

**Kajian Kinetika Pengeringan Dan Analisis Eksergi Pada Proses Pengeringan
Kerupuk mawar Menggunakan Microwave**
*(Study of Drying Kinetics and Exergy Analysis in the Drying Process of Rose
Crackers Using Microwave)*
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ABSTRACT

Rose crackers are starch-based food products with high water content, so they require an effective drying process to improve quality and shelf life. The drying process using conventional methods tends to take a long time and is less efficient in energy utilization. This study was conducted with the aim of evaluating the kinetics of the drying process and the exergy efficiency of rose crackers using a microwave and the use of low, medium low, and medium high power variations. The coefficient of determination (R^2), Sum of Squared error (SSE), and Root Mean Squared Error (RMSE) values were used to analyze the drying results data, several drying mathematical models were used to find the best model. The results showed that increasing microwave power can accelerate the reduction in water content and increase the drying rate with a kinetic model that is able to represent the data well based on statistical evaluation values. These results indicate that the use of the microwave drying method can improve drying performance, and the kinetic model used is able to describe the drying characteristics of rose crackers well.

Keywords: microwave drying, drying kinetics, rose crackers, exergy, energy efficiency