Biogeosciences Discuss., 9, C548–C549, 2012
www.biogeosciences-discuss.net/9/C548/2012/

Biogeosciences Discussions

Interactive comment on "Progress on quantitative assessment methods of biological aerosols in the atmosphere" *by* L. Liang et al.

Anonymous Referee #2

Received and published: 3 April 2012

This manuscript presents an overview of the quantitative assessment methods of biological aerosols. Indeed, aerosol particles derived from biological sources are abundant in the atmosphere and exert important effects on human health and climate. While other reviews are available in the literature, especially the comprehensive recent review by Despres et al. (2012), this compact review paper still provides a helpful overview of the most important methods available for the quantification of biological aerosols, which can point the reader to more in-depth reading. The manuscript in its current form could be improved in several respects, such as careful correction of the English wording and grammar, addition of important references, and a more critical comparison of the individual methods presented in the paper, as pointed out in more detail below.

Specific Comments:

1. It would be helpful to see definitions of all the terms which are related to this subject (biological aerosols), including distinguishing aspects between them, i.e., “biological aerosols”, “bioaerosols”, “primary biological aerosol particles (PBAP)”, etc.

2. The authors list a few pros and cons of the different methods. It would be helpful, if the authors provided more information and discussion on the comparison of the different new quantitative assessment methods, especially regarding the tracer methods and DNA based methods, pointing out the advantages and limitations of the individual methods.

3. Instead of merely giving a brief summary at the end of this paper, some concluding remarks would be more helpful for the readers, presenting a future outlook and directions, including recommendations for the development of new methods or additional emphasis on certain existing methods.

4. It is crucial to have the English wording and grammar checked by a native speaker. In the current version of the manuscript, nearly every sentence requires some corrections.

5. The authors did not include several important publications on this topic. The recent review by Despres et al. (2012) provides a good basis which the authors should consult when updating the references. Specifically, the following publications are relevant to the topic discussed here:

Despres et al., Tellus B 2012; Sesartic and Dallafior, Biogeosciences 2011; Heald and Spracklen, GRL 2009; Elbert et al., ACP 2007; Burstein et al., ACP 2011; Despres et al., Biogeosciences 2007; Froehlich-Nowoisky et al., PNAS 2009; Froehlich-Nowoisky et al., Biogeosciences 2012; Lang-Yona et al., ACP 2012; Huffman et al., ACP 2010; He and Yao, J Environ Monitor 2011; Xie et al., Aerobiologica 2011; Lee et al., Sci Total Environ 2010

Interactive comment on Biogeosciences Discuss., 9, 1511, 2012.