

Title Temperature conditioning for ripening induction of 'Rocha' pears
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Citation Abstracts of 7th International Postharvest Symposium 2012 (IPS2012). 25-29 June, 2012. Putra World Trade Centre (PWTC), Kuala Lumpur, Malaysia. 238 pages.
Keywords pear; ripening

Abstract

'Rocha' pears were harvested in January 2012, when the fruit in the orchard reached commercial maturity, defined by flesh firmness of 67 N and prevalence of 6 and 7 rates in the starch scale (from 1 to 10). Six 10-fruit samples were kept at $24 \pm 1^\circ\text{C}$, while the remaining 42 10-fruit samples were placed in cold room at $0 \pm 1^\circ\text{C}$. After 3, 6, 9, 12, 15, 18 or 21 days six 10-fruit samples were removed from storage and placed at $24 \pm 1^\circ\text{C}$. After five days at room temperature, flesh firmness, epidermis and seed color, rate of starch and soluble solids were evaluated. Decrease in the flesh firmness began after nine days of temperature conditioning followed by five days at room temperature. Fruit reached 37.4 N and 12.6 °Brix after 21 days of conditioning. There was an increase in the a^* values and a reduction in the Hue angle after six days of temperature conditioning, indicating the change of the epidermis color. The correlation was negative to flesh firmness and lightness (L^*) attributes. Fruit placed directly at 24°C showed 100 % of immature seeds (beige color), whereas the fruit kept for 12 days at temperature conditioning showed 83.3 % of seeds in the same condition. After 18 days of conditioning, 85 % of the seeds showed light brown color and 78.3 % had dark brown color after 21 days of conditioning at 0°C . 83.3 % of the fruit placed directly at 24°C showed rates of starch between 7 and 9 and after 15 days of conditioning all the fruit set rates 9 or 10. The 'Rocha' pears harvested at appropriate maturity present quality for consumption after 21 days of conditioning at $0 \pm 1^\circ\text{C}$ followed by five days at room condition.