

Consistency plots – a simple graphical tool for investigating
agreement in Key Comparisons
Supplementary information

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Institute	$x / \mu\text{mol kg}^{-1}$	$u / \mu\text{mol kg}^{-1}$
Lab01	5.681	0.029
Lab02	2.130	0.110
Lab03	5.190	0.080
Lab04	5.590	0.100
Lab05	5.290	0.050
Lab06	5.150	0.100
Lab07	5.870	0.160
Lab08	5.310	0.065
Lab09	5.430	0.100
Lab10	5.397	0.028
Lab11	5.430	0.065
Lab12	5.300	0.110
Lab13	6.400	0.190
Lab14	6.150	0.120

Table S1: Results x and standard uncertainties u for cadmium in a sediment, from key comparison CCQM-K13 [1]. The nominal value was approximately $5.5 \mu\text{mol kg}^{-1}$. All laboratories applied a coverage factor $k = 2$ for expanded uncertainty.

Institute	$x/\text{Sv m}^{-1}$	$u/\text{Sv m}^{-1}$
Lab01	0.099365	7.00×10^{-4}
Lab02	0.099710	7.50×10^{-5}
Lab03	0.099951	4.20×10^{-5}
Lab04	0.099963	9.50×10^{-6}
Lab05	0.099974	1.95×10^{-5}
Lab06	0.099982	2.05×10^{-5}
Lab07	0.099998	4.50×10^{-5}
Lab08	0.100040	2.50×10^{-5}
Lab09	0.100057	1.75×10^{-4}
Lab10	0.100120	2.00×10^{-5}
Lab11	0.100260	5.30×10^{-5}
Lab12	0.100270	8.00×10^{-5}
Lab13	0.100475	5.50×10^{-5}
Lab14	0.100600	5.00×10^{-4}

Table S2: Results from CCQM-P22, an interlaboratory comparison on conductivity of standard buffer solutions [2]. Laboratory identifiers are arbitrary.

Institute	x cp/cp (%)	u cp/cp (%)	U cp/cp (%)	k
K05	1.918	0.0770	0.1550	2.00
K08	2.000	0.1321	0.4200	3.18
K10	2.600	0.0943	0.3000	3.18
K12	2.900	0.1392	0.2784	2.00
K04	2.910	0.1850	0.3700	2.00
K09	2.930	0.1700	0.3400	2.00
K03	3.060	0.0880	0.2100	2.00
K01	3.390	0.4150	0.8300	2.00
K07	4.100	0.5500	1.1000	2.00
K06	4.630	0.1900	0.3800	2.00
K02	5.220	0.2788	0.6300	2.26
K11	5.520	0.6400	1.2800	2.00

Table S3: Results for sample T2 in CCQM-K86C, an interlaboratory comparison on determination of a specified gene target ratio in canola [3]. k is the reported coverage factor. “cp/cp” indicates copies per copy; that is, copies of a target nucleic acid sequence vs. copies of a reference target sequence.

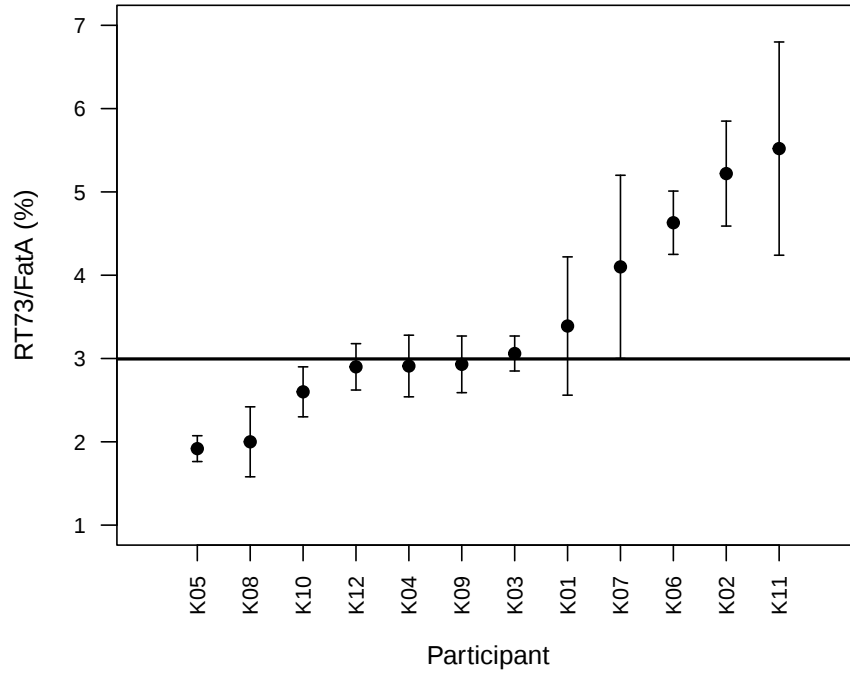


Figure S1: Plot of the values and expanded uncertainties from Table S3. Error bars show expanded uncertainties at $\pm 2u$. The horizontal line is the median of the accepted data. Results are in increasing order of reported value (compare Figure 7a) in the associated paper.)

References

- [1] Papadakis I, Taylor P D P and Aregbe Y 2002 *Metrologia* **39** 08004–08004 URL <https://doi.org/10.1088/0026-1394/39/1a/22>
- [2] Jensen H D and Dam N E 2001 Report on CCQM P22 Tech. rep. Danish Fundamental Metrology Ltd Lyngby, Denmark
- [3] Mester Z, Corbisier P, Ellison S L R, Gao Y, Niu C, Tang V, Lee F W, Pérez-Urquiza M, Suárez A R, Burns M, Milavec M, Wiangnon K, Griffiths K R, McLaughlin J L H, Shibayama S, Takatsu A, Akgoz M, Vonsky M, Runov A and Guerrero J E L 2020 *Metrologia* **57** 08004 URL <https://doi.org/10.1088/0026-1394/57/1a/08004>