

البحث رقم (2)  
الملخص الانجليزي

**Quality improvement of spreadable processed cheese made from ultrafiltered milk retentates using commercial starter cultures**

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This study was undertaken to evaluate the feasibility of using commercial starter cultures for quality improvement of spreadable processed cheese manufactured from ultrafiltered milk retentates. Compared to control, six samples of ultrafiltered milk retentate were incubated at 25°C with starter cultures CHN-22, FRC-60, and ABT-8. Three samples were incubated for 24h and the others were incubated for 72h. Physicochemical, microbiological, and organoleptic characteristics in all treatments during the 90-day cold storage (6±2°C) period were determined. The results showed that protein content of all treatments was significantly lower than the control. Utilization of starter cultures in ultrafiltered processed cheese production increased titratable acidity, where titratable acidity of the treatments (PC22-3, PC60-3, and PC8-3) was significantly higher than the other treatments and the control. PC8-1, PC60-1, and PC22-1 treatments were the highest penetrometer readings and with low firmness. All treatments had higher water soluble nitrogen/total nitrogen%, total bacterial viable and lactic acid bacterial counts especially PC22-3, PC60-3, and PC8-3 compared to the control. The results revealed that PC60-1 and PC22-3 treatments gained the highest acceptability scores than PC60-3, PC22-1, and the control.