Title	Oxygen Diffusivity in Avocado Fruit Tissue
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Abstract

The oxygen mass diffusion coefficient in pre-climacteric 'Hass' avocado fruits tissue at 20 °C was evaluated. A respiration–diffusion model was developed by using a non-steady–state mass balance routine, in combination with the second law of Fick and the Michaelis–Menten enzymatic kinetic theory. Diffusivity was determined by simulation trials where a set of quantities for this parameter was proposed during the model solution, until a predicted O_2 partial pressure below the skin agreed with experimental information; the resulting value was $2{\cdot}2\times10^{-9}$ $m^2 s^{-1}$. The effect of the diffusion on the respiration parameters is discussed. Oxygen internal concentration profiles were used to suggest a minimal permissible coating permeance for an adequate fruit modified atmosphere storage.