# Supplementary Information

# for

**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.**

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**Content Summary**

**Fig. S1:** Residual spectrum obtained on the TMBO + OH radical reaction (Fig. 3 trace H) focused in the frequency region between 3400 $cm^{-1}$ and 3800 $cm^{-1}$.

**Fig. S2:** Concentrations of carbonyls formed against reacted TMBO in the reaction with OH radicals.

**Fig. S3:** Residual spectrum obtained in the MMPO + OH reaction (Fig. 4 trace H) in the frequency region between 3400 $cm^{-1}$ and 3800 $cm^{-1}$.

**Fig. S4:** Concentrations of carbonyls formed against reacted MMPO in the reaction with OH radicals.
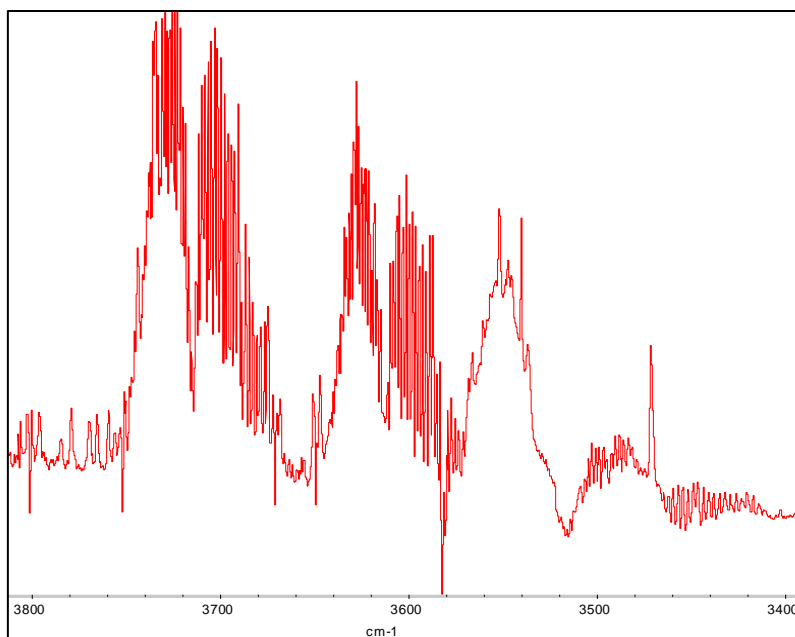
