

Title Influence of ripening and astringency on carotenoid content of high-pressure treated persimmon fruit (*Diospyros kaki* L.)

Author Lucía Plaza, Clara Colina, Begoña de Ancos, Concepción Sánchez-Moreno and M. Pilar Cano

Citation Food Chemistry, Volume 130, Issue 3, 1 February 2012, Pages 591–597

Keywords Persimmon; Carotenoids; High-pressure processing; Ripening; Astringency

Abstract

Rojo Brillante is an astringent variety of persimmonfruit that needs a de-astringency treatment (95% CO₂/20 °C/24 h) before commercialisation to improve its sensorial quality. This fruit is a good source of bioactive compounds, such as carotenoids. Effects of high-pressure processing (HPP) (200–400 MPa/25 °C/1–6 min) on carotenoidcontent of astringent and non-astringent persimmonfruits at two maturity stages (III and V) were studied. With regard to control samples, non-astringent fruits at maturity stage V, showed the highestcarotenoidcontent and vitamin A value. In general, HPP at 200 MPa produced a statistically significant increase in extracted carotenoidcontent for astringent samples (up to 86% and 45% at maturity stages III and V, respectively), whereas no significant differences or even a decrease was observed for non-astringent ones or those treated at 400 MPa. HPP of astringent persimmonfruit at 200 MPa/25 °C/6 min showed the best result in terms of carotenoid extractability. Therefore, HPP could be a useful tool to produce an improvement on the extraction of potentially health-related compounds and, in consequence, to modify their bioaccessibility.