

**acp-2016-447 Screening of cloud microorganisms isolated at the puy de Dôme (France) station for the production of biosurfactants**

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**Referee 1 #'s comments**

The authors have sufficiently addressed the comments of the reviewers and it is recommended that this work be published after some minor revisions:

Page 1, Line 26. The paragraph on human health has been removed based on Referee #2's comments, so the reference to human health in the abstract should also be removed.

Page 8, Line 12. I recommend replacing "a more or less strong" with something like "a noticeable" or "an appreciable" for clarity, though this more of a personal preference.

Page 9, Line 14. I think you mean the 45 mN m<sup>-1</sup> limit, as mentioned in the author's response to Referee #2, not the 55 mN m<sup>-1</sup> limit.

Page 12, Line 3. Since the statistical analysis based on air mass origins has been removed, this paragraph, especially the comment regarding the Northwest-North sector, is out of context. Please revise.

**Author's answer**

We thank the reviewer for his comments. We have corrected the revised manuscript accordingly

**Author's changes**

The changes are highlighted in yellow in the revised manuscript

P1: "Moreover, the potential impact of the production of biosurfactants by cloud microorganisms on atmospheric processes is discussed."

P 8: "As expected, a noticeable reduction of the surface tension values was observed when the microorganisms produced biosurfactants in the culture medium."

P9: "The 45 mN m<sup>-1</sup> limit is often considered the threshold in terms of the surface tension decrease originating from HULIS..."

P 12: "For example, French regions characterized by uniform monocultures (Ministère de l'Agriculture, de l'Agroalimentaire et de la Forêt, 2014) could be extremely favorable to plant pathogens, such as *Pseudomonas syringae* (McDonald and Linde, 2002)."