

Abstract

Flexible food packages should be characterized by an adequate permeability for water vapor and gases. In this work we have constructed a diffusion cell for the measurement of gas permeability, and we have determined O_2 (P_{O_2}), CO_2 (P_{CO_2}) and water vapor (P_{H_2O}) permeability of 92 flexible packages used commercially in Mexico in a variety of foods classified in 17 groups. The diffusion cell was constructed from acrylic plates and was conditioned with 4 valves and a manometer for pressure control. It is composed of 2 compartments separated by the film to be evaluated. The values of P_{CO_2} and P_{O_2} were found to be in the range of those reported for similar packages, indicating that the constructed diffusion cell is reliable. The cost of the construction of this cell was very low, and the time required for analysis is shorter compared to standard methods.