

Key comparison CCQM-K74**MEASURAND : Amount-of-substance fraction of Nitrogen dioxide in Nitrogen****NOMINAL VALUE : 10 $\mu\text{mol/mol}$** x_i result of measurement carried out by laboratory i u_i standard uncertainty of x_i

Lab i	Cylinder number	x_i / ($\mu\text{mol/mol}$)	u_i / ($\mu\text{mol/mol}$)
NPL	#930659-PRM	10.331	0.040
NIM	#930650-PRM	10.150	0.050
SMU	#930655-PRM	10.100	0.060
NMIA	#930662-PRM	10.740	0.315
NMISA	#930649-PRM	10.690	0.185
CERI	#930671-PRM	10.400	0.190
METAS	#930660-PRM	10.630	0.080
INRIM	#930667-PRM	9.990	0.100
KRISS	#930661-PRM	10.450	0.155
FMI	#930673-PRM	9.880	0.150
LNE	#930675-PRM	10.260	0.065
NIST	#930654-PRM	10.280	0.050
VSL	#930674-PRM	10.510	0.105
CEM	#930676-PRM	10.720	0.110
VNIIM	#930713-PRM	10.550	0.080
BAM	#930722-PRM	10.530	0.375
BIPM	#930697-PRM	10.343	0.024

Key comparison CCQM-K74

MEASURAND : Amount-of-substance fraction of Nitrogen dioxide in Nitrogen

NOMINAL VALUE : 10 µmol/mol

The key comparison reference value is the Nitrogen dioxide mole fraction assigned by the BIPM, x_{Ri} , to the cylinder measured by laboratory i , as explained in Section 5 on page 20 of the Final Report and in its Annex 2 on page 38.

Its standard uncertainty, u_{Ri} , is calculated using Equation (1) given on page 20 of the Final Report, with applying appropriate covariance factors as detailed in Annex 1.

The degree of equivalence of laboratory i with respect to the key comparison reference value is given by a pair of terms:

$D_i = (x_i - x_{Ri})$ and U_i , its expanded uncertainty ($k = 2$), both expressed in µmol/mol, with $U_i = 2(u_i^2 + u_{Ri}^2)^{1/2}$.

No pair-wise degrees of equivalence are computed for this key comparison.

Lab i	Cylinder number	x_{Ri} / (µmol/mol)	u_{Ri} / (µmol/mol)	D_i / (µmol/mol)	U_i / (µmol/mol)
NPL	#930659-PRM	10.226	0.042	0.105	0.115
NIM	#930650-PRM	10.227	0.042	-0.077	0.130
SMU	#930655-PRM	10.347	0.042	-0.247	0.146
NMIA	#930662-PRM	10.378	0.042	0.362	0.635
NMISA	#930649-PRM	10.347	0.042	0.343	0.379
CERI	#930671-PRM	10.351	0.041	0.049	0.389
METAS	#930660-PRM	10.431	0.041	0.199	0.180
INRIM	#930667-PRM	10.183	0.042	-0.193	0.217
KRISS	#930661-PRM	10.270	0.042	0.180	0.321
FMI	#930673-PRM	10.417	0.041	-0.537	0.311
LNE	#930675-PRM	10.378	0.041	-0.118	0.154
NIST	#930654-PRM	10.299	0.041	-0.019	0.130
VSL	#930674-PRM	10.370	0.041	0.140	0.226
CEM	#930676-PRM	10.435	0.042	0.285	0.235
VNIIM	#930713-PRM	10.320	0.042	0.230	0.181
BAM	#930722-PRM	10.350	0.042	0.180	0.755
BIPM	#930697-PRM	10.343	0.041	0.000	0.096

CCQM-K74 Nitrogen dioxide in Nitrogen

Degrees of equivalence: D_i and expanded uncertainty U_i ($k = 2$) expressed in $\mu\text{mol/mol}$

