



E435

Effect of high hydrostatic pressure treatment on liquid whole egg with nisin and lysozyme

Emna Ayari ; Csaba Németh ; Adrienn Tóth ; Noori Khabat; László Friedrich
Centre of Food Technology, Institute of Food Technology and Biotechnology, Hungarian University of
Agriculture and Life Sciences, Budapest, Hungary Capriovus Ltd.,

Day by day, the consumers show more interest in healthy and nutritive food products. Usually, heat treatment is the most widely used process to prevent food alteration. Although, it also showed that high temperature could damage thermo-sensitive food (and thermo-sensitive food materials like proteins). Egg and its products are one of these products that studies showed that egg proteins are damaged by temperatures used in conventional heat treatments. To prevent this, minimal processing technologies as High Hydrostatic Pressure (HHP) are taken into consideration. To reinforce the conservation ability of HHP treatment, some additives can be added to Liquid Egg products. The aim of this study is to determine the effects of different pressures of HHP treatment and nisin and lysozyme concentrations on the rheological properties of Liquid Whole Egg (LWE). For these purposes, a central composite design was carried out with pressures between (226-400 MPa) and nisin and lysozyme concentrations (between 0-6.35 and 0.16-1.5 mg/l consecutively). For the determination of rheological properties, an Anton Paar MCR 92 rheometer was used with a CC27 measuring system between 10 and 1000 1/s shear rate at 20 °C.