

Title Low temperature reduces the core breakdown disorder in Asian pear (*Pyrus pyrifolia*) fruits
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Abstract

The effect of low temperature on core breakdown disorder in 'Niiitaka' pear (*Pyrus pyrifolia*) fruits during storage was investigated. The severity of core breakdown disorder, ethanol, and mineral content were evaluated. Core breakdown as a postharvest physiology disorder appeared in 33.3% at 0°C after 2 months storage in 'Wonhwang' pear fruits, while it was 81.5% at temperature preconditioning and 100% at 5°C. The tendency was similar in 'Niiitaka' pear fruits. The ethanol contents of core breakdown fruit was also higher compared to normal fruit. Ca contents in non-core breakdown fruit flesh were higher than those in fruit that showed core breakdown. Otherwise, N contents was reverse. Our results showed that core breakdown of 'Niiitaka' pear fruits may be a symptom of mineral content deficiency in the orchard, especially when combined with high storage temperature after harvest. Incidence and severity of core breakdown could be reduced by low temperature storage at 0°C.