MEASURAND : **Inductance at f = 1 kHz**
NOMINAL VALUE : **10 mH**

Key comparison CCEM-K3

m_i : result of the measurement carried out by laboratory i
given as the relative difference from the nominal value
$L_i = L_0 \times (1 + m_i \times 10^{-6})$, with L_0 = 10 mH
u_i : combined standard uncertainty of m_i reported by laboratory i
u_t : estimated standard uncertainty of m_i due to the travelling standards
The transfer uncertainty of the travelling standards u_t is estimated from the standard deviation of one observation of the results of the long-time measurements of the pilot laboratory from 1989 to 1999: **u_t = 3.5**
u_{i+t} : total standard uncertainty of m_i

Lab i	m_i	u_i	u_{i+t}	Date of measurement
ASMW/PTB-B	449	3	4	89-10 ... 99-10
BNM-LCIE	449	7	8	91-04
IEN	452	7	8	91-10 ... 92-03
NIM	460	4	5	89-11
NIST	452	19	19	94-08
NPL	445	10	11	90-08 ... 91-04
METAS	436	38	38	91-06
PTB-BS	458	15	15	90-05
SP	434	19	19	90-07
UME	443	5	6	98-10
VNIIM	452	2	4	89-11

ASMW/PTB-B: ASMW up to 1990 and PTB in Berlin after 1990, PTB-BS: PTB in Braunschweig

Key comparison EUROMET.EM-K3

Results obtained by participants in EUROMET.EM-K3 are given in Table 2 on page 9 of the EUROMET.EM-K3 Final Report.

Key comparisons CCEM-K3 and EUROMET.EM-K3

MEASURAND : Inductance at f = 1 kHz
NOMINAL VALUE : 10 mH

The key comparison reference value L_R of this comparison is $L_R = L_0 \times (1 + m_R \times 10^{-6})$, with L_0 = 10 mH.
m_R is obtained from the weighted mean of the participant results*, using weights proportional to the reciprocal of the quadratic sum of the uncertainty of the laboratories and the transfer uncertainty.
The standard uncertainty u_R of m_R is the standard uncertainty of this weighted mean. It takes into account the uncertainty due to the travelling standards.
m_R = 452 **u_R = 2**

The degree of equivalence of each laboratory with respect to the reference value is given by a pair of terms:
$D_i = m_i - m_R$ and its expanded uncertainty (k = 2) $U_i = 2\,(u_{i+t}^2 - u_R^2)^{1/2}$ * **$(L_i/L_R \approx 1 + D_i \times 10^{-6})$.**

The degree of equivalence between two laboratories i and j is given by a pair of terms:
$D_{ij} = D_i - D_j = (m_i - m_j)$ and its expanded uncertainty (k = 2) $U_{ij} = 2(u_{i+t}^2 + u_{j+t}^2)^{1/2}$.

PTB or PTB (ASMW) participated in both comparisons CCEM-K3 and EUROMET.EM-K3, making possible to link the results of BIM and INM(RO), participants in EUROMET.EM-K3 only, to those of CCEM-K3 (see Section 4.2 of the EUROMET.EM-K3 Final Report).
No pair-wise degrees of equivalence involving participants in EUROMET.EM-K3 have been computed.

