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An On-Line Inverse Method for Estimation of Thermal Properties of Food Which Are Responsible to Predicting Temperature History during Heating/Freezing

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Most of the published methods for estimating temperature history during heating/cooling/freezing solid food require data on thermal properties and any relevant heat transfer coefficients. However, there are some difficulties in obtaining thermal data for use in industrial heating/cooling/freezing of food. In this study, the development of a new procedure for estimating the temperature history during heating/cooling/freezing of food is presented. This is a procedure which does not require the knowledge of thermal data of the food to be heated/frozen. This procedure collects a series of time/temperature data of the food in the early stages of heating/freezing, analyzes these data to p

parameters which are responsible for heat conduction, and predicts relationship for the remainder of the heating/cooling/freezing phases

Keywords: [temperature history](#), [inverse method](#), [optimum control](#), [freezing](#)

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