



# **Measurement Uncertainty for Chemical Tests**

22 and 23 September 2025

Organized by

Hong Kong Association for  
Testing, Inspection and Certification Ltd.

(Delivered by ex-HOKLAS Accreditation Officer)

This two-day course provides training for estimation of measurement uncertainty to participants who work in chemical testing laboratories.

## Objective

This two-day course focuses on the different aspects of measurement uncertainty mainly for chemical laboratories. It provides participants' fundamental knowledge and guidelines on what is measurement uncertainty, statistics involved and how the uncertainty can be estimated under different testing conditions. On completion of the course, participants shall have adequate knowledge to build up the uncertainty model and evaluate the measurement uncertainty of chemical tests.

## Outline

### A. Basic statistics and application

- distributions and related mean and standard deviation
- student-*t* test
- confidence interval
- applications

### B. Measurement uncertainty based on EURACHEM

- Definition
- Steps in evaluation of measurement uncertainty

### C. Additional requirements

- Recovery based on VAM Guidelines
- Between and within batch precision

### D. Approaches in estimation of measurement uncertainty

- Top down
- Bottom up
- Collaborative study
- Bias

### E. Common mistakes encountered

- Preparation of standard solutions
- Pooling of recovery and precision

### F. Reporting measurement uncertainty and compliance against specification

### G. Review of measurement uncertainty

- Relationship with criteria of quality control checks
- Approaches in review of suitability of established uncertainty

### H. Examples and workshops for chemical testing methods

The course is designed and delivered by professional analytical chemist who was also an ex-HOKLAS Accreditation Officer. She has more than forty years of experience in chemical analysis. She was the co-chairman of the APLAC Technical Committee for preparation of the APLAC guidelines on the estimation of measurement uncertainty.

## Who Should Attend

This course is designed for all laboratory staff members who are actively involved in quality aspects of the laboratory, including managers, supervisors, approved signatories, authorized representatives, etc.

## Date

Monday and Tuesday  
22 and 23 September 2025 (2 days)

## Time

9:30 am to 5:15pm

## Venue

Near MTR station;

To be announced 1 week before the training via email

## Instructors

Ms. Sandra Ho  
*HOKLAS Lead and Technical Assessor*  
*Previously Chemist in Govt. Laboratory and Accreditation Officer in HOKLAS*  
*Over 40 years of experience in chemical analysis*

## No. of Participants

First-come-first-served basis (Priority will be given to members.)

## Language

Chinese (with English course material)

## Registration

1. Email the complete the registration form to [info@hktic.org](mailto:info@hktic.org)
2. Prepare a crossed cheque payable to "Hong Kong Association for Testing, Inspection and Certification Limited" for the fee .
3. Post the completed registration form and signed cheque to the following address:

HKTIC Secretariat  
1/F., CMA Building,  
64-66 Connaught Road Central,  
Hong Kong

## Fee

HK\$4,000 for HKTIC members  
HK\$4,800 for non-members

This fee covers course notes. (Fees will be refunded for unsuccessful registration or course cancellation).

## Deadline

Friday, 19 September 2025

## Assessment

There will not be any assessment at the end of the course. Those that have attended will receive a ‘**Certificate of Completion**’ from HKTIC.

## Enquiry

Email: [info@hktic.org](mailto:info@hktic.org)  
Tel.: 3652 7515

## HKTIC Organized

**Measurement Uncertainty for Chemical Tests**

## Registration Form

Participants: Suitable for Managers, Supervisors, Approved Signatories, Authorized Representatives, Auditors

Course Content: Please see the attached outline

Date and Time: **22 and 23 September 2025**, 9:30am – 5:15pm

Venue: Near MTR station; to be announced 1 week before the training via email

Participant: Dr. / Ir. / Mr. / Mrs. / Ms. / Miss \_\_\_\_\_  
**\*Name to be shown on the certificate** **Full name in block letters, surname first**

Organization: \_\_\_\_\_

Position / Job Title: \_\_\_\_\_

Mobile No. / Phone: \_\_\_\_\_  
 Participant Admin., HR, etc., if applicable

Email: \_\_\_\_\_  
 Participant Admin., HR, etc., if applicable

Fee (HK\$): Please tick one HKTIC member \$4,000 ☐ Others \$4,800 ☐

Certificate (HK\$): Please tick one Physical certificate \$10 ☐ E-certificate free ☐

Payment: \_\_\_\_\_  
 Cheque Bank Amount

Receipt Recipient: Please tick one Organization ☐ Participant ☐

Mailing address: \_\_\_\_\_  
**(For receiving the certificate and receipt)**

☐ I/We do not agree with the use and provision of my/our personal data for receiving any promotional materials from Hong Kong Association for Testing, Inspection and Certification Ltd and/or its service providers .

**For registration**, please

- 1) email the completed registration form to  
info@hktic.org;
- 2) prepare a signed crossed cheque payable to  
"Hong Kong Association for Testing, Inspection and Certification Limited"; and
- 3) post the completed registration form and signed crossed cheque **on or before 8 September 2025**  
to HKTIC Secretariat, 1/F., CMA Building, 64-66 Connaught Road Central, Hong Kong.

**For enquiry**, please contact HKTIC Secretariat

Email: info@hktic.org  
 Tel.: (852) 3652 7515