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PRODUCTION OF LABNEH WITH PROBIOTIC CULTURES

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ABSTRACT

Labneh is a traditional concentrated yoghurt popular in the middle east. The objective of this study was to develop and assess a probiotic Labneh. Cultures of ABT-7 (*Lb. acidophilus*, *Bb. sp.* and *St. thermophiles*), YC- X11 (*St. thermophiles* and *Lb. bulgaricus*) with *Lb. casei* or ABT-7 with *Lb. casei* were used. The physiochemical, rheological, sensorial characteristics and cultures viability in Labneh were assessed at 0, 15 and 30 days of refrigerated storage at 4 °C.

The results indicated continued increases in total solids during the storage period, especially in Labneh with cultures containing *Lb. casei*. The pH decreased obviously during 15 days of storage, continued with slight decreases up to the end of storage. Continued increases in viscosity were determined up to the end of storage period. Labneh with probiotic cultures had higher viscosity, especially in labneh with ABT-7 cultures. Also, highest texture parameters including hardness, adhesiveness, cohesiveness, gumminess and chewiness were determined in Labneh with ABT-7 culture. The growth and survival of both *Lb. acidophilus* and *Lb. casei* were higher in labneh with ABT-7 and *Lb. casei* cultures, while, the opposite was determined for *Bb. sp.* Lower growth but higher survivals were determined for *St. thermophilus* in Labneh with *Lb. casei*. The growth and survival of both *Lb. acidophilus* and *Lb. casei* were higher in Labneh with ABT-7 and *Lb. casei* cultures. The maximum total score for sensory evaluation was gained for Labneh manufactured with ABT-7 and *Lb. casei* culture. These results suggest production of probiotic Labneh with ABT-7 and *Lb. casei* cultures.

Key words : Probiotic , Labneh, ABT, *Lb. casei*