MANUFACTURE OF LIMBURGER LIKE CHEESE BY A SEMI-CONTINUOUS METHOD

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SUMMARY:

A semi-continuous process was developed for the production of Limburger like cheese from cow’s, buffalo's, recombined milk and cow's milk retentate. Milks were heated to 74°C/15sec, cooled to 30°C, inoculated with 1% yoghurt starter, cooled to 5°C rennet was added and then left overnight at 5°C. Calcium chloride (0.02%) was added to the cooled milk and then heated slowly to 35°C to induce coagulation. After removal of whey, the cheese curd was molded and cheese manufacture was completed by similar steps to the traditional method. Cow's milk retentate gave the highest cheese yield, protein and fat contents than that of cheese from other treatments. Cow’s milk cheese was characterised by high pH value and water-soluble nitrogen (WSN), non protein nitrogen (NPN) amino acid nitrogen (AAN) and soluble tyrosine, and tryptophan contents and total volatile fatty acids compared with cheeses made from other milks. The breakdown of protein in Limburger cheese made by the semi-continuous method was more rapid than that made by the traditional method. Cow's milk cheese had the highest contents of the different microbial groups, while cow's milk retentate cheese had the lowest during ripening. Limburger cheese made by the semi-continuous method had lower total microbial counts than traditional ones. The organoleptic properties of Limburger like cheeses made from cow's milk grined high scores, followed by recombined, buffalo's milk and cow's milk retentate cheese in order. Generally Limburger cheeses made by semi-continuous method were characterized by better quality than that made by traditional method.

Keywords:

Limburger like cheese, Smear microorganisms, semi-continuous method, chemical composition, ripening indices, microbial counts, microstructure

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