

# PDO CANARIAN RAW MILK CHEESES, MICROBIOLOGICAL LIMITS

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## INTRODUCTION

Cheese making is the major livestock industry in the Canary Islands. Canarian artisanal cheese has traditionally been made with raw milk and there is still an important production of this type of cheese (about 50% of total production) that is made from non-pasteurized milk; this cheese is short ripening with less than 60 days of maturation. Until 1996, Spanish health legislation had forbidden these products although they were commercialized, mainly, because of the high sanitary level status of Canarian goats and sheeps (non cases of brucellosis and tuberculosis).

## MATERIAL AND METHODS

•534 cheese samples, two PDO: Queso Majorero and Queso Palmero

•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

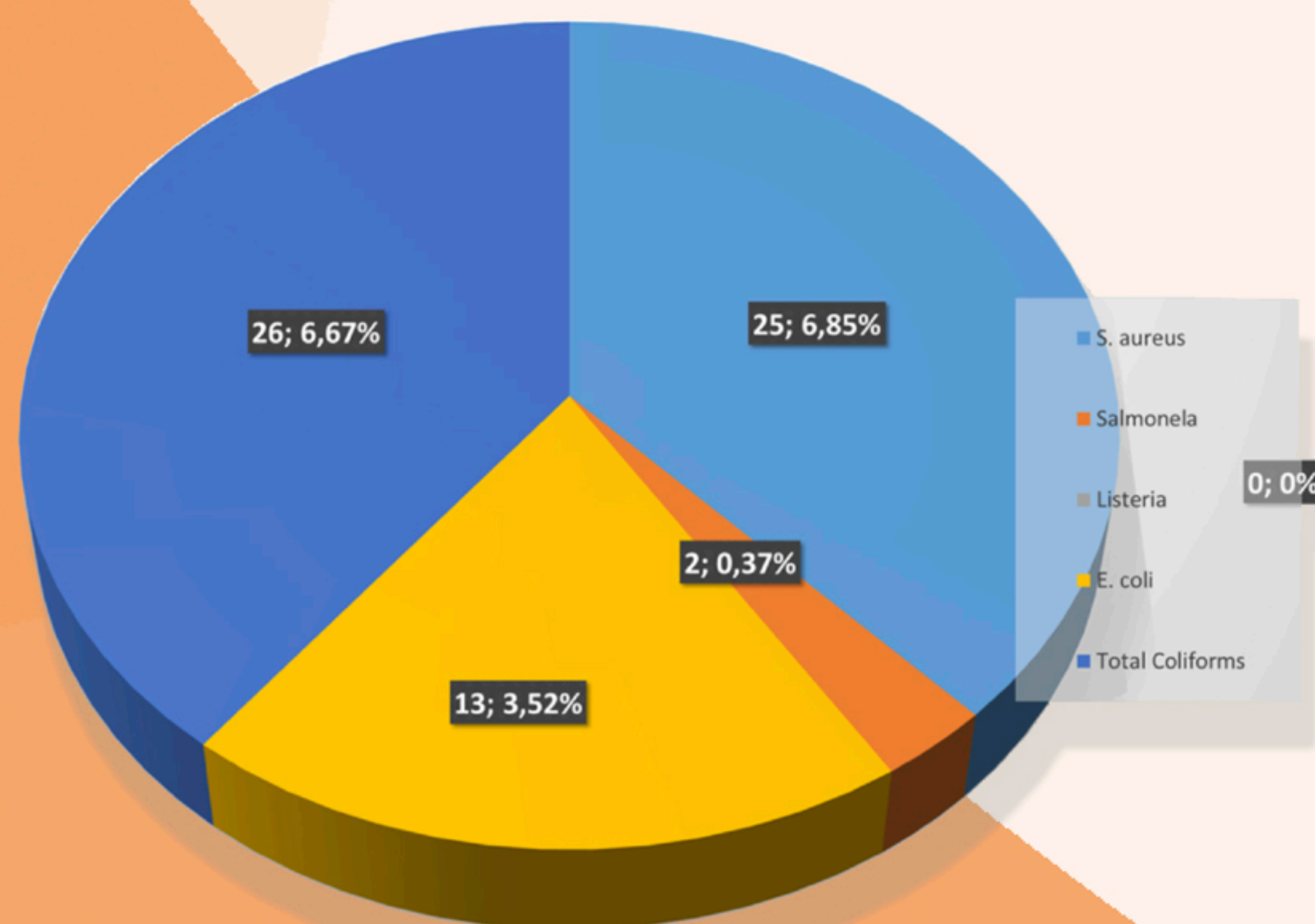
❖ *Salmonella*: absence in 25 g

❖ Total coliforms > 300,000 cfu / g

❖ *Escherichia coli* > 100,000 cfu / g

## RESULTS

Microbiological status of PDO cheeses. (number of cheese samples; % of total samples)



- Only manufactured with Majorera goat milk (maximum 15% allowed of sheep milk of the Canarian breed in ripen cheeses)
- Raw milk and pasteurized milk.
- Cheeses with natural cover, paprika or gofio.



- Only made with goat milk from the Palmera breed fed with local fodder.
- All raw milk production.
- Some cheeses are coagulated with artisan kid rennet.
- It is smoked with local materials: almond husk, acicles and pine wood, dried prickly pears. Natural coverage, gofio, flour

## CONCLUSIONS

These results means that food safety risk of raw milk cheeses can be controlled by taking a high hygiene standard during milk and cheese production.