

Industrial and Food Microbiology and Biotechnology

P-217 - ARE INDEED MEATS SOLD IN PORTUGAL WITHOUT CLOSTRIDIUM DIFFICILE?

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Background

The incidence and severity of diarrhea associated with *Clostridium difficile* have been increasing exponentially^[1]. The *C. difficile* infections (CDI), which were believed to be almost exclusively nosocomial and occurring mainly in immunocompromised and elderly patients, are now becoming increasingly common among low-risk individuals^[2]. In 2014, an outbreak with the hypervirulent ribotype 027 strain^[3] was firstly reported in Portugal and, among others, this ribotype have been largely isolated from animals and food. Given the bacteria spores nature and their presence in the intestinal tract of animals, it would be expected to found *C. difficile* in several foods. This study aimed to detect and quantify *C. difficile* from different meats sold in traditional commerce and supermarkets in *Porto* and *Lisboa*.

Method

Quantification of *C. difficile* was performed using direct enumeration in *Clostridium difficile* Agar (CLO) and detection was performed using a pre-enrichment of each sample in *Clostridium difficile* Moxalactam Norfloxacin (CDMN) broth and a pre-treatment with ethanol before inoculation on the recovery culture media CDMN agar.

Results & Conclusions

No *C. difficile* was found in any of the 143 samples analyzed. These results should not be ignored, since it is not possible to be sure if the meats analyzed, in fact, did not have *C. difficile* or if the methods used were not sensitive enough to detect its presence. In the absence of standardized methodologies, further studies using other detection/quantification methods of *C. difficile* should be performed not only on meats, but also on other types of foods, including ready-to-eat foods. Despite no confirmed cases of foodborne diseases caused by *C. difficile*, the increased CDI incidence suggest that contaminated foods could/may be contributing to community- and hospital-associated CDIs.

References & Acknowledgments

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This work was supported by National Funds from the *Fundação para a Ciência e a Tecnologia* (FCT) through project UID/Multi/50016/2013. Financial support for author J. Barbosa was provided by a post-doctoral fellowship SFRH/BPD/113303/2015 (FCT).

Keywords: *Clostridium difficile*, detection, enumeration, meat