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COMPARISON OF COMPOSITION CALF RENNIN ACTIVITY IN DIFFERENT EGYPTIAN GOVERNORATES

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ABSTRACT

Calf rennet as a traditional milk-clotting enzyme is very important in the production of cheese. This study has been conducted to assess the microbiological, physical, chemical, technological and sensorial properties of commercial liquid rennet collected from different Egyptian governorates (Dkahliya, Kafr El – sheikh, Domietta, Gharbiya, Sharkiya). A total of fifteen liquid rennet samples were tested. The quality of the various rennet samples varied widely between factories. The total bacterial count ranged from 20×10^1 cfu/ml to 30×10^4 cfu/ml, the yeast and mold count was 5×10^1 cfu/ml to 25×10^2 cfu/ml and the spore forming anaerobe count was 2×10^1 cfu/ml to 30×10^2 cfu/ml. None of the samples contained coliform bacteria. pH values, protein content and Salt content of the samples ranged between 4.5 to 6.54, 6.5 to 12.3 mg / ml and 5.26 % to 13.16% respectively. Boric acid, Sodium benzoate and Formaldehyde of rennet samples ranged from 0.96 % to 4.1%, 0.1% to 0.5% and 0.18 % to 1.64 % respectively. All tested rennet samples seemed free from hydrogen peroxide. The milk-clotting activity and proteolytic activity of samples ranged from 533 to 1864.2 Su/ml and 7.9 u/ml to 59.1 u/ml respectively. Our results suggested that most of the commercial liquid rennet samples showed variations in terms of their microbiological, physical, chemical and sensorial properties, in addition to contains Unauthorized Preservatives .

Key words: boric acid, milk-clotting activity, preservation, proteolytic activity, rennet.