

Review bg-2020-469 by Prass et al.

We thank the authors for their effort to answer the concerns of the various reviewers and for the corrections of the manuscript. I agree it could be published but I would like the authors to make a few changes to take into account my previous comments.

P3 Line 36 : “Our results demonstrate that FISH has great potential in bioaerosol analysis as it provides number concentrations of specific organism classes (i.e., from domain down to species level) and, therefore, combines bioaerosol identification, enumeration, an visualization” I suggest to delete “great” and keep “FISH has potential in bioaerosol analysis”. Indeed we think that this technique is so heavy that its use to analyze a great number of samples will be limited, alternative techniques will be more suitable (qPCR, sequencing, Flow cytometry + targeted probes etc..)

P 11 line 7: “Our study showed that FISH has great analytical potential in bioaerosol analysis.” Please delete “great” (for the same reason as before).

P11 line 11: “Here, we propose FISH to be a promising tool”. Please change “promising” for “interesting” (same reason).

### *Supplement*

P 5 line: The authors should add a paragraph about the advantages of flow cytometry to quantify the total number of cells and look at their size distribution. This technique is very fast contrary to DAPI which is time consuming. They should also speak about the combination of flow cytometry with specific staining with targeted probes.

P5 line 23. We do not agree with this paragraph :impingement is recognized as an efficient tool and no growth is observed with a short time collection, typically less than an hour is need to have enough sample , especially using high volume impingers (Šantl-Temkiv, T., Sikoparija, B., Maki, T., Carotenuto, F., Amato, P., Yao, M., Morris, C. E., Schnell, R., Jaenicke, R., Pöhlker, C., DeMott, P. J., Hill, T. C. J., and Huffman, J. A.: Bioaerosol field measurements: Challenges and perspectives in outdoor studies, *Aerosol Science and Technology*, 1-27, 10.1080/02786826.2019.1676395, 2019.)

We ask the authors to change this paragraph.