



Taiwan Accreditation Foundation

APLAC

Determination of Di-(2-ethylhexyl) phthalate (DEHP) and
Di(n-octyl) phthalate (DNOP) in Plastic materials
Proficiency Testing Program

Proposal

Objective

The objective of this proficiency testing program is to evaluate the competence of chemical laboratories for analyzing phthalates in Plastic materials.

Organization and Coordination

This proficiency testing programme is organised by the Taiwan Accreditation Foundation (TAF) under the auspices of Asia Pacific Laboratory Accreditation Cooperation (APLAC). TAF is responsible for coordinating activities relevant to this program such as inviting participants, assigning confidential codes to participants, preparing instructions, dispatching test samples, collecting results, analysing results and preparing final report as well as the interim reports.

Test material and Homogeneity test

Sample preparation was made by Plastic Industry Development Center. The approximate concentration range of phthalate is from 0.8 % to 1.0 %.

To allow suitable and reliable proficiency testing, homogeneity test will be conducted on randomly selected samples before test samples are distributed to participants.

For the homogeneity test, at least 10 samples prepared in their final package will be selected in random. For the 10 test samples, measurement results for each of tests will be obtained under repeatability conditions.

For the samples to be accepted as suitable for use, the results of this testing and any applicable statistical analysis (i.e. ISO 13528:2005) of the results must indicate that no significant variability existed. Thus any outlier results subsequently identified in a program will not be attributable to sample variability.

Test Items and Test Methods

Test items: Plastic materials- Polyvinyl chloride (PVC)

Test to be conducted: Di-(2-ethylhexyl) phthalate (C₂₄H₃₈O₄, DEHP)

Di(n-octyl) phthalate (C₆H₄[COO(CH₂)₇CH₃]₂, DNOP)

Test method: CPSC-CH-C1001-09.2 Standard Operating Procedure for Determination of Phthalates

Selection of Participants

APLAC and non-APLAC members will be invited to participate in this program; however, APLAC member has priority for participating in this program. Each APLAC member's accreditation body (AB) may nominate up to a maximum of 3 laboratories, other non-APLAC members can nominate only one laboratory. The nomination form shall be returned to TAF before the due date as stated in the invitation.

Result Collection and Result Analysis

Standard Result Sheets will be provided to the participating laboratories for result collection. All participating laboratories should return the completed result sheets to the AB of their economy who will then send the collected result sheets to TAF before the due date as prescribed in the instructions. If any result is not received by the due date then TAF will contact the AB of the corresponding economy to follow up. Late return of result sheets without justified reasons may be regarded as disqualified and the corresponding data will not be included in the analysis.

Once all results are received, the data will be entered and checked by TAF. An interim report with all the received data tabulated in a well-formatted table and the consensus values of each test will be sent out to all participating AB, then kindly request the participating AB delivers the interim report to the participating laboratories. Any clarification or correction of results should be made within 2 weeks after receipt of the interim report.

Once confirmations of results have been received from all participants, a draft report will be written up. The z-score approach using ISO 13528 will be used for statistical analysis of the test results. The draft report will be dispatched to APLAC Proficiency Testing Committee who will review it and forward their comments back to TAF.

The final report incorporated with the received comments will then be published. A copy of the final report will be distributed to each participating AB plus sufficient copies for each of the participating laboratories.

SCHEDULE OF THE PROGRAMME

December 2009	Submit PT program proposal
March-May 2010	Prepare samples and Homogeneity test of sample
July 2010	Issue the invitation letter to APLAC members
August 2010	Dispatch the samples
September- October 2010	Collect the results and analysis of data
November 2010	Issue interim report
December 2010	Issue final report