

Dear Editor,

Thank you very much for reviewing our manuscript. We have accepted all corrections you have requested, and modified the manuscript accordingly.

Unfortunately, the short deadline and the bureaucratic processing time of any purchasing here have not allowed us to get and study the ISO standard before the composition of our response. Reconstruction of the formulas you provided makes it very likely that the ISO standard is valid only for data series without trend, i.e. for the cases when any subset of the data is representative for the whole period of the averaging. It is not necessarily the case for real-life atmospheric measurements, especially during the morning and evening transition periods. As Figure 3 in our paper illustrates, the start time of the measurements may critically influence the deviation of the calculated hourly average from the true one, because the subset of the data is not necessarily representative for the period of averaging.

We show in our paper that the more frequently an intake is sampled (the sampling period is shorter) the lower the uncertainty of the calculated hourly averages, because the measurements follow the temporal variation of the atmospheric concentration more closely. The higher the frequency the more data points are lost during the flushing periods. According to the ISO formulas, with higher sampling frequency the uncertainty would be increasing, not decreasing, due to the fewer data points available. This phenomenon indicates that the ISO standard cannot be applied when the concentration shows trend-like changes within the averaging period.

Yours sincerely

László Haszpra