

Abstract

A procedure permitting the simple determination of the O₂ and CO₂ permeance of pouches used to pack respiring foods under real conditions is described. It is based on the measurement of the atmosphere changes in pouches filled with a gas mixture whose composition is calculated as a function of the permselectivity of film. The experimental curves (p_{CO_2} and $p_{(21-\text{O}_2)}$) versus storage duration are submitted to an exponential regression. The exponential coefficients are directly proportional to the O₂ and CO₂ permeances of the films. The method is designed for microperforated films (permselectivity close to 1), but can also be used to approximate the permeances of non-perforated films. The large variability of the permeances of the microperforated films is due to the heterogeneity of perforation density and diameter.