

Objectives and Tasks of the CCQM Gas Analysis Working Group (GAWG)

Scope

The scope of the Gas Analysis Working Group includes the determination of the amount-of-substance concentration of individual compounds in the gaseous state in a gas matrix, the concentration of liquid and solid particles and particle bound compounds in gaseous matrices, and the concentration of dissolved gaseous compounds in liquid or solid matrices.

Objectives

1. To establish the degree of equivalence of national measurement standards maintained by NMIs in all areas of gas analysis;
2. To assist the CCQM and the RMOs in matters related to the mutual recognition of calibration and measurement certificates issued by NMIs for all areas of gas analysis.
3. To coordinate research between NMIs aimed at improving and developing new measurement standards for gas analysis.
4. To collaborate with the WMO GAW Programme on the provision of standards for global atmospheric monitoring within the scope agreed by the CIPM.

Tasks

1. To identify the key comparisons in the field of gas composition analysis, develop a long-range program and assist the CCQM in maintaining a current list (Appendix D)

The GAWG will consider the following criteria for the selection of comparisons:

- a) application areas that have large impact on international trade and cross-boundary issues;
 - b) measurement methodology that would contribute to traceability at the highest level in chemical measurements and establishment of measurement uncertainty (primary or robust methods);
 - c) selection of analytes that are both individually important and representative of a broad class;
 - d) consideration of pure materials, calibration mixtures and real matrices;
 - e) recognition of existing or past activities
2. To initiate and conduct key comparisons at intervals to be decided individually for each comparison. To review the results and to propose the key reference value and the degrees of equivalence. To report the results of key comparisons for approval by the CCQM and publication by the BIPM.
 3. To coordinate the RMOs in the planning of RMO key comparisons. To examine and confirm the results of RMO key and supplementary comparisons and submit them to Appendix B and

the KCDB.

4. To examine and confirm the results of bilateral comparisons between NMIs.
5. To advise the CCQM and the RMO's on all matters related to Appendices B and C of the CIPM MRA. Providing, in special cases, additional guidelines to the agreed CIPM Guidelines for conducting key comparisons in the area of gas composition analysis
6. To hold regular meetings with the WMO/GAW to coordinate activities.
7. To organise workshops and selected pilot studies to coordinate and progress research into measurement standards for gas analysis.

Composition

Participation in the CCQM GAWG is open to NMIs with operational facilities for the calibration of gas composition standards and/or gas composition monitors and to laboratories that are not NMIs but are nominated by the designated NMI as being responsible for the relevant national measurement standards.