

Growth of adjunct *Lactobacillus casei* in Cheddar cheese differing in milk fat globule membrane components

Abstract

The effect of two adjunct *Lactobacillus casei* strains on the lactobacilli population of low-fat Cheddar cheese is described. The adjuncts, added at a low initial number, differed in their ability to utilise components of the milk fat globule membrane (MFGM); these were controlled by addition of butter milk powder or skim milk powder. The most diverse microbial composition was revealed at the start of cheese ripening and became more uniform in the later stages. The microorganisms present at the start influenced the lactobacilli population during ripening, but the adjuncts did not dominate the microflora in the cheese. A higher content of MFGM components in the cheese seemed to influence the lactobacilli population and the composition of free amino acids during ripening. The low initial numbers of lactobacilli resulted in comparatively large distances of separation between these cells in fresh cheese; electron micrographs of ripened cheese showed large clusters of clearly elongated lactobacilli.

Please cite this article as: Martinovic, A., Moe, K.M., Romeih, E., Aideh, B., Vogensen, F.K., Østlie, H., Skeie, S., Growth of adjunct *Lactobacillus casei* in Cheddar cheese differing in milk fat globule membrane components, *International Dairy Journal* (2013).