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Deteriorating Microorganisms in Milk and Some Dairy Products

Thesis Presented by

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(Hygiene and Control of Milk and its products)

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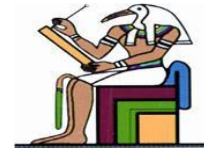
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Abstract

One hundred and ninety five samples [Thirty each of Pasteurized milk, UHT milk, Plain yoghurt and one hundred and five cheeses (Twenty five each of White pickled soft cheese, Ras cheese, processed cheese and thirty of Kariesh cheese)] were collected randomly from dairy shops and supermarkets in Cairo and Giza governorates, Egypt and subjected to physicochemical & microbiological examination for determination of its contamination with deteriorating microorganisms. Sensory evaluation revealed that the majority of pasteurized milk, UHT milk & processed cheese were graded as excellent, while that of Kariesh cheese, Ras cheese and processed cheese were graded as fair, plain yoghurt was graded as good. Chemical examination showed that the hydrolysis degree of pasteurized & UHT milk using TNBS method was ranged from 2.1 – 9% and 2.7- 11.3%, respectively. The mean titratable acidity % of Pasteurized milk, UHT milk, Plain yoghurt, Kariesh cheese, White soft cheese, Ras cheese and Processed cheese samples were 0.15 ± 0.003 , 0.15 ± 0.0028 , 0.89 ± 0.019 , 0.67 ± 0.045 , 1.0 ± 0.075 , 0.6 ± 0.047 and 0.83 ± 0.064 %, respectively, while the mean values of salt % in the examined Kariesh cheese, White soft cheese, Ras cheese and Processed cheese were 0.59 ± 0.044 , 5.79 ± 0.12 , 3.5 ± 0.098 and 1.024 ± 0.061 %, respectively. Aerobic mesophilic count and Aerobic spore formers were determined in 30, 30% and 76.7, 53.3% of pasteurized & UHT milk samples, respectively; most of the examined yoghurt & cheese samples were contaminated with high numbers of coliforms, yeast, mold, proteolytic, lipolytic and Enterococci, while anaerobic spore formers were detected in some of the examined cheese samples except white soft cheese. The influence of Salt % & starter culture on viability of some deteriorating micro-organisms (*Pseudomonas aeruginosa* and *Candida albicans*) during the storage of lab. manufactured cheese at 4°C was studied. The obtained results revealed that *P.aeruginosa* couldn't be detected in fresh & ripened cheese samples at the end of 6th and 3rd week of the storage period, respectively, while *C. albicans* persist in fresh & ripened cheese until deterioration occurred at the 9th week.

Key words: Deteriorating microorganisms, Sensory examination, Salt, *P. aeruginosa* and *C.albicans*.

Dedication

To

My husband and sons

&

My mother and father

&

My Brothers and sisters

&

My friends

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I am grateful to the Almighty God the most beneficent for his graciousness bestowed upon me and the opportunity given to study and complete this thesis.

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