Title	Effect of high hydrostatic pressure treatment on post processing antioxidant activity of fresh Navel orange juice
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Abstract

Total antioxidant activity of high pressure processed (600 MPa, 40 °C, 4 min) compared to thermally pasteurised (80 °C, 60 s) fresh Navel orange juice was studied as a function of storage at different isothermal conditions (0–30 °C). The contribution of ascorbic acid – among the other antioxidant compounds of orange juice – to the total antioxidant activity was also evaluated. The reaction rate constant of *n*th order kinetics of the decolourisation of ABTS radical cation solution, after addition of orange juice, was used as a measure of the total antioxidant activity. A mathematical description of the above reaction rate constant as a function of storage temperature and time was established. Total antioxidant activity of both juices decreased during storage mainly due to ascorbic acid loss. High pressure treatment led to a better retention of the antioxidant activity of orange juice compared to conventional pasteurisation.