Reviewer's report

Title: Influence of Negative Air Ions on Plastic Medical Equipment

Version: 1 Date: 7 October 2009

Reviewer: Yvonne Kampmann

Reviewer's report:

The paper is generally interesting, but it needs some improvements.

Major compulsory revision:
The article describes the physical impact of ionisation on medical equipment. All aspects concerning the action of ionization on the spread of Acinetobacter are considered only theoretically and not investigated in this study. The effect of ionization on bacteria should have been analysed parallel to the electrostatic measurements.

Furthermore there are a few minor essential revisions:
It is not described, how often the measurements were taken. Are the data reproducible?
The calculation of electric field strength is described in discussion and conclusion section, but it should be explained in materials and methods. Also some of the results are described in the discussion part, they should have been described in the results section.
The graphs shows, that in some cases, the electronically potential of the medical devices after ionization is lower than before ionization (e.g. by the mask and nebulizer tubing). Do the authors have an explanation for this effect?
Table 2: Has the ventilator tubing been measured two times in contact with table or is this a typing error?

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests