

Alibas I, Akbudak B & Akbudak N (2007) Microwave drying characteristics of spinach. *Journal of Food Engineering* 78(2): 577-583.

### **Abstract**

Spinach leaves (*Spinacia oleracea* L. cv. "Meridian") with 50 g weight and 9.01 humidity on dry basis were dried in microwave oven using eight different microwave power levels ranging between 90 and 1000 W, until the humidity fell down to 0.1 on dry basis. Drying processes were completed between 290 and 4005 s depending on the microwave power level. Energy consumption remained constant within the power range of 350–1000 W, whereas 160 and 90 W resulted in significant increase in energy consumption. In this study, measured values were compared with predicted values obtained from Page's thin layer drying semi-empirical equation. The best quality in terms of colour and ascorbic acid values were obtained in the drying period with 750 W microwave power. Microwave power of 750 W for 350 s produced the least energy consumption and the energy requirement for drying was only 0.12 kW h.

**Keywords:** Ascorbic acid; Colour; Dehydration; Microwave drying; Spinach