Abstract

Blueberry fruit can be easily stored at low temperature and high R.H., for nearly one month, without significant loss of quality. There are differences in storability between cultivars. A screening research was carried out in 2004 to evaluate the storability of 10 different cultivars, some of them produced in different localities, in the plain or on the hills. Some cultivars (Barkeley, Brigitte, Elizabeth, Elliott, Lateblue and Ozarkblue) were highbush (*V. corymbosum*) and some (Briteblue, Centurion, Powderblue and Tifblue) were rebbiteye (V. ashel). 15 plastic boxes (each containing 250 grams of fruits) of each cultivar were harvested and immediately cooled at 0 ºC. Within 12 hours the boxes were divided in five groups and stored in five different atmospheres: 2%0_2 and 10%$C0_2$; 4%0_2 and 10%$C0_2$; 2%0_2 and 14%$C0_2$; 4%0_2 and 14%CO_2; Control, 21%O_2 and 0%$C0_2$. Control boxes were checked monthly for decay, withering and general appearance of fruit; the boxes in the different atmospheres were checked after 2, 3, or 4 months' storage. Weight loss, color, firmness, number of decayed fruits, soluble solids, pH and acidity of juice of fruits were measured and general appearance and commercial quality were evaluated. All controlled atmospheres tested extended storability of fruits of all cultivars as compared to control. High differences in storability were found between cultivars: generally rabbiteye cultivars gave better results than high bush ones. High CO_2 significantly reduced decay while increased fruit acidity and pH of juice. The responses of different cultivars to C.A. composition are discussed.