

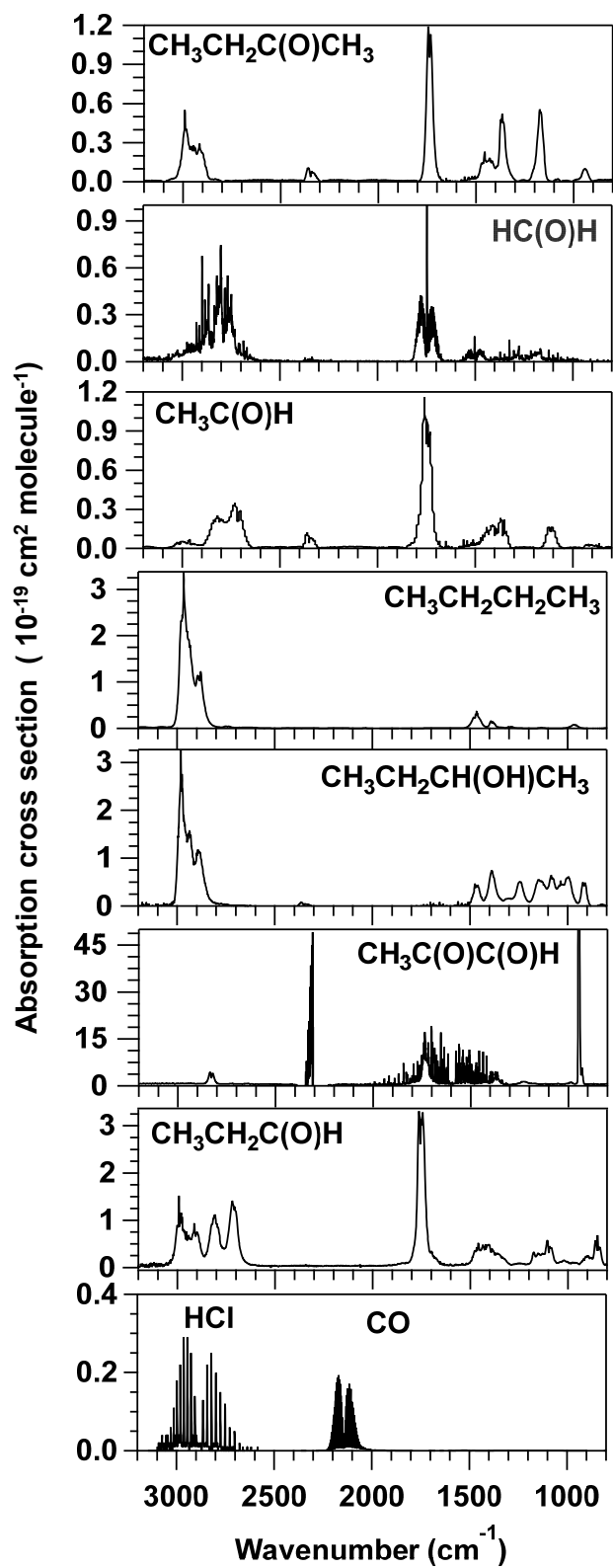
We would like to thank the editor for the further revision that will certainly improve the quality of the manuscript.

*For line 413, the point is that, since methylglyoxal may not be a major product from the C-3 site, you cannot conclude from the observations that aldehydic and tertiary C-2 abstraction are dominant. I suggest wording such as the following be employed - "Although abstraction at the  $-C(O)H$  and tertiary C-2 site are likely dominant, methylglyoxal may not be a major product of C-3 and thus our product data are not conclusive on this issue."*

**Authors' reply:** As suggested by the editor, we have reworded the text in lines 410-413.

*Figure S6: The referee is asking that absolute cross sections be given for the species measured as part of the work (e.g., butanone, acetaldehyde, formaldehyde, ...), not just for the parent 2MB. As suggested, perhaps absolute cross sections instead of absorbance units for the relevant species in Figure S6 would be the easiest approach to this?*

**Authors' reply:** As suggested by the Reviewer and the editor, we have changed Figure S6 to show the absolute absorption cross sections of butanone, formaldehyde, acetaldehyde, butane, 2-butanol, methylglyoxal, propanal, HCl, and CO, instead of absorbances.



New Figure S6

*Butane quantification: It seems to me that the better approach to Figure C would be to follow the procedure that is outlined in the text – i.e., subtract the 2MB features, then the butanone, and then compare the residual to the butane spectrum (perhaps by showing the residual with and without butane removed).*

**Authors' reply:** We agree with the editor that the procedure followed for the subtraction of butane will be easier to understand if the figure shows the same order.

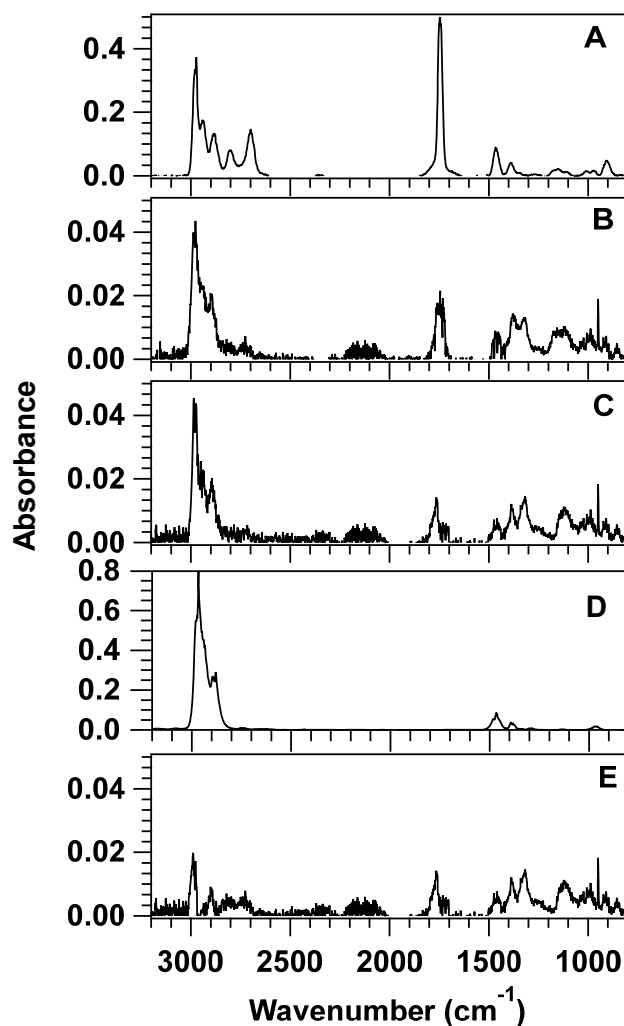


Figure. Set of spectra showing the subtraction procedure to obtain the butane concentration as described in the text.

Therefore, we present here the following spectra:

- A. Final spectrum after 150 min of photolysis.
- B. A spectrum - 2MB.
- C. B spectrum - butanone.

D. Butane spectrum.

E. C spectrum - butane.