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Interactive comment on "A TGA/FT-IR study for OC and EC quantification applied to carbonaceous aerosol collected in Milan (Italy)" *by* P. Fermo et al.

P. Fermo et al.

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According to the referee suggestions we have made the required corrections in the text. The paper title has also been modified as suggested: "A TGA/FT-IR study for measuring OC and EC in aerosol samples". The minor changes suggested in the "technical comment" have been included. As concerns the "general comment" we have made the following corrections (the pages reported in the following list refer to the paper version printed on line): - at page 2, line 20: the figures have been modified (29 (+/- 13)%). On this purpose the authors agree with the referee on the rounding off strategy and have made the changes suggested. Nevertheless, they would like to stress that in page 2 the values given in parentheses refer to the data variability expressed as standard deviation; at page 19, 200.0 is a typing error. The values reported in tables 2 and 3 have

been rounded, too. The same rounding off strategy has been used also for the coefficients in the equations reported in figures 7 and 8. - at page 11, line 8: as required by the referee we have included in the text more information on the possibility of using FT-IR: “In fact from preliminary measurements on a few PM samples both SO2 and NOx have been detected from infrared spectra. The quantification of these species will require a suitable calibration and work is still in progress.” - at page 17, line 18: we have indicated both technique precision and detection limit: “It has been estimated that the technique detection limit is 0.5 micrograms C/cm2 while the precision is 10%.” - at page 18, line 5: we have added a comment on the comparison between TOT and TGA/FT-IR: “A more rigorous comparison on a larger number of samples is in progress as our laboratory has recently acquired a TOT instrument.” As a matter of fact we had not so much problems in weighing the quartz fiber filters (Whatman, QMA). As we describe in the paper, before and after the samplings the quartz fiber filters were exposed for about 48 hours on open but dust-protected sieve-trays in an air-conditioned weighing room (T = 20 +/- 1 °C and R.H. = 50 +/- 3 %). The gravimetric determination of the mass was carried out using an analytical microbalance (precision 1 micrograms), which is installed and operates in the weighing room. Calibration procedures check the microbalance performance. According to our weighing laboratory protocol both before and after sampling each filter is weighed at least two times to obtain one mass measurement result. The two readings have to agree within 5 micrograms to be accepted; if the second measurement is more than 5 micrograms apart from the first, a new pair of weighing is immediately done until they are within the (+/-) 5 micrograms goal. The filters are very carefully managed (always using flat-ended tweezers) paying attention not to remove fibers from the filter. Using this procedure we obtain a very good reproducibility and accurate gravimetric measurements. For the quartz fiber filters cited in this paper we had about 2-3 micrograms as standard deviation (after 2 weighings) on a filter weight of about 149000-150000 micrograms.

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