**Figure S1.** Residual spectrum obtained in the TMBO + OH reaction (Fig. 3 trace H) in the frequency region between 3400 cm$^{-1}$ and 3800cm$^{-1}$.
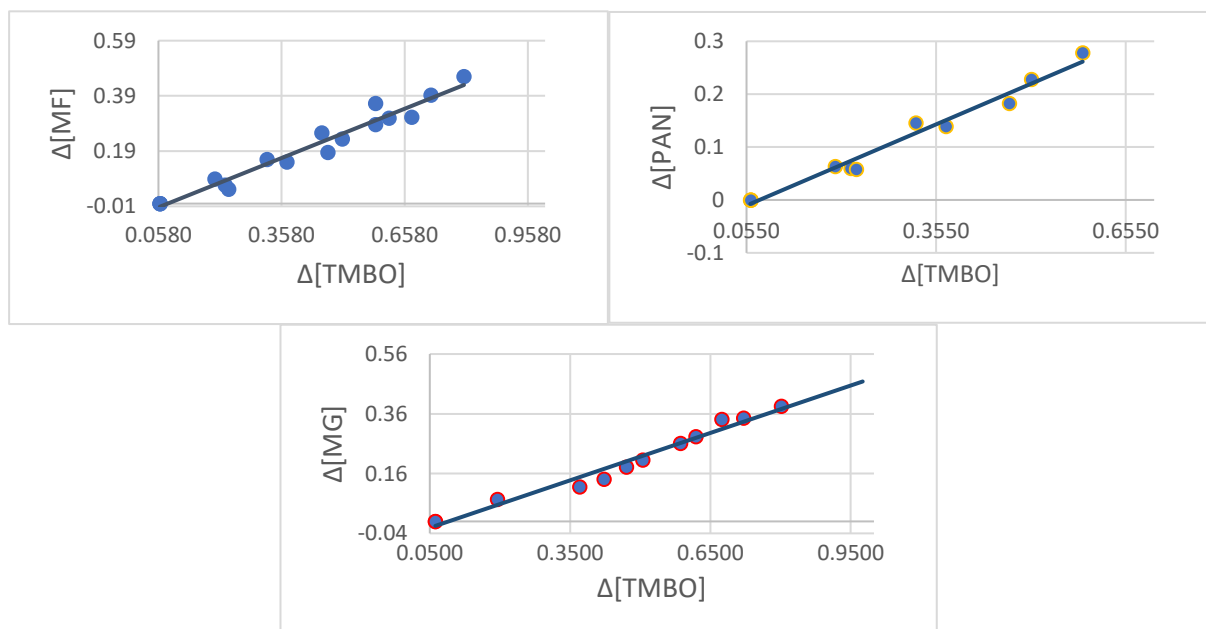
**Figure S2.** Example of the concentrations of carbonyls formed against reacted TMBO in the reaction with OH radicals.
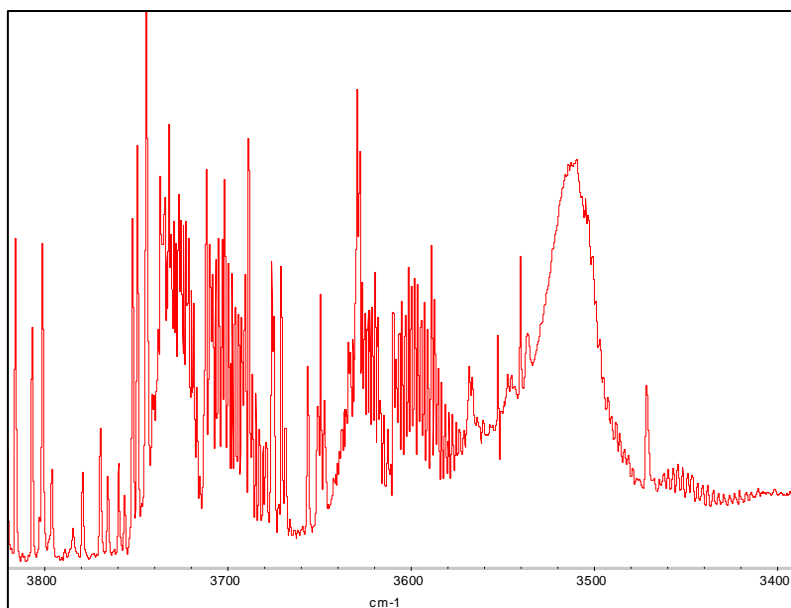
**Figure S3.** Residual spectrum obtained in the MMPO + OH reaction (Fig. 4 trace H) in the frequency region between 3400 cm$^{-1}$ and 3800cm$^{-1}$.
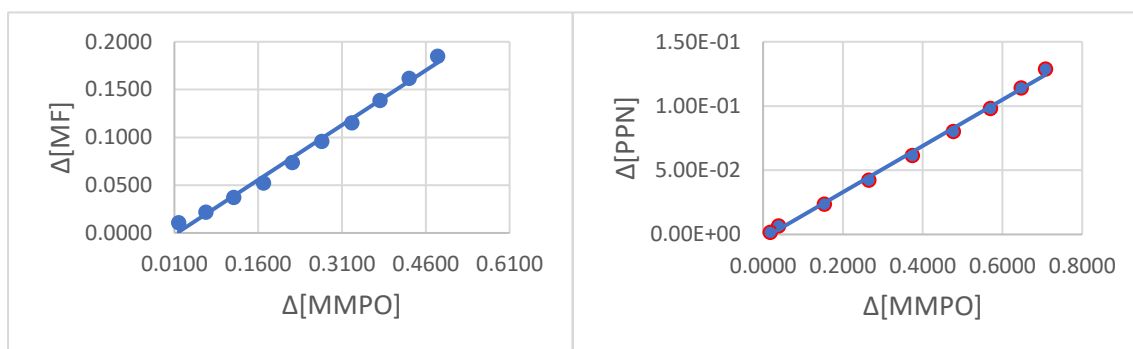
**Figure S4.** Example of the concentrations of carbonyls formed against reacted MMPO in the reaction with OH radicals.