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Thermal inactivation of *Enterococcus faecium*

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Data for thermal inactivation of working suspension of *Enterococcus faecium* in model solutions were acquired and used to develop a mathematical model for thermal inactivation of the bacterium. The model is valid within the water activity range 0.97 to 0.99; pH range 6.0 to 7.6; temperature range 60 ° C to 65 ° C, and was determined for the microorganism concentration ranges of 102 per ml to 108 per ml of the model inactivation solution. An Excel procedure was developed in Visual Basic language which enables the calculation of the final concentration of the microorganism from the input data for pH, a_w, $\log N_0$, temperature, and holding time of the treatment. The proposed model was verified in experiments using cow and human

milks. With cow milk, the correspondence between the experimental and the predicted data is highly satisfactory. With human milk, the model predicts a smaller effect of heating than is that manifested experimentally.

Keywords:
thermal inactivation model; *Enterococcus faecium*; verification

[fulltext]