EUROMET PROJECT
FINAL REPORT

1. Ref. No.: 441

2. Subject field:
Mass

3. Type of collaboration:
Comparison

4A: Partners:
(insitutions)
NPL, DFM

4B. CEC funded?
No

5. Participating countries:
UK, DK

6. Title:
A Bi-Lateral Comparison of a 0.5 gram to 0,001 gram Weight Set

7. Progress:
A bi-lateral comparison of a 0.5g to 1mg set of weights was carried out between NPL and DFM.

The weights were calibrated at NPL 24-29 January 1996, at DFM 16-30 April 1996 and again at NPL 13-21 June 1996. A significant drift in the mass values during the short period of the comparison was noticed. After having corrected for this drift, there is a good agreement between the two laboratories. The mass difference of 16 out of 17 weights under consideration (94%) agree to within the combined standard uncertainty defining a confidence level of approximately 67%. After removing a dominating uncertainty component (balance repeatability) from the NPL uncertainty budget, which was already included in an other component (residuals of weighing scheme), 13 of 17 weights (74%) agree to within the combined standard uncertainty.

Reference:

N.M. Raymond, L. Nielsen: *A Bi-Lateral Comparison of a 0.5 gram to 0.0001 gram Weight Set*, NPL Report CMAM 6 (October 1997).

8. Coordinators name: N. M. Raymond

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9. Completion date:
October 1997

10. Coordinators signature:

11. Date:
1997-10-31

Notes for completion of the form overleaf