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ENHANCEMENT THE QUALITY PROPERTIES OF CAMELS' MILK LABNEH USING *MORINGA OLEIFERA* DRY LEAVES

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ABSTRACT

The present study was carried out to investigate the effect of adding four different concentrations (ranged from 0.05 to 2%) of *Moringa oleifera* dry leaves (MODLs) on the preparation and properties of camels' milk Labneh. All treatments differed ($p \leq 0.05$) in their properties; depending on the percent of MODLs added and storage period (28 days at $6 \pm 0.5^\circ \text{C}$). Addition of MODLs had considerable effect ($p \leq 0.05$) on the total solid, protein, fiber, dynamic viscosity, pH values, carbohydrate and ash contents. The highest values were recorded with Labneh fortified with the highest concentration of MODLs (except pH value). All camels' milk Labneh made with MODLs could be considered as a good source of minerals (Ca, Fe, Zn and P) and vitamins (A, B₁, B₂ and E). The whey syneresis and pH decreased meanwhile, the dynamic viscosity increased in all treatments including the control till the end of storage period. Among different treatments, control treatment has presented a highest index of syneresis than all other treatments. Meanwhile, T4 (2 % MODLs) had the highest viscosity values, lowest whey separation throughout the storage period. Also, the instrumental textural characteristics of hardness and adhesiveness were negatively correlated to cohesiveness and springiness in all treatments throughout the storage period. The overall acceptability scores of the sensory evaluation revealed that, the Labneh treatments fortified with MODLs was acceptable during storage period. T3 (1.5% of MODLs), fresh as well as, stored was the significantly most accepted, while the control sample was the least. The obtained results showed that the MODLs had good significant impact on the physiochemical, texture and sensory properties of resultant Labneh made from camels' milk during storage. In addition, it can be serves as innovative camels' milk product in desert areas.

Key words: Camels' milk Labneh, chemical composition, *moringa oleifera* dry leaves, rheological properties, sensory evaluation