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Atmospheric Measurement Techniques Discussions

Interactive comment on "ECOC comparison exercise with identical thermal protocols after temperature offsets correction – instrument diagnostics by in-depth evaluation of operational parameters" *by* P. Panteliadis et al.

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We thank the reviewer for the valuable feedback. The punches were taken from random areas using an increasing radius from the center to outside for the circular HVS filters, while for the Andersen HVS filters the external 3cm of the sampled area was avoided and the punches were taken from different areas for the same participant. A clarification will be inserted in the manuscript. The arbitrary level of compliance of 8.3% derives from a selected +/- 25% range (line 181) which is a common range applied to

such type of comparisons exercises when a certified reference material is lacking (lines 169-171).

Outliers and results from laboratories showing poor performance were removed from the robust average calculations (lines 193-194 and 238-240). The procedure selected for the determination of the robust average is described in detail in ISO 13528:2005 (lines 168-169).

In principle the focus of ECOC analysis has been in the EC and OC fractions and not on temperature-step related peaks. When no or erroneous temperature offsets are applied the thermal peak distribution is expected to alter. Coeluting peaks indeed occur when using EUSAAR2 and NIOSH870 and this observation will be added in the manuscript.

A conclusion section will be included in the updated version. Further, the reported standard deviation numbers will be also revised.

Based on the laboratory comparison exercise report the individual laboratories took action on identifying the cause of poor performance and troubleshot any related operational/systematic deviations. Feedback from underperforming laboratories suggested that causes were found and handled (lines 342-343). Outliers were removed, lines 193-194 and 238-240.

While Youden plots may be customary in a number of interlaboratory comparison exercises they are not included in the method described by the standards applied in the current work. (ISO 13528:2005 and ISO 5725-2:19940). Overlying thermograms, especially when considering the number of participants, may be difficult to read but our main objective was to point out any eye-catching deviating behavior rather than providing individual information per participant. Nonetheless, the number of thermograms will be reduced in the revised version.

Interactive comment on Atmos. Meas. Tech. Discuss., 7, 8697, 2014.