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Review

Heat stability of indigenous milk plasmin and proteases from *Pseudomonas*: A challenge in the production of ultra-high temperature milk products

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Abstract

The worldwide demand for ultra-high temperature (UHT) milk products is increasing, as these products are interesting for export. Their shelf-life at ambient temperature is usually around 4–6 months; however, for products to be exported, a longer shelf-life is necessary. Spoilage of sterile UHT milk products is often caused by proteases, in particular plasmin and proteases from *Pseudomonas*. These proteases are highly heat-stable and are able to resist UHT heating processes. This review summarises the data on the inactivation behaviour of the plasmin system and of *Pseudomonas* proteases. Based on the data presented, heating processes and alternative methods are proposed that sufficiently reduce the protease activity in the final product to achieve a shelf-life of the UHT products of up to one year.