We thank the reviewers for their helpful comments on the manuscript. The lengthy delay in reply reflected additional laboratory work to firm up the quantification of the first-generation oxidation products of benzyl alcohol.

Responses to Referee 1

We thank reviewer 1 for their time and have updated the manuscript to address their concerns. In size 12pt Calibri we address the individual comments or reviewer 1.

Overall resolution of the figures seems inconsistent. Figures 2 and 4 should be replaced with high-resolution versions. Figure 5 has a gray border that should be removed, and the font size should be increased, to at least match that of Figures 6 and D1.

Figures 2 and 4 were replaced with higher resolution versions.

Line 68: Check the product number of the TSI soft x-ray charge conditioner, is it 2088 or 3088?

Line 86: Check the product number of the DMA, I assume it is 3081 not 308100.

Product numbers for the TSI soft x-ray charge conditioner and DMA were updated.

Line 123: Reference to SI (no SI is available), should be Appendix B.

References to SI updated to reference relevant appendixes.

Line 208: The concentration of NO in the "particle phase experiments" mentioned to be ~80 ppb. In Table 1, the HBA experiment indeed uses 80 ppb, but this is not the case for the benzaldehyde experiment ([NO] = 14 ppb) which is inconsistent with the language used in line 208.

Thank you for catching this. Corrected NO_x reported in the experimental summary.

Line 347: Bethel et al. is mentioned repeatedly.

References were corrected in Line 347.

Line 350: "350 nm lights." Delete "lights".

Made correction.

Table F1: Numbers in the "Observed m/z and Reagent Ion" column, particularly after Glyoxal, seem inconsistent. Glyoxal + NO+ should be 88, not 99, for example, among others. The very last CF_3O^0 should be corrected to CF_3O^-.

Information in Table F1 was corrected: The molecular formula for dihydroxy benzoic acid was updated (changed from C6H3OHOHC(O)H to C6H3OHOHC(O)OH).

Tetrahydroxy, benzoquinone, oxopentanal, MW information was corrected.

Corrected methanol butenedial molar mass and molecular formula

Corrected hydroyoxopropanal nomenclature and structure.