



Influence of Microwave Power on Physico-Chemical Characteristics of Aloe Vera (*barbadensis Miller*) During Microwave Drying

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Abstract: The objective of this present study is to evaluate the influence of different microwave power (180 – 900 W) with an interval of 180 watts on the physico-chemical properties of aloe vera samples during microwave drying. The results showed that, the color of the aloe vera samples were not affected by the microwave treatment. On the other hand, the rehydration ratio, water holding capacity, shrinkage, total phenolic and flavonoid content was significantly affected by different microwave power level and it was decreased while increasing the microwave power level during drying. From the results, it was found that, the microwave treatment can increase the rate of mass transfer, and enhance the solvent penetration into the cells by disrupting the cellular walls and hydrophobic bonds in the cell membrane, it may lead to a high permeability of samples and decreased the rehydration ratio, water holding capacity, shrinkage, total phenolic and flavonoid content of dried aloe vera samples when compared with fresh materials.

Keywords: Microwave, Drying, Power, Physico-Chemical properties, Total phenol content, Total flavonoid content.

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