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Drying of bioactive products: Inactivation kinetics

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Abstract

A comprehensive experimental study of the drying of enzymes (E) and gin seng (GS) biomaterials provides a basis for mathematical modelling of the drying process with respect to the inactivation kinetics. Temperature of 20-120 °C was established for a number of enzymes while removing moisture with no thermal destruction. The kinetic parameters of inactivation were obtained for dry and wet enzymes and gin seng biomaterials. The software for kinetic parameters calculations for drying and inactivation of enzymes and gin seng biomaterials was drawn up, tested and verified experimentally. Methods of drying, design of dryers and regimes of drying of pure enzymes and gin seng biomaterials with minimum loss of bioactivity are suggested on the basis of model analysis and experimental data.
