Model Kinetika Pengeringan Pisang Kepok (*Musa paradisiaca L.*) dengan Menggunakan Pengering Microwave (*Kinetic Model for Drying Kepok Bananas (Musa paradisiaca L.) Using a Microwave Dryer*)

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ABSTRACT

One of the horticultural commodities from the fruit group that is currently quite considered is the banana plant. One type of banana that is often consumed is kepok banana. Kepok bananas are also a type of banana that has abundant production. Post-harvest handling of Kepok bananas is still limited. To overcome this problem, there is an alternative to drying. Drying is one way to increase the shelf life of Kepok bananas. For this reason, a drying method is needed that can speed up the drying process. One solution is the use of a microwave. Research on drying Kepok bananas needs to be carried out to find several drying kinetic models. This aims to determine the most appropriate mathematical model of the kinetics of the kepok banana drying process among the many existing models. Fifteen mathematical models were chosen to simulate the drying characteristics of Kepok bananas with three different energy levels (low, medium, and medium high) in the microwave. The results show that the Verma model is the most accurate model for describing the drying of Kepok bananas. Each level of energy level influences the browning reaction and the Deff value, where the higher the level the BI value and the Deff value will be greater. The BI value at the low energy level is 32,63, medium is 35,27, and medium high is 36. Meanwhile, the Deff value at the low energy level is 6.5 x 10^{-9}, medium is 15.2 x 10^{-9}, and medium high is 22.4 x 10^{-9}. This research is suitable for use in industries that produce banana flour because this research models the banana drying process.

***Key Word**: Model, kineticts, drying, microwave*