國立東華大學貴重儀器使用中心 ICP-MS 預約須知

■ 注意事項：

一、預約單註明送樣人須提供之樣品資訊及各項注意事項。

二、中心不提供符合性聲明亦不對合法性作判斷。

三、檢驗數據僅對檢測樣品有效，並不得作為宣傳廣告之用。

請務必先將資訊 MAIL 予操作人員，**以東華貴儀網頁中 EXCEL 預約單編輯**。

操作人員：林家酪<nseryoe@gms.ndhu.edu.tw>

■ 送樣人須提供的資訊：

1. **樣品名稱**：請以 01-99 編號依序對應送測樣品名稱，

   如：01. AAAAAA；02. BBAABB；03. AABBCC；...。
2. **樣品類型**：有機物/無機物/…、固體/液體、材料/環境/生物/食材...等。
3. **消化試劑**：硝酸/鹽酸/雙氧水/氫氟酸/…/由東華貴儀處理。
4. **分析元素**：以英文縮寫表示，如銅請填 Cu。
5. **預估濃度範圍**：ppb / ppm / %。
6. **樣品重量或體積**：若須由東華貴儀消化，才須提供。
7. 申請人資訊：包含申請人、計畫主持人、所屬單位(校系)、聯絡方式。

■ 備註：

1. 樣品成分若有微量元素超過 10%，其他元素最低只能測至 0.1 %。
2. 若非一般消化方法，可提供予中心評估。
3. 我方消化使用試劑主要以硝酸為主，視樣品性質搭配鹽酸、雙氧水，暫不提供氫氟酸消化服務。
4. 氫氟酸消化之檢液，HF 與二次水體積比須達 1:1000 或更稀。
5. 樣品統一以 **PP 材質容器**盛裝，**需微波消化樣品以 15 或 50 mL 離心管盛裝指定毫克數**，

   可直接上機液體以微量離心管裝約 1 mL，玻璃容易卡部分元素請自行斟酌，不接受金屬容器。
6. 若須由東華貴儀消化，**請自行秤重至 PP 離心管以加速實驗進行**。

   請先來信詢問，重量依樣品性質與預估濃度而定。
7. 可直接上機的檢液最少僅須 1 mL 即可檢測。
8. 務必將樣品編碼清楚寫在瓶蓋與瓶身(瓶身一定要)，**強烈建議只寫編碼**(名稱可對應預約單)。
9. 未檢出以「<數字」表示，數字為可測得之最低濃度。

National Dong Hwa University Core Facilities Center
ICP-MS Reservation Guidelines

■ Important Notes:

1. The reservation form must clearly indicate the sample submitter and include all required sample information and special considerations.
2. The Center does **not** provide statements of conformity nor make judgments regarding legal compliance.
3. Analytical results are valid **only for the tested samples** and must not be used for promotional or advertising purposes.

Please be sure to **email all required information to the operator in advance**,
using the **Excel reservation form available on the NDHU Core Facilities Center website**.
Operator: Lin, Jia-Ming <nseryoe@gms.ndhu.edu.tw>

■ Information Required from the Sample Submitter:

1. **Sample name:**
   Please assign numbers from **01–99** corresponding to the submitted samples, for example:
   01. AAAAAA; 02. BBAABB; 03. AABBCC; …
2. **Sample type:**
   Organic / Inorganic / Others; Solid / Liquid; Material / Environmental / Biological / Food, etc.
3. **Digestion reagents:**
   HNO_3 / HCl / H_2O_2 / HF / Others / To be processed by the NDHU Core Facilities Center.
4. **Elements for analysis:**
   Specify using English abbreviations (e.g., **Cu** for copper).
5. **Estimated concentration range:**
   ppb / ppm / %
6. **Sample weight or volume:**
   Required only if digestion by the NDHU Instrumentation Center is requested.
7. **Applicant information:**
   Including applicant name, principal investigator, affiliated institution/department, and contact information.

■ Remarks:

1. If any trace element in the sample exceeds **10%**, the minimum detectable level for others is limited to **0.1%**.
2. For non-standard digestion methods, relevant information may be provided for evaluation by the Center.
3. Digestion reagents used by the Center are mainly HNO_3, with HCl or/& H_2O_2 peroxide added depending on sample properties. Hydrofluoric acid (HF) digestion is currently not provided.
4. For digests containing hydrofluoric acid, the **volume ratio of HF to deionized water must be at least 1:1000**, or more diluted.
5. Samples must be **uniformly stored in PP (polypropylene) containers**.
   - Samples requiring microwave digestion must be placed in **15 or 50 mL PP centrifuge tubes** with the specified milligram amount.
   - Solutions ready for direct analysis should be placed in **microcentrifuge tubes** with approximately **1 mL**.
   - Glass containers may adsorb certain elements—please use discretion.
   - Metal containers are not accepted**.**
6. If digestion by us is required, please **pre-weigh the sample into PP centrifuge tubes** to expedite processing. Please contact us in advance; Sample weight depends on sample properties and estimated concentration.
7. For solutions ready for direct analysis, a minimum volume of **1 mL** is sufficient.
8. The **sample code must be clearly labeled on both the container cap and body** (Labeling on the container body is mandatory and cannot be replaced by labeling on the cap alone.). It is **strongly recommended to label only the sample code**, with names corresponding to the reservation form.
9. Non-detected results will be reported as **"< value"**, where the value indicates the minimum detectable concentration.