The authors have investigated via a model the degradation of dissolved organic compounds by bacteria in cloud droplets. The results suggest that this could be appreciable for some organic compounds with intermediate solubility and high bacterial activity. The manuscript is generally well-written and can be recommended for publication in ACP after the minor comments and suggestions below are addressed.

1) Section 2.1: The model description is too concise and could be improved a bit. Which 26 species are transferred between the gas and aqueous phases? It would be worth showing the coupled mass transfer ODEs with Schwartz's treatment.

2) Is the size class same as the size bin? On line 101, it is stated that the 5 um < $D_{droplet}$ < 20 um, but then one droplet size class has $D_{droplet}$ = 20 um. Should the range be changed to 5 um < $D_{droplet}$ ≤ 20 um? Also, why is only the last size class allowed to have bacteria cells?

3) Line 105-106: Which organic compound? Is the model run separately for each individual compound? What other inorganic species were considered in the model? What was the cloud water pH in the model simulations discussed in section 3?

4) While the degradation rate constant remains constant between pH values 5 and 8, could it change at lower pH?

5) Figures 2, 3, 6, 7, 8, 10 are presently displayed as three-dimensional plots, which I found a little difficult to read as parts of the plots are obscured by curved surfaces. Since the Z-axis and colors represent the same dimension, I suggest replotting these figures as two-dimensional color contour plots. This would greatly improve the quality and readability of the figures.

6) Table 2: There's an extra multiplication symbol in the 5 C Experimental rate column on 12th row.