

selected sweet persimmons from Jinyoung area were used for the experimentation. Respiration characteristics and packaging materials with economic consideration were examined. After selecting possible packaging materials, permeation characteristics with temperature changes were studied and made as formula to make easy to calculate package-product interaction. The formula were used to match with known respiration rate models, and new model was verified experimentally. The results show that MAP modeling of sweet persimmons is relatively easy since the fruits have usually low respiration rate and be stored at lower temperature.

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Model development to design modified atmosphere packaging of Mandarin oranges

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The aim of this study was to develop a model that could be used in the design of modified atmosphere packaging (MAP) for Mandarin oranges. Respiratory data at 5, 10, 20°C for mandarin oranges were gathered and altered for create useful respiration model. The maximum rate of oxygen uptake increased with increasing temperature. The packaging materials were conventional low density polyethylene and polypropylene with anti-fog, and anti-fungi treatments, and thickness was 30 μm and 50 μm . Permeability tests were performed to find their oxygen, carbon dioxide, water vapor transmission rate as increases in temperature. Test results were then converted to logarithm format for MAP modeling. Optimum gas composition in the package system for fruits were set according to literature and upper or lower limits of oxygen and dioxide established. To predict gas composition at certain storage time, weight of fruits, film thickness, film type, and other variables, respiration rate was studied at various storage conditions. The validity of the model was tested experimentally by observing actual atmospheric changes inside packages. It is concluded that the strategy developed is of use in designing dynamic gas exchange MAP systems, and also has potential uses in similar agricultural products.

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아쿠아이온을 이용한 농산물의 선도 유지

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기존 저온저장고의 가습방법을 개선하고 아울러 음이온을 농산물의 선도 유지에 이용하고자 아쿠아이온발생시스템의 설계, 제작이 레너드효과를 응용하여 이루어졌다. 시스템의 아쿠아이온의 발생