

2<sup>nd</sup> review of Bean & Hildebrand, ACP 2015

This manuscript has improved greatly since the first version reviewed; the authors have made a number of very helpful clarifications and have satisfactorily addressed all my major concerns.

A few remaining small comments on this draft:

line 17: saturations => saturation

line 104: "1000 nm in diameter"

line 245:  $\alpha$ -pinene =>  $\beta$ -pinene

line 273: resulting => substituted

para ending at 287-288: Rather than the sentence about not only 10%, I suggest simply stating that for  $\alpha$ -pinene, most of the nitrates would be expected to be tertiary and thus have a faster hydrolysis rate. This is more direct, and leads nicely into the next para where you explain the mechanism.

line 329: add comma between "meansurements, are"

The added experiment and figure are great.