*except METAS and UME

Lab j ⇨

Lab i ⇩

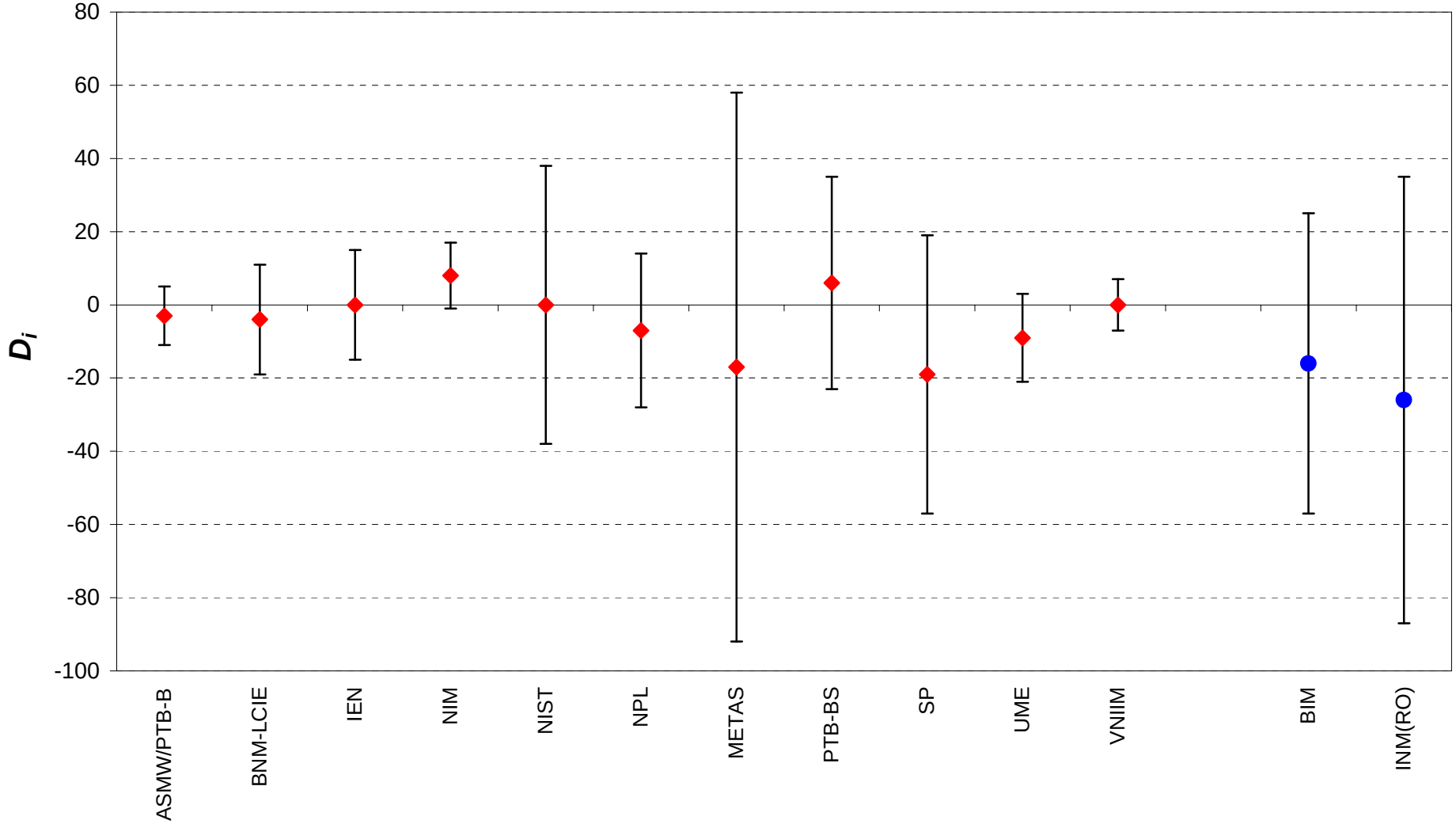
	D_i	U_i	ASMW/PTB-B		BNM-LCIE		IEN		NIM		NIST		NPL		METAS		PTB-BS		SP		UME		VNIIM	
			D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}	D_{ij}	U_{ij}
ASMW/PTB-B	**-3**	8			**1**	18	**-3**	18	**-11**	13	**-3**	40	**4**	23	**14**	76	**-9**	31	**16**	40	**6**	15	**-3**	12
BNM-LCIE	**-4**	15	**-1**	18			**-4**	22	**-12**	19	**-4**	42	**3**	27	**13**	77	**-10**	34	**15**	42	**5**	20	**-3**	18
IEN	**0**	15	**3**	18	**4**	22			**-8**	19	**0**	42	**7**	27	**17**	77	**-6**	34	**19**	42	**9**	20	**0**	18
NIM	**8**	9	**11**	13	**12**	19	**8**	19			**8**	40	**15**	24	**25**	76	**2**	31	**27**	40	**17**	16	**8**	13
NIST	**0**	38	**3**	40	**4**	42	**0**	42	**-8**	40			**7**	44	**17**	85	**-6**	49	**19**	55	**9**	41	**0**	40
NPL	**-7**	21	**-4**	23	**-3**	27	**-7**	27	**-15**	24	**-7**	44			**10**	55	**-13**	37	**12**	44	**2**	25	**-7**	23
METAS	**-17**	75	**-14**	76	**-13**	77	**-17**	77	**-25**	76	**-17**	85	**-10**	55			**-23**	81	**2**	85	**-8**	76	**-16**	76
PTB-BS	**6**	29	**9**	31	**10**	34	**6**	34	**-2**	31	**6**	49	**13**	37	**23**	81			**25**	49	**15**	32	**6**	31
SP	**-19**	38	**-16**	40	**-15**	42	**-19**	42	**-27**	40	**-19**	55	**-12**	44	**-2**	85	**-25**	49			**-10**	41	**-18**	40
UME	**-9**	12	**-6**	15	**-5**	20	**-9**	20	**-17**	16	**-9**	41	**-2**	25	**8**	76	**-15**	32	**10**	41			**-9**	15
VNIIM	**0**	7	**3**	12	**3**	18	**0**	18	**-8**	13	**0**	40	**7**	23	**16**	76	**-6**	31	**18**	40	**9**	15		

BIM	**-16**	41
INM(RO)	**-26**	61

This value takes into account the correlation between METAS and NPL results.
BIM and INM(RO) participants in EUROMET.EM-K3 only

CCEM-K3 and EUROMET.EM-K3 10 mH inductance at f = 1 kHz

Degrees of equivalence [D_i and its expanded uncertainty (k = 2) U_i] ($L_i/L_R \approx 1 + D_i \times 10^{-6}$)



Red diamonds: participants in CCEM-K3 **Blue circles: participants in EUROMET.EM-K3 only**