The objective of this study was to assess the possible inhibitory effect of several biological and chemical materials that may be present in stool specimens to be processed through the BD MAX™ Cdiff Assay.

Methods: Twenty-five (25) biological or chemical substances occasionally found in stool specimens were evaluated for interference with the BD MAX™ Cdiff Assay. In the first part of the study, two Clostridium difficile strains ATCC 43255 (Toxinotype 0) and ATCC 43598 (Tox VIII) spiked at ≥ 1 X 10⁶ C. difficile spores were tested with the BD MAX™ Cdiff Assay except for Mesalamine and Nonoxynol-9 where slight inhibition was observed (delay result and needed to be repeated. The remaining substances tested showed no interference with high microbial load of bacterial strains used during this study, namely ATCC 25922 and Escherichia coli strains used during this study as potentially interfering organisms, respectively ATCC 29223 and ATCC 700587.

Results: Out of 25 substances tested, only antacids (Tums® and Major Prep® with Nonoxynol-9) showed slight inhibition (delay result and needed to be repeated). The highest amount of each compound likely to be found in stool specimens or 1 X 10⁶ C. difficile spores were tested with the BD MAX™ Cdiff Assay, however, expected assay results were still obtained (Table 1).

CONCLUSIONS

The BD MAX™ Cdiff Assay performed well in the presence of inhibitory substances that may be present in clinical samples. Only one type of chemical substances (antacids) gave non confirming status and required a repeat. These data showed the high robustness of this new automated molecular assay for the detection of C. difficile Toxin B gene.

REFERENCES