

GRANA PADANO CHEESE MAKING WITH LYSOZYME FROM ASS'S MILK: FIRST RESULTS

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Introduction

Grana Padano is an Italian Protected Designation of Origin (PDO) hard cheese produced with partially skimmed raw milk. The cheese is usually ripened for 14-18 months. Maize silage is one of the principal livestock forage in dairy farms where the PDO Grana Padano cheese is made. Unwelcome microorganisms can therefore move to milk by external contamination, with negative effects on cheese ripening when lysozyme is not used (**defGP**).

In order to prevent swelling in Grana Padano cheese ripening, lysozyme from hen egg white has to be used in Grana Padano cheese making. On the other hand, sensitive consumers can show allergy to hen eggs and their components. Lysozyme content is reported to be high in ass's milk, a dairy food for consumers with food allergies.

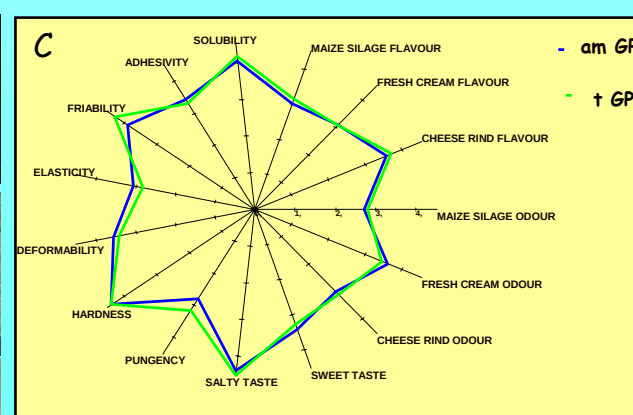
Methods

Nine traditional Grana Padano cheeses (**tGP**) were compared to nine ass's milk added cheeses (**amGP**), in order to study the ripening process under the effect of lysozyme from the two different sources.

Chemical, physico-chemical and microbiological aspects of milk (**M**), whey (**W**) and cheese three hours after shaping cheese were studied; radioscopic and sensory analyses were performed at 16 months of ripening.

Results and conclusions

A	Mean	P
M, pH tGP	6,748	0,03
M, pH amGP	6,753	
W, pH tGP	6,230	0,01
W, pH amGP	6,237	
pH at 3hr tGP	5,562	0,001
pH at 3hr amGP	5,367	



A. pH values at 3 hours were significantly lower in amGP than in tGP thesis, suggesting that ass's milk could make lactic fermentations easier

B. Although the lowest defect score assigned by radioscopic analysis was observed for the tGP thesis, such difference did not increase as ripening was carried out

C. Spider diagram, representing sensory profiles of tGP and amGP, shows that there are no perceptible differences between the two theses