

Physical property changes are one of the important effects caused by thermal processing of foods. Some of the undesirable effects caused by thermal processing can be reduced by using HTST (High temperature-short time) techniques. Ohmic heating is a recently developed food processing technique. It falls into the category of HTST (High-temperature-short-time) processing techniques due to quick heating. In ohmic heating, the passage of an alternating electric current causes internal generation of heat due to resistance afforded by the food material. The process being a HTST technique, ohmic heating should demonstrate higher quality retention. In this study temperature variation of three different food materials, carrot, beetroot and potatoes, was studied during ohmic heating using a heating medium and an indirect heating method, (250ml of 2.12 g/l Sodium Chloride (NaCl), electrical conductivity =  $4.98 \times 10^{-3} \text{Scm}^{-1}$ ). Structural changes of carrot were studied during both processes. 3cm x cm x 3cm cubic food particles were heated ohmically using two stainless steel electrodes and an alternating current (240V, 50 Hz) and the results show that the increasing of temperature inside the cube was faster than the medium. Also in the indirect heating method, less damage was caused to the material than in the direct heating method.