

Interactive comment on “Towards the development of standard reference materials for soot measurements – Part 1: Tailored graphitized soot” by O. Popovicheva et al.

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The paper is very well written and highly instructive; the introductory section does an especially good job at positioning the current problem of the absence of an international standard for soot measurements.

My main question refers to section 4.2, to the dosage of filters with the SRM:

Page 1758: The authors state the samples were "deposited" on the filters, and this is the a key issue which shall determine the applicability of the proposed reference material. What exactly do they mean by this? Large errors may be introduced during dosage of the filters with the SRM. It is unclear to me at this point whether the SRMs

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are in liquid or solid form, and this should be specified. If they are solid, how is the SRM dust deposited onto the blank filter and fixed to avoid losses before the filter is introduced in the oven? If it is liquid, how is the SRM dosed to minimise losses?

Page 1758, line 8: it would be useful to have a measure of the "very good precision" reported, the standard deviation, number of repeats, etc.

Page 1758, line 10: what is the uncertainty of the nominal OC values?

Page 1758: it would be useful if the authors could provide additional data on which specific SRM they suggest to be used as an international standard, out of those listed in Table 1. Do they suggest to provide all, and each lab should pick one? Or are the different SRMs suited for different purposes? From the end-user perspective, it would be useful to know exactly which standard to use.

Page 1759, line 12: the authors state that results after 6 months were "very close to nominal". Could they provide specific data, what concentrations were measured and what ratios to the originally measured concentrations (or the nominal values).

Some technical details: Page 1752, line 29: "higher" should be "the highest" Page 1753, line 8: "EM" should be "SEM" Page 1754, line 22: "chromatogramme" should be "chromatogram". Same on page 1755, line 1 Page 1755, line 26: the sentence "leading to a negligible amount" seems to be incomplete. Page 1760, line 12: insert space between "evaluation" and "of".

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