Reviewer's report

Title: Utilizing BD MAX™ Enteric Bacterial Panel to Detect Stool Pathogens from Rectal Swabs

Version: 0 Date: 29 Dec 2016

Reviewer: Hagen Frickman

Reviewer's report:

DeBurger et al. report on the comparison of BD MAX_TM Enteric Bacterial Panel (PCR) and culture from rectal swabs regarding the detection of enteropathogenic bacteria.

Major point:

To this reviewer's opinion, the authors do not sufficiently consider the fact that a single rectal swab is not the best sample material for culture-based stool diagnostics. As recommended in various papers beside the quoted manuals in the article, at least 3 stool samples with subsequent broth enrichment prior to agar culture for Salmonella spp. and Shigella spp. should be applied to ensure appropriate sensitivity for culture-based stool diagnostics.

The explanation of the authors that stool samples are difficult to get is only partly understandable for this reviewer, if patients with diarrhea are assessed. To this reviewer's experience, patients with fluid diarrhea produce more than enough sample material.

So this reviewer's point is the following: The authors have convincingly shown that PCR from swabs is more sensitive than culture from swabs. They have not shown that PCR from swabs is equally sensitive as culture from optimal sample material (3 fresh stool samples as described above). Therefore, the conclusion that rectal swabs would be acceptable samples for detecting enteropathogenic bacteria cannot be drawn from the results, because an appropriate control reflecting the present culture-based diagnostic gold standard is missing in this assessment. A conclusion that can be drawn is that PCR from swabs is more sensitive than culture from swabs, if no good sample material can be provided. This reviewer respectfully asks the authors to reconsider their conclusion in the respective way.
Minor point:

Beside the above mentioned general point, sensitivity of swabs can show large differences depending on the used product as recently shown for nasal swabs. If respective data are available in literature, the authors should comment on the sensitivity of the swabs that were used in their study.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

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Please indicate the quality of language in the manuscript:

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