營繕組同仁至現場會勘，發現內部已有部分損壞，必須修繕改善。主要為廢液貯存室之地板破洞及感溫型滅火器因鏽蝕脫落，如下圖所示。現在已經完成初步估價，將於經費許可的前提下逐步修繕地板、揮發性氣體洩漏偵測裝置、以及相關防爆設備。此外，亦將於現場設置緊急沖淋裝置，以提供同學安全的廢棄物棄置環境。貯存場改善前請同學於搬運廢液時多加留意自身安全。

Temporary storage chambers for laboratory wastes will be replenished soon.

There are two temporary storage chambers near the north gate of our university. They have been used for more than 10 years as temporary storage site before licensed contractors come to transport wastes for final disposal as required by law. It was found that the two chambers are old and partially damaged as shown. To provide safe and sound waste storage, both will be repaired and replenished soon and we plan to set up emergency shower on site. Please take necessary precautions for the time being for your own safety. Thank you very much for your attention!



圖 6: 廢液貯存室地板破洞
Corroded floor inside the
storage chamber

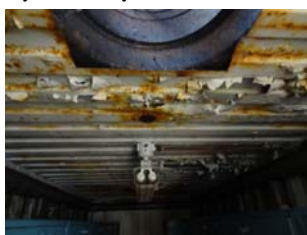


圖 7-1 感溫型滅火器鏽蝕
脫落 Automatic fire
extinguisher fell off



圖 7-2 感溫型滅火器因鏽蝕
脫落 Automatic fire
extinguisher fell off

其他學校實驗場所事故案件分析:溫控器失效致持續加熱造成火災

網址如右列 <http://goo.gl/kXtXgc>

Case study: Fire resulting from malfunction of a thermostat controller.

**毀損之排煙櫃；
壓克力視窗熔毀,排煙
櫃背板燒焦,上方排氣
管前半部毀損。**



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and Hygiene (OESH), NTUST

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bin/home.phtml](http://www.ehs.ntust.edu.tw/front/bin/home.phtml)

安全衛生政策 :

1. 遵循環保安全衛生法令，建立規範制度。
2. 強化環保安全衛生管理，降低危害風險。
3. 實施環保安全衛生訓練，提升意識知能。
4. 落實環保安全衛生執行，營造永續校園。

最新消息 News

- ◇ [保訓會全面修正安衛防護辦法](#)/資料來源:中央日報網路報 2014/3/6
- ◇ [環安衛 5 大桂冠 中大實踐綠色校園](#)/資料來源:中時電子報 2014/2/25
- ◇ [清大化工館火警 無人傷亡](#)/資料來源:中央通訊社 2014/1/18
- ◇ [德國一間高等院校實驗室爆炸 14 人受傷](#)/資料來源:學校安全衛生輔導團 2014/1/9

活動預告 Events to come

- ◇ 預計 4/9 下午 1:30 清運實驗室有害廢棄物 Collection and transport of laboratory hazardous wastes is scheduled at 1:30 PM, March 26.
- ◇ 預計 103 年 4 月清運實驗室廢液 Collection and Transport of liquid laboratory wastes is scheduled in April 2014.
- ◇ 103/4/30 下午 3:30 舉辦「實驗室化學安全」教育訓練講座，歡迎大家報名參加。Lecture (in Chinese) on “Chemical Safety in Laboratory” is scheduled at 3:30 PM, April 30.
- ◇ 下回電子報預告:3/13 自控所檢查檢查；3/19 營建系、工商設計系、建築系實驗室檢查；3/20 電氣安全教育訓練講座。

休息一下 Funny Time:

It's Always Me 總是我

A father said to his sons: "Tomorrow your mother is going to bake a pie. Who is going to eat it?"

The oldest son replied: "Father, I'll eat it all!"

The father then said: "Tomorrow I'm going to butcher a pig. Who is going to eat it?"

The same son answered: "Father, I'll eat it all!"

The father added: "Tomorrow, we are going to plough the field. Who is going to plough?"

The oldest son answered again: "It's always me, always me. Now it's someone else's turn to volunteer!"

一位父親對他的兒子們說：“你們的媽媽明天要烙一張餡餅，誰要吃呢？”

大兒子說：“爸爸，我要把它都吃了。”父親接著說：“明天我要殺一口豬，誰要吃呢？”

又是大兒子說：“爸爸，我要把它都吃了。”父親又說：“明天我們要耕地，誰想耕地呢？”

大兒子再次回答道：“總是我，總是我，這次還是讓其他人來吧。”