

Experimental Study on Drying Parameters of Freeze Drying Systems

Authors : Ali Osman Suiçmez, Emrah Deniz

Abstract : In this study, control experiments were made on a freeze drying system of which were built a prototype. In experiments, apple slices in different geometrical shapes were dried and drying curves were gained. Then, the shapes which were the fastest for drying were determined. Twenty samples for each apple shapes were put in the prototype and dried. After the experiments, the humidity ratio of the samples and water activity values of the samples have been obtained. Obtained results show that the prototype is working and by comparing the results the shape which dried fastest was determined.

Keywords : freeze drying, vacuum, energy consumption, drying process, apple

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