

## ***Interactive comment on “A quantitative test of infrared optical constants for supercooled sulphuric and nitric acid droplet aerosols” by R. Wagner et al.***

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The subject of this paper is important, but it is not clear that it provides the test promised in the title. The experimental methods used to characterize the aerosols (as described in section 2.1) are not adequate to give absolute concentrations. I refer specifically to the use of nylon filters to determine the mass concentration of sulfate and nitrate in the cold chamber. When drawn out of the chamber, the materials will come to equilibrium with the walls of the tubing, the filter housing, etc. at the temperature of these surfaces (room temperature) and it is not clear to me that the resulting concentrations will have any relevance to those in the chamber. The reasons for the discrepancies among the optical constants in the original publications can be traced to the difficulties the various

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authors had in determining the correct concentrations of their samples. This is indeed a matter of concern given that the title of the paper is "A Quantitative Test..."; and it is assumed that the concentrations can be determined much more accurate than those in the previous publications

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Interactive comment on Atmos. Chem. Phys. Discuss., 3, 2219, 2003.

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