

**Title** Change in anthocyanin concentrations in red apricot fruits during ripening  
**Author** Sylvie Bureau, Catherine M.G.C. Renard, Maryse Reich, Christian Ginies and Jean-Marc Audergon  
**Citation** LWT - Food Science and Technology, Volume 42, Issue 1, 2009, Pages 372-377  
**Keywords** *Prunus armeniaca* L.; Maturation; Pigments;  $\beta$ -Carotene; HPLC-DAD-MS

#### **Abstract**

Here we report on accumulation patterns of anthocyanins and of  $\beta$ -carotene during fruit maturation, between 82 and 125 days after flowering, of two apricot (*Prunus armeniaca* L.) cultivars, A3576 and A3751. Both cultivars displayed an intense red colour of the skin but differed in their genetic background. The pigments were extracted from skin and flesh, separately, and analysed using HPLC-DAD-MS. Out of three anthocyanins detected here, the major compound, cyanidin-3-O-rutinoside was present at 75%. The two minor compounds were cyanidin-3-O-glucoside and peonidin-3-O-rutinoside. This is the first time that peonidin-3-O-rutinoside has been detected in apricot fruit. During maturation, A3751 accumulated anthocyanins in both skin and flesh, whereas anthocyanins were present only in the skin of A3576. The skin anthocyanin content was higher in A3751 ( $296 \text{ mg kg}^{-1}$ ) than in A3576 ( $41 \text{ mg kg}^{-1}$ ). Maximum anthocyanin levels were attained after 108 and 118 days of flowering in A3751 and A3576, respectively, in conjunction with loss of firmness and red colour acquisition on the un-blushed side of the fruit. At the end of ripening, the  $\beta$ -carotene flesh concentration reached  $5 \text{ mg kg}^{-1}$  in A3576 and  $15 \text{ mg kg}^{-1}$  in A3751. A significant effect of environment was observed on the anthocyanin content in the two cultivars.