Isolation and Characterization of Three Casein Fractions from Camel Milk (Sudan)

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ABSTRACT

This study was designed to isolate and characterize camel casein fractions using biochemical methods. Whole camel casein was precipitated by acidification (pH 4.3) and fractionated by ion exchange chromatography. Peaks corresponding to αs1-casein, β-casein and κ-casein revealed molecular mass of 36.325, 31.732 and 25.044 kDa, respectively, after SDS-PAGE. The three casein fractions were loaded on the same isoelectric focusing (IEF) gel beside whole camel milk to identify bands corresponding to each fraction. The αs1-casein was focused on the most acidic side of the gel followed by β-casein on the middle of the gel, while κ-casein was the less acidic fraction. It could be concluded that IEF technique could be effectively used for biochemical characterization of camel casein on protein level.

Key words: Camel milk; casein fractions; SDS-PAGE; IEF

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