

**A COMPARATIVE STUDY OF SOFT CHEESE IN
EGYPT AND ETHIOPIA**

BY

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ABSTRACT

Karish cheese samples were obtained and collected from a different vendor from local markets in El-Giza, El-Kaliobia and El-Sharkia governortates. The total solids content of El-EI-Sharkia Karish were distinguished with the highest total solids and the lowest titratable acidity (TA) contents as well as the scores of flavor score or overall quality of cheese. El-Gizapossessed the lowest total solids content as well as flavor score. El-Kaliobia had the highest counts of Total bacterial Count, Yeasts & Molds and *Staphylococcus aureus*.

Karish cheese was manufactured by heat treatment of cow's skim milk at different temperatures 65°C, 75°C and 85°C), and (raw skim milk used as a control. The production of cheeses from ultrafiltered milk (UF cheese) and (A) addition of skim milk powder (SMP) or reconstitute at ratio of (B) skim milk powder 2: 1 cow skim milk, (C) skim milk powder 1: 1 cow skim milk and (D) skim milk powder 1: 2 cow skim milk. All treatments divided into 6 equal portions and used different methods are used to coagulate the milk (YC starter culture, GDL, rennet, YC starter culture + GDL, YC starter culture + rennet and GDL + rennet). Results showed that T.N/TS%, fat/TS % and titratable acidity were significantly the highest in raw milk cheese. Heat treatment had effect that by increasing heat degree TS% and Ash/moisture% increased, but decreased as TN/TS. The total solids content in reformulated cheese was increased by using the enzymatic or acidic-enzymatic coagulation in all treatments manufactured from fresh cow's skim milk or reconstituted skim milk powder (SMP). The TA content was increased in all Karish cheese manufactured by acid coagulation. The Ash/moisture content decreased in treatments made by using starter. SDS-PAGE analysis clearly indicates that the chemical complexes of protein are formed when the reconstituted skim milk undergoes further heat treatments. The cheese that SMP with any formula or cheese made from UF-concentrate, obtained with the incorporating between YC, GDL and rennet were distinguished with the presence of the glycomacropeptide (GMP) band in the whey protein.

Keywords: Kareish cheese, skim milk powder, Heat treatment, glycomacropeptide and Ultrafiltration technique

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