

## ***Interactive comment on “Rate coefficients for reactions of OH with aromatic and aliphatic volatile organic compounds determined by the Multivariate Relative Rate Technique” by Jacob T. Shaw et al.***

**Anonymous Referee #3**

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The manuscript entitled “Rate coefficients for reactions of OH with aromatic and aliphatic volatile organic compounds determined by the Multivariate Relative Rate Technique” by Shaw et al. reported the rate coefficients for the 35 VOCs with OH radicals (five of which are measured for the first time) at room temperature by using the recently developed multivariate relative rate technique. The obtained rate coefficients are in reasonable agreement with previously reported values and SAR calculated ones. The paper is very clear and well explained. It should be published after incorporating the minor corrections suggested below. 1. In Page3, Line 10: What do you mean by

C1

five aromatic compounds and eleven aromatic compounds? 2. In Page 4; Line 10: The author should cite a reference. 3. What is the rate coefficient for the reaction R2? 4. How did the authors confirm the absence of any dark reactions? 5. In Page 8, Line 30: Authors should state the percentage depletion of all the studied VOCs other than t-butyl and n-pentyl benzene. 6. In Page 9, Line8: Authors should state the name of the compounds in the running text for the benefit of the readers. 7. In Page 13, Line 20: Cite the reference for the concentration of OH radicals. 8. In Figures 2 and 3, the dashed lines are very much confusing. What does it state? Does it show the rate coefficients? Please give a detailed explanation of this. 9. The caption of Figure S3 should be corrected (mixture 1 should be replaced by mixture 2) as the authors have mentioned mixture 2 in the caption of Table 2.

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C2