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Effect of UHT treatment on liquid egg yolk

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Eggs and their products are easily perishable items because of their high nutrients content, especially Protein. Many efforts have been made to increase the shelf-life of these products however; Heat Treatment according to literature is the most promising although egg and its products are heat-sensitive. Thus, either a very low temperature or very high one in a short time are needed. Ultra-Heat Treatment (UHT) is one of the well-known technologies that are used for heat-sensitive products. The aim of the study is to investigate the effect of UHT treatment (approximately 67°C for 190 seconds) on Liquid Egg Yolk (LEY). During twenty-one days, the colour was measured every seven days. We also studied its effects in damaging proteins using DSC (Differential Scanning Calorimetry) and viscosity. On the 14th day of storing, the reference samples (raw LEY) showed a high microbial contamination resulting in stopping their tests while the UHT treated samples retained their properties until the 21st day. The Colour-difference (ΔE*ab) was upper than (3). The endothermic peak of treatment egg yolk took a place after the endothermic peak of raw egg yolk. İn the last day of storing, it was obvious that the viscosity of egg yolk had decreased. The effect of UHT treatment is clearly shown on the DSC and viscosity graphs. And the Colour-difference (ΔE*ab) is very noticeable.

Biography

Ayari Emna has completed her engineering degree in Food Science at the age of 25 years at Université Libre de Tunis and currently doing her Doctoral Studies in Faculty of Food Science at Szent Istvan University, Hungary. She's working on how to extending the shelf-life of egg products without occurring any damaging to the egg Proteins.

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