APMP Proficiency Testing Programme (APMP PT 11-02)

Pesticides in Tea

Final Report Summary

6 September 2013

Summary of Results

1. This proficiency testing programme APMP PT 11-02 "Pesticides in Tea" was organised as a joint initiative of the Technical Committee for Amount of Substance (TCQM) and the Developing Economies' Committee (DEC) of the Asia-Pacific Metrology Programme (APMP) and was coordinated by Government Laboratory of Hong Kong (GLHK). The main objective of the PT programme was to assist participating laboratories in demonstrating competence on the measurement of the mass fractions of two incurred organochlorine pesticides, namely beta-endosulfan and endosulfan sulphate in green tea by various analytical techniques. The mass fractions of the analytes were to be reported on a dry mass basis to assist in assessing comparability.

2. A total of 20 laboratories registered for the PT programme and 17 of them returned results to the organiser.

3. The PT programme was conducted in parallel with the CCQM key comparison (CCQM-K95) using the same test material of green tea. The Key Comparison Reference Values (KCRV) of CCQM-K95 were agreed to be used as the assigned values for evaluating the performance of the participants of this PT programme. The *z*-score and E_n number were used as the numerical indicators to show the participants' performance with respect to the assigned values. The standard deviations for proficiency assessment were calculated using the Horwitz Equation.

4. The participants' *z*-scores are summarized as follows:

z-score	Number of Participants (Percentage)	
	Beta-endosulfan	Endosulfan Sulphate
$\|z\| \le 2.0$	6 (35%)	6 (50%)
$2.0 < \|z\| < 3.0$	0 (0%)	3 (20%)
$\|z\| \ge 3.0$	11 (65%)	6 (40%)
Total:	17 (100%)	15 (100%)

5. The participants' E_n numbers are summarized as follows:

E_n number	Number of Participants (Percentage)	
	Beta-endosulfan	Endosulfan Sulphate
$\|E_n\| \le 1.0$	1 (8%)	2 (13%)
$\|E_n\| > 1.0$	16 (92%)	13 (87%)
Total:	17 (100%)	15(100%)