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**Development of a healthy low-fat yoghurt fortified with vitamin A, D and E
Abstract**

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Present study was carried out to develop “A Healthy Low Fat Yoghurt fortified with vitamin A, D and E” as a great response to the consumer choice towards the low fat foods. Hence, three formulae were developed according to standard recipe for low fat yoghurt (fat contents were 1.5%, 1.8% and 2.0% respectively), using standardized raw milk, sugar, gelatin, vanilla essence as main ingredients. Moreover, each of the above three was added with the same levels of three fat soluble vitamins; Vitamin A (670IU), Vitamin D (66.9IU) and Vitamin E (3.64mg) and fermented with probiotic starter culture.

Microbiological analysis results revealed that all three products were excellent in their microbiological quality. Chemical analysis was carried out to make sure that all three products are in accordance with their specification in Fat content, Total Solids content and Acidity.

A sensory evaluation by a panel of 25 judges was conducted on 7- point hedonic scale in order to determine the formula with the best overall quality. Results of sensory evaluation revealed that formula with 2.0% fat content was the formula with the best overall quality. Further chemical analysis of the selected sample from taste panel analysis (Sample with 2% fat content), revealed it is acceptable in its nutritive quality, with 7.8% of protein content, 9.08% sugar basis carbohydrate content and 2.0% fat content. There was no destruction of added vitamins during processing of the yoghurt. It supply more than the minimum requirement of vitamin A, D and E, for an adult per day.

Examination of the effect of added vitamins pre-mix on the keeping quality of the selected sample, by assessing results of development of acidity and yeast and moulds, revealed that there was no any significant effect of adding Vitamin pre-mix on the keeping quality of the product.

According to results Yoghurt with 2.0% fat content was the best sample for Healthy Low- Fat Yoghurt.

Key words: standardized raw milk, fat soluble vitamins, probiotic starter culture

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