

Supplement of Atmos. Meas. Tech., 12, 3351–3363, 2019
<https://doi.org/10.5194/amt-12-3351-2019-supplement>
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Supplement of

A novel approach to calibrating a photoacoustic absorption spectrometer using polydisperse absorbing aerosol

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Table S1: Noise levels of the PAS taken during filter period. Reported is the standard deviation of the mean as a function of averaging time for each of the four PAS cells.

cell	1 second data (Mm^{-1})	30 second average (Mm^{-1})	60 second average (Mm^{-1})
405 dry	.0092	.0039	.0035
660 dry	.0687	.0321	.0308
405 den	.0250	.0311	.0225
660 den	.1160	.0196	.0199

Figure S1: Aerosol size distributions from the three different substances used for the calibration method: Aquadag (a), Regal Black (b), and Nigrosin (c). These size distributions correspond to the example calibration shown in Figures 3, 5, and S2.

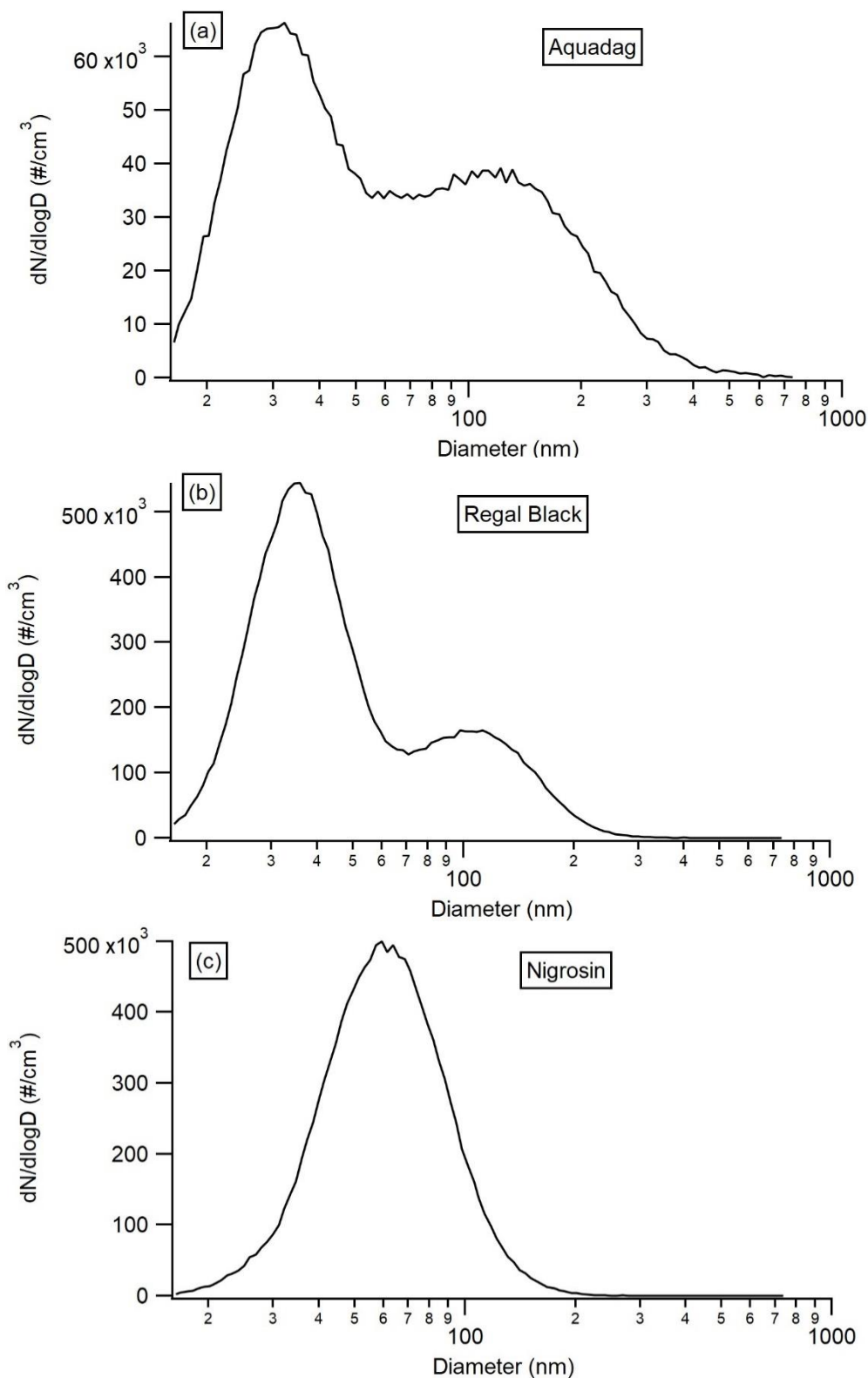


Figure S2: Single scattering albedo at 450 nm (blue) and 660 nm (red) for the three substances: Aquadag (a), Regal Black (b), and Nigrosin (c). All three of these examples correspond to the same data used in figures 3, 5, and S1. Also shown is the Extinction at 450 nm (black). The concentration is varied over the course of the calibration, and the lowest concentrations correspond to the highest noise in SSA calculation. For example, in the bottom panel, the first concentration of Nigrosin corresponds to only 7 Mm^{-1} of Extinction at 450 nm, and 3-4 Mm^{-1} of scattering, resulting in a highly noise estimate of SSA.

