

Interactive comment on “Atmospheric fate of two relevant unsaturated ketoethers: kinetics, products and mechanisms for the reaction of hydroxyl radicals with (*E*)-4-methoxy-3-buten-2-one and 1-(*E*)-1-methoxy-2-methyl-1-penten-3-one” by Rodrigo Gastón Gibilisco et al.

Anonymous Referee #1

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The first reviewer has done a good job of summarizing the goals and results of the paper. I fully concur with everything they presented, and will not repeat those general comments.

Overall, this is a clear paper that describes high quality gas-phase kinetics results for the OH oxidation of some multifunctional oxygenates. To provide validation of mod-

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els like MCM, there is the need for the type of kinetics and product information presented in the paper. The relative rate technique is very well established, two reference compounds were used, and the group performing the measurements has a strong reputation. My overall impression is that the results are solid. The paper goes into considerable depth on the oxidation mechanism and comparison to results of estimation methods.

Overall, I recommend publication. I have no substantive comments to make.

Minor comments:

Page 3, line 12 – check reference format

Page 10, line 9 – substituents

Page 11, line 8 – change deducting to withdrawing

Page 19, line 13 – space needed

Figure 1 – missing line of best fit

Scheme 1 – explain the meaning of the dashed line in the structure

My main comment is that I would like a bit more information on how the product yields were calculated, especially their associated uncertainties. Was a multivariate fitting performed? In particular, the residual spectrum is quite large with intensity at some frequencies where products are identified.

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2019-867>, 2020.