

***Interactive comment on* “Technical Note:
Detection and identification of radical species
formed from α -pinene/ozone reaction using DMPO
spin trap” by J. Pavlovic and P. K. Hopke**

Anonymous Referee #2

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Although the main goal of the work seems very interesting, the results that are presented are very poorer demonstrated.

The main goal of the work presented in the manuscript concerns the identification of spin adducts of radical species generated during oxidation of pinene under ozone atmosphere. However major results reported DMPO hydroxyl adducts (m/z 130) and its fragmentation under MS/MS (Fig 3, 4). These results lack novelty since they were already published by Domingues et al (J. Am. Soc. Mass Spectrom. 2001; 12: 1214-1219) and by Jurva et al (Rapid Commun. Mass Spectrom. 2003; 16: 1934-1940.), although none of these works have been cited by the authors. Furthermore, the other

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spin adducts mentioned were considered as spin adducts of radical from pinene oxidation, but no structures were proposed for that intermediate radicals of pinene and they all are simply assigned as R. Some are even not seen in the MS spectrum (for example ion at m/z 268). It is not presented a detailed explanation of their possible fragmentation that should support their identification. The information provided only confirms that they are DMPO adducts. On the other hand, there are several incorrect attributions to the fragmentation pathways, namely loss of $[\text{DMPO}+\text{H}]^+$, loss of $[\text{DMPO}-\text{OH}+\text{H}]^+$. In fact, an ion with one single charge can only lose a neutral molecule, generating another ion with one charge.

In conclusion, the manuscript is not appropriate to be published.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 23695, 2009.

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