Next CCM KCs of the WG LP

The following 4 comparisons cover the present or intended CMC entries from members of the WG LP and have to be carried out repeatedly.

Table 1 Comparison needed for the pressure range 10^{-9} Pa up to 10^{-4} Pa

Pressure range CMC	**10^{-9} Pa ... 10^{-4} Pa**
Comparison needed	KC or supplementary
Name of comparison type	C-IG
Approximate repeat sequence	Every 12 years
Target points	$3{\cdot}10^{-9}$ Pa, $9{\cdot}10^{-9}$ Pa, $3{\cdot}10^{-8}$ Pa, $9{\cdot}10^{-8}$ Pa, $3{\cdot}10^{-7}$ Pa, $9{\cdot}10^{-7}$ Pa, $3{\cdot}10^{-6}$ Pa, $9{\cdot}10^{-6}$ Pa, $3{\cdot}10^{-5}$ Pa, $9{\cdot}10^{-5}$ Pa
Transfer standard (present knowledge)	Hot cathode ionization gauge of Bayard-Alpert type or extractor type
Comment	C-IG is normally extended to $9{\cdot}10^{-3}$ Pa by means of a SRG as transfer standard

Table 2 Comparison needed for the pressure range 10^{-4} Pa up to 1 Pa

Pressure range CMC	**10^{-4} Pa ... 1 Pa**
Comparison needed	KC or supplementary
Name of comparison type	C-SRG
Approximate repeat sequence	Every 12 years
Target points	$3{\cdot}10^{-4}$ Pa, $9{\cdot}10^{-4}$ Pa, $3{\cdot}10^{-3}$ Pa, $9{\cdot}10^{-3}$ Pa, $3{\cdot}10^{-2}$ Pa, $9{\cdot}10^{-2}$ Pa, $3{\cdot}10^{-1}$ Pa, 1 Pa
Transfer standard (present knowledge)	Spinning rotor gauge
Comment	Highest point (1Pa) serves as linkage to C-CDG

Table 3 Comparison needed for the pressure range 1 Pa to 10^{4} Pa

Pressure range CMC	**1 Pa ... 10^{4} Pa**
Comparison needed	KC or supplementary
Name of comparison type	C-CDG/RSG
Approximate repeat sequence	Every 12 years
Target points	1 Pa, 3 Pa, 10 Pa, 30 Pa, 100 Pa, 300 Pa, 1 kPa, 3kPa, 10 kPa
Transfer standard (present knowledge)	Capacitance diaphragm gauge with the support of resonance silicon gauge at 100 Pa ... 10 kPa
Comment	Lowest point serves as linkage to C-SRG

Table 4 Comparison needed for CMC leak rates

Leak rate CMC	**10^{-15} mol/s ... 10^{-9} mol/s**
Comparison needed	KC or supplementary
Name of comparison type	C-STL
Approximate repeat sequence	Every 12 years
Target points	10^{-13} mol/s and $5{\cdot}10^{-11}$ mol/s
Transfer standard (present knowledge)	Helium standard leak by permeation or capillary
Comment	none

Schedule for current or decided KCs as of 2011-05-06:

Type	**Registered as**	**Range**	**Date of Measurements**	**Pilot NMI**	**# Participants**
C-STL	CCM.P-K12	10^{-13} mol/s and $4{\cdot}10^{-11}$ mol/s	2'2007 to 10'2008	PTB	11
C-SRG	CCM.P-K14	10^{-4} Pa …1 Pa	3'2009 to 3'2010	METAS	7 (CENAM, INRIM, KRISS, METAS, NIST, NMIJ, PTB)
C-CDG/RSG	Not yet	1 Pa … 10 kPa	2012	NIST	To be defined
C-IG	CCM.P-K3.1	$3{\cdot}10^{-6}$ Pa … $9{\cdot}10^{-3}$ Pa	2011	NIST	2 (NIST, PTB)
C-IG	Not yet	$3{\cdot}10^{-9}$ Pa … $9{\cdot}10^{-5}$ Pa	2013	NMIJ	To be defined