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Microbiological profile of "Conciato Romano", an artisanal cheese of Campania

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The aim of this study was to determine the microbiological profile of the "**Conciato Romano**", an artisanal raw ewe's and/or goat's milk cheese produced in the province of Caserta (Campania, Italy).
The area of production, comprising few villages of Monte Maggiore, is limited.

MILK FILTRATION
↓
ADDITION OF RENNET
(artisanal kid rennet)

↓
COAGULATION OF CURD in 20 minutes
↓
CUTTING OF CURD (after 2 hours)
(up to the dimensions of a grain of rice)

↓
MOLDING (after 10 minutes)
AND DRAINAGE

↓
MANUAL SALTING (for 24 hours)
↓
DRYING IN A TRADITIONAL MOSQUITO-PROOF WOODEN STRUCTURE IN THE OPEN SHADE ("Casale")
↓
WASHING WITH WATER USED TO COOK A LOCAL HOME-MADE TYPICAL PASTA ("Pettole")

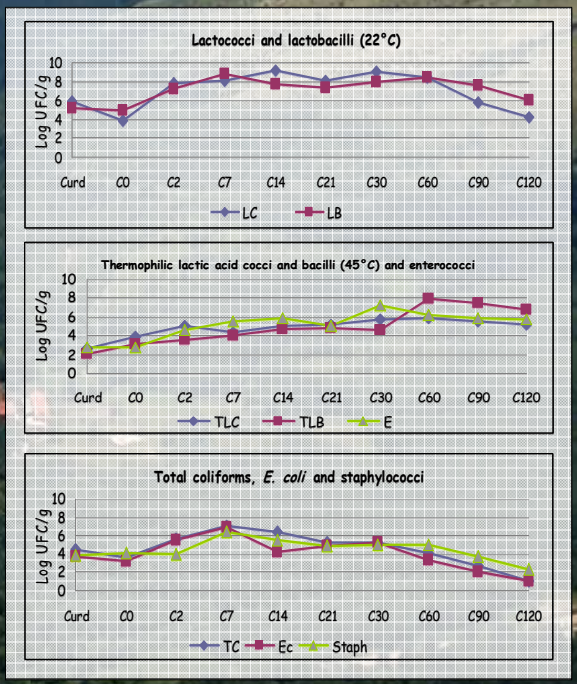
↓
TREATING WITH A "CONCIA"
(olive oil, white vinegar, wild thyme and hot red pepper)
↓
AGING INSIDE CLAY VASES
(from 6 months to 2 years)

Materials and Methods

Samples from 2 different batches of Conciato Romano were analyzed (curd, 0, 2, 7, 14, 21, 30, 60, 90 and 120 days of ripening).
Microbiological analyses targeted the presence and the evolution of: lactic acid bacteria (LAB), hygiene indicator and spoilage bacteria (total coliforms - TC, *Escherichia coli* -Ec, staphylococci and micrococci-Staph, yeast and moulds), main pathogen microrganisms (*Salmonella enterica*, *Campylobacter* spp. and *Listeria monocytogenes*).
LAB isolates were submitted to phenotypic and genotypic identification by API system (bioMérieux, France) and following species-specific PCR: *Enterococcus faecium*, *Enterococcus faecalis*, *Lactobacillus plantarum* and *Lactococcus lactis/cremoris*.

Results

LAB appeared to be the dominant microflora throughout ripening. Sixty isolates were obtained. They were mainly represented by the species *Lactobacillus plantarum* (22), *Lactococcus lactis subsp. lactis* (5) and *Enterococcus faecium* (19), confirmed both by phenotypic and genotypic methods. Low levels of yeasts and moulds were detected throughout the ripening period. *Salmonella enterica*, *Campylobacter* spp. and *Listeria monocytogenes* were absent in all samples.



Conclusions

The results suggest that there could be advantageous to improve the level of hygiene during milk and cheese production in order to eliminate the undesirable microorganisms and to standardize quality of this cheese. The microbial evaluation of this artisanal cheese is beneficial for not only the consumers but also the manufacturers, since it will help them to standardize their production practices and allow them to produce higher quality and more stable products with well-defined characteristics, preserving the properties of this unique cheese.