

Summary of Resolutions of the WGFF

1. General rules of WGFF Key Comparisons

1. Key Comparisons (KCs) should be used to support CMCs.
2. Share costs of constructing the transfer standard and labour.
3. Expert groups will be formed that are available to assist pilot laboratories on topics such as: protocols, transfer standard evaluations, and data reduction.
4. A potential pilot can propose a new KC and it will be circulated to the WGFF members by the WGFF chairperson. If enough participants come forward (>3), then it will be forwarded to the CCM for approval.
5. It is not necessary to use the same TS in KCs and regional comparisons to obtain linkage. The approach depends on the quantity and should be determined on a case by case basis **including** an expert group.

2. Preparation before Key Comparisons

1. Use a template or guideline for KC protocol for Pilots to use as a reference. (Approved template : WGFF document No.1 “Template Protocol for KCs”)
2. Use a checklist of potential transfer standard influences and uncertainty sources. (Approved checklist : WGFF document No.2 “Checklist Sensitivities and Uncertainty for KCs”)
3. Each Pilot should provide a checklist of uncertainty sources of primary standard (including dynamic influences) intended for use by assessors.
4. Participants must show detailed uncertainty budgets according to the above checklist at start of KC.
5. Preliminary test should be made for meter characterization before starting KC.

3. Carrying out Key Comparisons

1. Where possible, transport should be arranged by the Pilot with a single company.
2. Use the recommendations of SP. (packaging, documentation, logistics of KCs
Approved recommendation : [WGFF document No.3 “Handling TS for KCs”](#))

4. Draft A / B and CMCs

1. KCRV calculations should include the uncertainty of the transfer standard.
2. Consider use of Largest Consistent Subset for determination of KCRV.
3. A data reduction spreadsheet will be made for sharing between all pilot laboratories. (Spreadsheet is not ready)
4. In order to reduce the number of CMC entries and simplify maintenance, CMCs should use titles like “Volumetric flow meter factor” or “Gravimetric flow meter factor” (which ever is larger), and list under comments section “DUT uncertainty = x% and density uncertainty = x%”.
5. The expanded uncertainty of CMCs and certificates can be expressed with $k=2$ unless some special technical reason requires degrees of freedom to be taken into consideration.
6. All NMIs should use the same DUT uncertainty in CMCs. (not in Resolution yet)