

Abstract:

An unstable temperature regime during transportation and realisation of frozen food are common. Stability of ascorbic acid and anthocyanins during frozen storage at temperatures above optimum in different cultivars of raspberries and blackcurrants were tested in this study. Significant changes of ascorbic acid and anthocyanin content during treatment were found in both raspberries and blackcurrants. The losses of ascorbic acid after the treatment in blackcurrants were insignificant, whereas in almost all raspberry cultivars the losses were from 83 to 88%. The content of anthocyanins in raspberries decreased after frozen storage, however, it increased in most of the blackcurrant cultivars, which can be explained by easier extraction of anthocyanins from partly degraded berry skins. In conclusion, raspberries are very sensitive to temperature regimes during frozen storage, whereas blackcurrants are tolerant to frozen storage even in temperatures above optimum. Freezing of blackcurrants before juice processing may be advantageous because of easier colour extraction from berry skins. The best blackcurrant cultivars for fresh consumption was 'Chornij Kentavr' and 'Joniniai', and for frozen storage prior to processing, 'Ben Alder'.