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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Seasonal cycle and temperature dependence of pinene oxidation products, dicarboxylic acids and nitrophenols in fine and coarse air particulate matter" *by* Y. Zhang et al.

Anonymous Referee #2

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This is a very well-written paper with a good overall structure. The paper is original enough and scientifically sound. I agree on the comment by the first reviewers, in addition to which I have a few very minor issues for the authors to consider.

Page 13255, line 8: I am pretty sure that dicarboxylic acid may constitute more than 1 per cent of total aerosol mass in some remote environments. Please check out.

Page 13255, lines 27-28: Please specify explicitly which generation products the compounds referred to here are (first, second or higher up in the oxidation chain).

Page 13260, beginning of section 3.1: Maybe one should emphasize here that this study does not report usually the most common dicarboxylic acids (oxalic, succinic and malonic acid). Otherwise, the reader may get the wrong impression that concentration levels of all dicarboxylic acid tend to be extremely low as compared, for example, the total WSOC concentration.

The analysis of Arrhenius-type temperature dependence in section 3.3 is very interesting, especially since the author attempt to combine the influence of temperature on emissions, reactions rates and gas-particle partitioning. The authors could elucidate a bit whether someone has made similar type of a combined analysis earlier, or whether this is the first analysis of that kind.

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 13253, 2010.