APAC PROFICIENCY TESTING PROGRAMME

NON-POLAR AND POLAR PESTICIDES IN WATER (APAC T116)

INVITATION LETTER

Dear APAC colleagues,

1 The National Institute of Metrology (NIM), China, and the Health Sciences Authority (HSA), Singapore will be organising an Asia Pacific Accreditation Cooperation (APAC) proficiency testing (PT) programme for the determination of mass fraction of non-polar and polar pesticide residues in water in June 2026. NIM has been experienced in organising APLAC/APAC PTs since 2017. HSA Chemical Metrology Laboratory (CML) serves as an accredited PT provider, experienced in organising accuracy-based PT programmes in accordance with ISO/IEC 17043.

2 The PT programme will be organised following the requirements of ISO/IEC 17043:2023. The programme is organised in parallel with two Supplementary Comparisons organised under the auspice of the Asia Pacific Metrology Programme (APMP), i.e. APMP.QM-S23 Non-polar pesticide residue in water and APMP.QM-S24 Polar pesticide residue in water. The PT programme is accuracy-based and makes use of metrologically traceable PT programme reference values (PTRVs) to evaluate the results from participating laboratories. The PTRVs will be derived from supplementary comparison results of metrology institutes contributing to the supplementary comparison reference values (SCRVs). Hence, the programme enable the participating laboratories to assess both the comparability and accuracy of their test results.

3 For non-polar pesticide in water, the batch of PT material comprised non-polar pesticide (lindane) spiked into acetonitrile. Each unit contained about 1.2 mL of the acetonitrile solution in 3 mL amber glass ampoule. For polar pesticide in water, the batch of PT material comprised polar pesticide (glyphosate) spiked into water. Each unit contained about 8 mL of the water solution in 10 mL amber glass ampoule.

4 A participating laboratory is allowed to register participation in one or both analytes in the PT programme. For each registration, a participating laboratory will receive **FIVE** units of PT materials for non-polar pesticide in water and/or **FOUR** units of PT materials for polar pesticide in water (i.e. five units of lindane in acetonitrile and/or four units of glyphosate in water for participation in both PT programmes). Additionally, participating laboratories registered for lindane in water PT programme will receive one bottle containing about 550 mL of drinking water for sample dilution purposes. For

lindane in water, instructions for sample dilution in water will be provided. For glyphosate in water, analysis will be performed on the samples as received. The mass concentrations of the analytes are in the following ranges:

Analyte	Mass concentration	
Lindane (non-polar)	2 – 1000	µg/L
Glyphosate (polar)	100 – 1000	µg/L

5 The performance of the participating laboratories will be primarily evaluated by calculation of z-scores (or z'-scores), where the standard deviation for proficiency assessment is determined from Horwitz function. Supplementary information from ζ-scores will also be provided when the measurement uncertainty is reported. Graphical plots showing the direct comparison of the participating laboratories' results against assigned values will also be provided.

6 The schedule for the programme is as follows:

By 15 August 2026	:	Distribution of PT sample
31 October 2026	:	Deadline for result submission
January 2027	:	Issuance of Interim Report[+]
December 2027*	:	Issuance of Final Report
January 2028*	:	Forum discussion session (virtual)

[+]The interim report may contain only graphical plots of results and may not contain performance evaluation results.

*Subject to changes depending on the progress of discussions of the SCRVs at the Consultative Committee for Amount of Substance: Metrology in Chemistry and Biology (CCQM) Organic Analysis Working Group (OAWG) Meeting and APMP Technical Committee for Amount of Substance (TCQM) Meeting.

7 Full members of APAC are invited to nominate two laboratories for the PT programme that provide or intend to provide testing services in water or other similar matrices. To submit the nomination, you may access the Nomination Form from HERE or scan the QR code. The deadline for nomination is 30 June 2026.

8 Due to limited availability of the PT samples, the total number of participating laboratories will be limited to about 50. Priority should be given to accredited laboratories.

9 After the deadline for nomination, HSA CML will notify the nominating accreditation body and the laboratories on the acceptance of the nomination. A link to the Registration Form will be provided to the laboratories for completion prior to the deadline for registration on 20 July 2026. Upon receipt of the Registration Form, a PT package comprising an Acknowledgement Email, Study Protocol, Sample Receipt Form and Data Submission Form will be provided to the participating Laboratories. If no result is submitted, the laboratory will not receive any report or Certificate of Participation.

10 Each laboratory will be allocated a unique laboratory code. The identities of laboratory codes will be treated as confidential. They are known only to NIM and HSA CML staff involved in the PT programmes and the nominating accreditation body. Confidential information will not be disclosed unless consent from the laboratory is given to NIM and HSA CML.

11 If you need further information or clarifications, please contact:

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12 We look forward to your nomination. Thank you.

Yours Sincerely,

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