Horticultural Research (Japan)
Vol. 9 (2010) , No. 1 99-105

Change in Fruit Characteristics during Ripening and Packaging on Fruit Ripening in 'Koshisayaka' Pears

Shuji Chino[1)], Yuuki Ohta[1)], Asuka Futatsugi[2)], Yotaro Saito[1)], Sy Ohtsuka[1)], Yu Sakai[1)], Tatsuya Matsumoto[3)] and Kiyohide Kojima

1) Graduate School of Science and Technology, Niigata University
2) Faculty of Agriculture, Niigata University
3) Horticultural Research Center, Niigata Agricultural Research Inst

(Received March 15, 2009)
(Accepted May 25, 2009)

The peel color index and soluble solid concentration of 'Koshisayal increased during ripening at 20°C, while the flesh firmness, elasticity coefficient and elasticity index of the fruit decreased. When the fruit ripeness stage 12 days after harvest, the values of those characteris index), 12.7 Brix % (soluble solid concentration), 1.4 N (flesh firm

(elasticity coefficient) and 1.1×10^7 (viscosity coefficient). In additi
that were calculated from the frequency of second resonance and th
9.5×10^6 and 17.4×10^6, respectively. Film packaging of the pear
of moisture loss, yellowing of the peel, softening of the flesh and sac
during ripening. The characteristics of the film-packaged fruit 12 da
(peel color index), 20% (potassium iodide reaction), 12.5 N (flesh
(elasticity coefficient), 15.0×10^7 (viscosity coefficient), 29.5×10^6
(Emf_3). These findings clarify the ripening characteristics of 'Koshis
the delaying effect of film packaging on fruit ripening. The delaying e
suggested to be due to decreased level of oxygen in film. Furthermo
nondestructive method for estimating the ripening stage is suggested
between the elasticity index and fruit softening.

Key Words: elasticity coefficient, elasticity index, flesh firmness, r
viscosity coefficient

[PDF (792K)] [References]

Downlo

To cite this article:

Shuji Chino, Yuuki Ohta, Asuka Futatsugi, Yotaro Saito, Syun Ku
Yu Sakai, Tatsuya Matsumoto and Kiyohide Kojima. 2010. Chang
during Ripening and Effect of Film Packaging on Fruit Ripening in '
Res. (Japan) 9: 99-105 .