

# FOOD SAFETY & REGULATORY MEASURES

June 05-07, 2017 Milan, Italy

## Fortification of yogurt milk with oleaster (*Elaeagnus angustifolia* L.) flour enhances overall quality of yogurt

Nihat Akin and Sümme Aydin  
Selcuk University, Turkey

Yogurt is well known for its health promoting properties. Oleaster has been suggested to increase the growth of probiotic bacteria during yogurt production. However, studies on the effects of dried fruit flour on physico-chemical characteristics of yogurt are limited. This study aimed to evaluate the effects of oleaster flour on the overall quality of yogurt and anticipate inventing a new fiber rich yogurt product. In this study, 3.5% whole milk was supplemented with 1-3% (v/w) oleaster flour, inoculated with a yogurt culture (Danisco YO-MIX 883 LYO 500 DCU), fermented and stored at 4°C. The control and fortified samples were analyzed for pH, total titratable acidity (TTA), viscosity, and microbial counts over a 28-day storage period (4°C). The color test, viscosity, and sensory evaluation were also performed at the initial day of production. Results demonstrated that oleaster flour stimulated the growth of *Streptococcus thermophiles* and *Lactobacillus delbrueckii subsp. bulgaricus* after the initial fermentation and maintained a greater bacterial count over a 28-day refrigerated storage. Furthermore, there was a significant ( $p < 0.05$ ) decrease in pH and enhancement in TTA in oleaster flour containing yogurt across the whole storage period. Fermentation time was decreased by 1.5 hours with inclusion of oleaster flour (pH: 4.5). The color and viscosity value were almost constant and there was not a significant ( $p < 0.05$ ) difference between the control sample and the fortifying samples. There were similar results on sensory properties comparing the plain yogurt and yogurt with 1% and 2% of oleaster flour. The results suggest that oleaster fortified yogurt offers an alternative new fermented dairy product and provides a better quality.

### Biography

Nihat Akin has completed his PhD in Chemical Engineering department at Loughborough University of Technology, United Kingdom. He has been working as a Professor for 15 years and been working as Head of Department of Food Engineering at Selcuk University. He has published more than 100 scientific papers about Milk Products and Microbiology.

nakin@selcuk.edu.tr

### Notes: