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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Comparison of analytical methods for HULIS measurements in atmospheric particles" *by* C. Baduel et al.

Anonymous Referee #3

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The Authors present a first intercomparison between two different analytical approaches used in the literature for atmospheric HULIS quantification. The results are clear and the manuscript is well-written although a bit long. The comparison between the DEAE method and the C18-SAX method shows a superior recovery of the former, but also a good correlation between the concentrations derived by the two methods. This suggests that HULIS, which are usually referred as an operationally-defined class of substances, actually are (or contain) substances which are humic-like irrespectively of the analytical protocol used. I believe this is non-negligible result which should be stressed at some point during the discussion. My only concern is that all the analysis performed by the Authors is based on a limited batch of samples, which is very homogeneous in nature. Since the composition of the samples reflects "a stable and dominant source of POM" (page 6806, line 3), the Authors conclude that further inves-

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tigations are needed “including extensive characterization and quantification studies in a wide variety of aerosol samples coming from different emission sources”. Such limitations of the present study must be clarified also in the abstract of the paper. I am not convinced that the results presented in this manuscript are general enough to state that one of the two methods “should be recommended” (Abstract, last line).

Minor comments: Given the broad audience of Atmospheric Chemistry and Physics, I suggest to explain the acronym “HULIS” in the title of the paper. Table 4. Please provide units in the caption. Figures 1, 5 and 6. Provide explanations for “WS HULIS” and “T HULIS” in the captions.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 6787, 2009.