



11th International Conference on
Predictive Modelling in Food
Bragança, Portugal · 17-20 September 2019

11TH INTERNATIONAL CONFERENCE ON
PREDICTIVE MODELLING IN FOOD (ICPMF11):

BOOK OF ABSTRACTS

Edited by:

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and

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September 17 – 20, 2019

Bragança, Portugal

Printed by: Image Services of IPB, Portugal



Title

11th International Conference on Predictive Modelling in Food: Book of Abstracts

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Design

Atilano Suarez

Website

Nuno Carvalho, Ursula Gonzales-Barron, Vasco Cadavez

Edition

Instituto Politécnico de Bragança
Campus de Santa Apolónia
5300-253 Bragança
Portugal

Edition year: 2019

ISBN: 978-972-745-261-3

Handle: <http://hdl.handle.net/10198/18567>

URL: <http://esa.ipb.pt/icpmf11/>

Legal Deposit: 460552/19

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147: PREVALENCE AND GENOTYPE IDENTIFICATION OF *SALMONELLA* spp. ISOLATED FROM A MEAT PRODUCT ARTISANALLY PRODUCED IN BRAGANÇA

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Introduction: Previous meta-analytical work estimated that in Portuguese meat products intended to be eaten cooked, the overall occurrence of *Salmonella* spp. was 9.7% (95% CI: 7.0–13.4%). One of these meat products is alheira, which is a fermented sausage made of poultry/pork meat, bread and seasonings. The objective of this study was to investigate prevalence, numbers and serovars of *Salmonella* spp. in alheira sausages artisanally produced in Bragança, Portugal.

Methodology: This work was undertaken in three stages: (i) sampling of 52 alheiras from markets and traditional fairs; (ii) detection of *Salmonella* using culture methods and enumeration by MPN; and (iii) molecular confirmation of isolates (*invA* and randomly-cloned chromosomal fragment), and typing of *S. Enteritidis* (*SefA*), *Typhimurium* (*fliC*) or *Pullorum* (*glgC*) by PCR.

Results: Analysis of 52 sausage samples revealed the presence of *Salmonella* spp. in 8 samples (incidence of 0.154; 95% CI: 0.080–0.275), although all of these positive samples were unpacked sausages from traditional fairs (n=21), indicating therefore the higher *Salmonella* prevalence in alheiras sold in these establishments (incidence 0.381; 95% CI: 0.207–0.591). *Salmonella* mean concentration was 1.938 log MPN/g (s.d 0.839 log MPN/g). All of the 33 biochemically- and serologically-confirmed isolates coded for the *invA* gene. Multiplex-PCR revealed that only 3 of the positive isolates had the presence of *SefA* genes; which indicated that 9.1% of the isolates belonged to *Enteritidis*; while 20 isolates belonged to *Typhimurium* (60.6%) since they coded for *fliC* gene. The other 10 isolates (30.3%) were of serovars different from *Enteritidis*/*Typhimurium*/*Pullorum* since they only presented genes general for *Salmonella*. From the positive alheiras, *Enteritidis* or *Typhimurium* serovar was recovered from two samples, while the other samples harboured at least two serovars.

Conclusion and Relevance: *Salmonella* continues to be a frequent contaminant of alheiras produced in Bragança, and, in particular, of those sold in local fairs (38%). Not unexpectedly, *Typhimurium* and *Enteritidis* represented the prevailing serovars (72.7%) since they are linked to pork and poultry meat, the main raw materials of alheira. Regional producers must be urgently informed on the implementation of preventive and corrective actions in their current manufacturing processes and hygiene standards.

Keywords: Alheira; Portugal; PCR; molecular typing