

# CANARIAN CHEESES: PREVALENCE OF PATHOGENS (R-CE-2073/2005) BETWEEN 2011-2018

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## INTRODUCTION

•Canarian traditional cheeses were made with raw milk, although in Spain it was forbidden until 1996. Annual goat cheese production is nearly 12.500 t while sheep cheese production stands at 782 t. About 50% is made with unpasteurized milk and an important amount is commercialized as fresh cheese or with a short ripened period.

•The Canary Islands have an important variety of cheeses, of which three are awarded by protected designations of origin (PDO): Majorero cheese and Palmero cheese with goat milk and Flor de Guía cheese and Guía cheese with sheep milk. 3.4% of the total production has been certified as PDO.



## MATERIAL AND METHODS

•1143 cheese samples, years 2011-2018

•Food safety control program of Public Health Department (Canary Islands Government)

•Official methods

- ❖ *Staphylococcus aureus* coagulase+ PNT-ANA-M-0014
- ❖ *Listeria monocytogenes* PNT-ANA-M-0006 y PNT-ANA-M-0005
- ❖ *Salmonella* PNT-ANA-M-0012

•Limits above which a cheese is considered unfit are:

- ❖ *Staphylococcus aureus* coagulase + > 100,000 cfu / g
- ❖ *Listeria monocytogenes*: absence in 25 g
- ❖ *Salmonella*: absence in 25 g



## HISTORY

1985

- ✓ Canary cheeses description (Fresno, 1985)
- ✓ All hand made cheeses (raw milk and short ripen) were commercialized without Health Department authorization
- ✓ 1<sup>st</sup> Canarian Cheese Awards (S. Antonio del Monte, La Palma)

1992

- D 92/46
- Hand book for cheese makers (García et al., 1992)
- 1<sup>st</sup> Research Project (Fresno et al., 1990-1992)

1996-2010

- ✓ RD 402/ 1996
- ✓ About 500 hand made cheese farms with Health Department authorization
- ✓ Canary Islands Free Brucellosis goats and sheep (1997). Cows (2009).
- ✓ Implementation of HACCP
- ✓ Administration and different groups (ADER, etc.) involved in cheese sector
- ✓ Official Cheese Awards
- ✓ Several Research Projects
- ✓ Cheese is important in other fields (gastronomy, etc.)

2010 onwards

399 cheesemaking factories (15% spanish total register)

Cheese production structure:

- 4 (1,600-350 t/year)
- 13 (150-350 t/year)
- 356 (small cheese factories → raw milk )

•1996: Queso Majorero DO  
•1997: Queso Palmero DO  
•2008 :Queso Flor de Guía , Queso de Media Flor y Queso de Guía DO

## RESULTS

- ❑ 55 samples have exceeded the limits for *Staphylococcus aureus* coagulase +
- ❑ 100% samples met the absence of listeria and salmonella in 25 gr

## CONCLUSIONS

Although the entire available database has not yet been analyzed and therefore only preliminary conclusions can be noted, the first results suggest a very low number of samples that do not meet the microbiological criteria. Hence, it seems that the production of raw milk cheeses in the Canary Islands is safe from a hygienic point of view.