

ohmic heating of

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ABSTRACT

Ohmic heating is a promising heating method for the aseptic processing of fluid containing particles. The values of electric conductance of both the liquid and the solid phases are primary factors to be considered in the setting up of the heating process. This process can reduce temperature difference between liquid and solid particles. In this study, the effective factors of multiple particulate food, such as particle type (high/ low conductivity), particle number, particle mixing ratio, viscosity were studied. There are two parts in this study: 1. ohmic heating treatments of the One kind of particle, fixed particle ratio of high/ low conductivity and the different particle ratio of high/low conductivity by 3 % NaCl solution to be load beaving, . The results showed that high conductivity of particles, it heating were higher, and solid particle numbers conductivity. The other is to observe the changes of the heating processes, the temperature difference of the solid and fluid particles and the change of the whole conductivity by simulate multiple particle food of the same or different mixed ratio of the high and low conductivity. The result shows the single particle of high conductivity with higher heating rate. The conductivity increased with the particle numbers reduced. Besides, the higher ratio of the high conductivity particles, with the higher whole conductivity and higher heating temperature in the high and low mixing particles.

Keywords : ohmic heating ; conductivity

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