

Research project IZS VE 18/10

Safety and quality of alpine farm dairy products through the use of autochthonous starters and protective strains

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The microbiological profile of raw milk cheeses is typically characterized by a multitude of microbial groups, with complex interactions among them throughout ripening. Incidence of undesired microorganisms in raw milk cheese, as is the case of either spoilage or even pathogenic ones, is common in alpine dairy products. Passive inclusion of such undesired microorganism as coliforms, *Staphylococcus* spp, even *Listeria* spp raises potential public health hazards. Hence, they are of major concern towards microbiological safety of final product.

Thermal process of milk and addition of commercial starter cultures may control growth of unwanted microorganisms such as *Staphylococcus* spp., but can induce negative effects on final organoleptic features of typical foodstuffs.

Therefore the main objective of the project is the improvement of safety and quality of cheeses produced in alpine farms through the development and use of new types of starter cultures constituted by freeze-dried natural milk cultures enriched with autochthonous strains of lactic acid bacteria. These new wild strains, representative of the microbial composition of the natural milk cultures and dairy products of alpine farms, could contribute to the improvement of quality and safety of traditional alpine cheeses without modifying their specific and unique organoleptic characteristics.