

NIZ
DAIRY CONFERENCE

DAIRY INGREDIENTS:

INNOVATIONS IN FUNCTIONALITY

Papendal,
The Netherlands

30 September–2 October 2009

ABSTRACT BOOK

ORGANISERS
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Posters will be on display throughout the conference and there will be two poster viewing sessions
 Wednesday, 30 September 13:00-14:00 (Even numbered posters)
 Thursday, 1 October 12:45-13:45 (Odd numbered posters)

POSTER THEME: Other

P17

Inhibitory potential of the nisin on *Staphylococcus aureus* in pasta filata cheese

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The effect of nisin incorporation, 500 IU/g into "queso de mano" (Pasta filata cheese) previously inoculated with a strain of *Staphylococcus aureus* (10^2 CFU/g) and stored 7 days at 10 ± 2 °C was studied. The nisin proportion was choiced from preliminary test. "Queso de Mano" or hand cheese is a type of pasta filata cheese presenting high moisture content. It was made with pasteurized milk (65 °C x 30 minutes), to which calcium chloride (20 g/100 L milk) and 2 % starter was added. The curd was ready to be cooked at 70 °C, after being kept for 4 hours at 42 °C. The cooked curd was moulded by hand under hygienic conditions. The cheeses (the units) were put into a plastic bag, into which some whey was poured. After that, to half of the units with the bacterial (control cheese) and another half, bacterial plus a dose of nisin (500 IU/g) (experimental cheese). The average physio-chemical characteristics in control cheese were: moisture 50,72 %, fat 48,48 %(dwb), protein 44,92 %(dwb), NaCl 5,2 %(dwb), pH 5,0 and acidity 0,53%. The statical analysis of the two cheeses (control and experimental) stored 24 hours showed no significant difference. The use of nisin inhibited the growth of the bacteria *Staphylococcus aureus* in experimental cheese, while the population was $5 \log \text{CFU.g}^{-1}$ after 7 days in control cheese.

Keywords: nisin, Pasta filata, *Staphylococcus aureus*

P18

Evaluation of chemical and microbial properties of Iranian white brined cheese using traditional kefir grain, yoghurt and commercial cheese culture as a starter

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In this research, the chemical and microbiological characteristics during a 60- day ripening period of white brined cheese produced using five different starter cultures were examined. Starter cultures included traditional kefir grain as an un-defined, commercial kefir(DG 500L), commercial yogurt(Lactina), traditional yogurt and commercial cheese starter culture(FRC-65) as a control. Results of statistical analysis showed that starter culture type had a significant impact(effect) on pH, acidity, fat, protein, moisture, coli form, enterobacteria, total count, mold & yeast and lactococcus level($p < 0.01$), and as well as on lactobacillus level ($p < 0.05$). Ripening period had significant effect on pH, acidity, fat, protein, coli form, total count, mold & yeast, and lactobacillus level($p < 0.01$). Moisture, enterobacteria and lactococcus level in cheese were not affected by ripening period. Parameters including pH, fat and protein content showed decreasing trend during ripening except for acidity. Among chemical analyses cheese produced with traditional kefir had highest pH and cheese produced using commercial kefir showed highest acidity and moisture. Among microbial parameters cheese produced with commercial kefir starter had the lowest total microbial count and after that cheese using traditional kefir starter. Traditional kefir grain can be used as a starter culture in production of white brined cheese.

Keywords: white brine cheese, kefir, starter culture, chemical and microbial profiles