

Title Guidelines for storage temperature for edible flowers
Author Hye Jin Kwon, Jeong Hee Choi and Eun Ha Yoo
Citation Abstracts of 27th International Horticultural Congress & Exhibition (IHC 2006), August 13-19, 2006, COEX (Convention & Exhibition), Seoul, Korea. 494 pages.
Keywords visual quality; chilling injury; package; petal wilting; shelf life

Abstract

Unlike freshly marketed crops, there is no information or guidelines identifying temperature and shelf life factors limiting quality and no guidelines for storage of edible flowers. Ten species of edible flowers were stored in 30 mm thickness low-density polyethylene film bags at 0, 5, 10, and 20°C, all within $\pm 1^\circ\text{C}$. Flowers were rated for visual quality each day for 14 days using a scale of 1-5 (5 being the highest quality and 1 or 2 being unmarketable). The index of quality declined due to factors such as water soaking, necrosis, surface mold, discoloration and petal wilting. Daisy (*Bellis perennis*), dianthus (*Dianthus sp.*) and begonia (*Begonia semperflorens*) flowers showed similar losses in quality and were all rated a 4 or 5 when stored at 0 and 5°C after 7 days, while daisy were still marketable after 14 days. Pansy (*Viola tricolor*), pot marigold (*Calendula officinalis*) and nasturtium (*Tropaeolum majus*) flowers stored at 0-5°C were marketable, rated as 3 or 4, after 7 days. Torenia (*Trenis fournieri*) and impatiens (*Impatiens sp.*) flowers were marketable after 4 days when stored at 0 and 5°C. Mallow (*Malva sylvestris*) and periwinkle (*Vinca rosea*) flowers rated as 3, after 4 days at 0 and 5°C. *Impatiens* and *Vinca* showed chilling injury symptoms when stored at 0 and 5°C. There was no significant production of CO₂ and ethylene from the ten species of edible flowers. When stored at 10-20°C, flowers were unmarketable after 4 days except daisy and dianthus.