

ABSTRACT

The main objective to this study was to determine of the drying time of asparagus slices in hot air oven and microwave oven and to optimize drying time and effective moisture diffusivity was done in terms of process parameters. The drying time of asparagus slices varied from 140 to 1485 min for hot air oven and from 75 to 2580 sec for microwave drying. Effective moisture diffusivity of asparagus was between from $0.20 \times 10^{-10} \text{ m}^2/\text{s}$ to $2.90 \times 10^{-10} \text{ m}^2/\text{s}$ for hot air oven and $8.89 \times 10^{-10} \text{ m}^2/\text{s}$ to $75.26 \times 10^{-10} \text{ m}^2/\text{s}$ for microwave oven. The results presented indicated that process parameters were significantly important on drying time and effective moisture diffusivity for hot air oven drying. The less drying time was obtained in microwave oven compare to hot air oven. Drying time was affected by the concentration of CaCl_2 and thickness of slice and effective moisture diffusivity was significantly influenced by the microwave power and slice thickness during microwave drying.