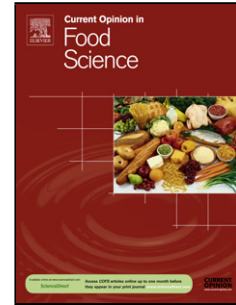


Accepted Manuscript

Title: Foodborne pathogens in raw milk and cheese of sheep and goat origin: a meta-analysis approach

Author: Ursula Gonzales-Barron Andiará Gonçalves-Tenório
Vânia Rodrigues Vasco Cadavez



PII: S2214-7993(17)30117-0
DOI: <https://doi.org/doi:10.1016/j.cofs.2017.10.002>
Reference: COFS 279

To appear in:

Received date: 2-9-2017
Revised date: 1-10-2017
Accepted date: 6-10-2017

Please cite this article as: Gonzales-Barron, U., Gonçalves-Tenório, A., Rodrigues, V., Cadavez, V., Foodborne pathogens in raw milk and cheese of sheep and goat origin: a meta-analysis approach, *COFS* (2017), <https://doi.org/10.1016/j.cofs.2017.10.002>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Foodborne pathogens in raw milk and cheese of sheep and goat origin: a meta-analysis approach

Ursula Gonzales-Barron, Andiará Gonçalves-Tenório, Vânia Rodrigues, Vasco
Cadavez*

CIMO Mountain Research Centre, School of Agriculture, Polytechnic Institute of
Bragança Campus de Santa Apolónia, Apartado 1172, 5301-855 Bragança, Portugal

(*) Corresponding author

ABSTRACT

This review compiles published information concerning the incidence of pathogenic microorganisms – *Listeria monocytogenes*, *Salmonella* spp., *Staphylococcus aureus* and shiga-toxin producing *Escherichia coli* (STEC) – in goat and sheep raw milk and cheese. Meta-analytical data were extracted from 37 primary studies undertaken in Australia, Brazil, China, Colombia, Costa Rica, Czech Republic, Egypt, Germany, Greece, Iran, Italy, Malaysia, Mexico, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, UK and USA. Pooled frequencies of detection of pathogens were found to be similar for sheep and goat raw milk: *Salmonella* (1.4 – 2.4%), *L. monocytogenes* (2.9 – 3.6%), STEC (4.3 – 4.8%) and *S. aureus* (35 – 39%). Likewise, in goat cheeses, regardless of being made of raw or heat-treated milk, *S. aureus* has been the most frequent contaminant (16.0%), whereas in raw milk cheeses, regardless of origin, the pooled prevalence of *S. aureus* is equally high in hard (34.6%) and soft cheeses (25.7%). *L. monocytogenes* is another important pathogen in sheep and goat milk cheeses (3.6 – 12.8%) while *E. coli* O157 strains with virulence genes (4.3%) also appear to persist during cheese manufacture. As expected, STEC has a higher pooled incidence in raw milk cheeses (10.0%) than in pasteurised milk cheeses (4.7%). Thus, the moderate contamination in raw milk and cheese of sheep and goat origin, revealed by this meta-analysis, advocates the reinforcement of general prevention measures such as close monitoring of hygiene on farms and eradication of disease by sheep and goat

Download English Version:

<https://daneshyari.com/en/article/8409196>

Download Persian Version:

<https://daneshyari.com/article/8409196>

[Daneshyari.com](https://daneshyari.com)