Sensory descriptive profiling and consumer acceptance of made-in-transit (MIT) set yoghurt

ABSTRACT

Shelf-life loss during the distribution of food is a growing problem for the food industry as manufacturers centralize production into large manufacturing units and expand their markets. Adaptation of made-in-transit (MIT) concept that changes the transportation of food from merely relocating products to a productive system would permit production during distribution. This concept could maximize product shelf-life and providing the consumer with the freshest product. Alteration of some yoghurt processing parameters (e.g. milk base, heat treatment, starter culture concentration and fermentation temperature) was able make the yoghurt suitable for an MIT product. Therefore, this work is to determine the sensory characteristic of two manufacturing methods for MIT set yoghurt. Manufacturing method (1) consisted of a skim milk base fortified with milk protein concentrate (MPC) inoculated with a 0.2% (v/v) inoculum of S. thermophilus STM5 and L. acidophilus LA5 (STLA) in a ratio of 1:1. Manufacturing method (2) consisted of a skim milk base fortified with sodium caseinate (NaCN) inoculated with a 0.002% (v/v) inoculum of STLA. In both manufacturing methods, fermentation was at 25°C for 168 h. Sensory evaluation of the yoghurts manufactured by each method was compared with standard set yoghurt. There were no significant differences ($p > 0.05$) between the two MIT set yoghurts on sensory evaluation (descriptive test) yet they were significantly different ($p < 0.05$) to the standard set yoghurt. MIT set yoghurts scored better than standard set yoghurt for overall acceptance.

Keyword: Yoghurt; Made-in-transit; Descriptive test; Acceptance test