

Ultrafiltrated soft cheese as affected by soymilk , *lactobacillus acidophilus* starter and certain flavour additives

Metry, Wedad A .

Dairy department , Faculty of agriculture ,Cairo university , Fayoum, Egypt.

ABSTRACT

The effect of soybean milk , *lactobacillus acidophilus* and other additives such as hot green pepper juice (HG PJ) , cayenne pepper , paprika (p) and artificial green pepper flavour (AGPF) was studied .The chemical , reological , microbiological and organoleptical properties of ultrafiltered(UF) white soft cheese during 25 days at $4 \pm 1^{\circ} \text{C}$ were investigated . Results of the study clearly indicated that , the changes in the chemical composition of cheese samples with or without soybean milk were similar and almost of the same trend during storage . Fresh and stored cheeses prepared with *lactobacillus acidophilus* had the lowest PH values and soluble nitrogen compared to that of other treatments . The highest cholesterol content was in control followed by cheese contained starter and those contained soybean milk without starter , however the lowest cholesterol content was detected in treatment contained soybean milk and starter . Addition of starter culture led to a significant decrease ($P \leq 0.01$) in cholesterol content of fresh and during storage of UF- soft cheese . Rate of syneresis was highly significant ($P \leq 0.01$) during storage . The penetration and syneresis of cheese samples increased with adding HG PJ to retentate . The addition of starter improved the keeping quality of UF-soft cheese . The count of *lactobacillus acidophilus* significantly increased ($P \leq 0.01$) during storage at $4 \pm 1^{\circ} \text{C}$ and reached to its maximum number after 8 days . However the viable counts at the end of storage were still enough for cheese to be successful probiotic , especially when added HG PJ . Statistically , there is significant differences ($P \leq 0.01$) between treatments containing soymilk + starter and control in total scores . The results of sensory evaluation indicated that out of 12 formulas used to manufacture UF-soft cheese , five treatments showed good organoleptic properties (total score ranged between 91 and 95.3) . The best results were shown by two formulas that contained CP and HG PJ , respectively .

Key words : ultrafiltration process - soybean milk - *lactobacillus acidophilus* - artificial Flavour - green pepper – probiotic .