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BOOK OF ABSTRACTS

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I10. Industrial and Food Microbiology and Biotechnology

P379. Microbiological characterization of fresh cheeses made in Portugal from raw materials to final products

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Cheese is a dairy product obtained through processing techniques involving coagulation of the protein of milk, in particular, the casein portion. It is made by the action of rennet or other suitable agents, and by partially draining the whey from the coagulation, resulting in a concentration of milk protein. In Europe, the average cheese consumption per capita stands at 11.1 kg in 2019 and the market is expected to grow annually by 3.1%. Fresh cheese is ready for consumption shortly after manufacture, it is considered rich in proteins, vitamins, minerals and fatty acids, essential nutrients to a healthy diet. Due to its high water content, it is adequate for microbial growth; cheeses may be a vehicle of pathogens of importance for public health and they can spoil rapidly. This study aims to characterize microbiologically fresh cheeses made in Portugal from raw materials to final products. Samples of cow (12) and goat (12) pasteurized milks, of rennet (6) and of cow (12) and goat (12) fresh cheeses were analysed as per ISO Standards one day after cheese production during May and June of 2019. The results showed no significant differences amongst samples. For both final raw materials and final products, *Escherichia coli*, *Salmonella* spp. and *Listeria monocytogenes* were not detected or were below the detection limit of the enumeration technique. Nevertheless, goat cheese samples presented the highest counts of quality indicator microorganisms, reaching: *Staphylococcus* coagulase positive (1.0×10^2 CFU.g⁻¹), *Pseudomonas* sp. (9.5×10^5 CFU.g⁻¹) *Enterobacteriaceae* (1.5×10^4 CFU.g⁻¹), lactic acid bacteria (1.7×10^5 CFU.g⁻¹), moulds (1.8×10^2 CFU.g⁻¹), yeasts (2.5×10^3 CFU.g⁻¹), total microorganisms at 30 °C (5.5×10^5 CFU.g⁻¹) and total microorganisms at 6.5 °C (1.8×10^5 CFU.g⁻¹). In contrast, a lower microbial contamination was observed on the others samples. All of the samples were in accordance with Regulation (EC) No 2073/2005 on microbiological criteria for foodstuffs.