Title The Effects of UV-C and hot water treatments on total phenolic compounds of juice, peel and seed extracts in pomegranate

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Abstract

In this research, the effects of UV -C and hot water treatments on total phenolic compounds of juice, peel and seed extracts in pomegranate were investigated by using modified atmosphere packaging during the storage time. Fruits were divided into four groups. First group was dipped into hot water at 53°C for 3 minutes duration. Second group was exposed to UV -C light (254 nm) dose at 3.6 kJm^{-2}. In order to investigate the effects of combined hot water and UV-C treatments, third group fruits were dipped into hot water at 53°C for 3 minutes duration followed by UV -C treatment. Untreated fruits were used as control. After treatments, pomegranates were stored at 6°C temperature with 90-92% relative humidity for six months. During the storage, changes of the total phenolic compounds were determined on juice, peel and seed extracts with Folin Ciocalteu Colorimetric (FCC) method. The results showed that the levels of total phenolic compounds changed according to treatments and fruit parts.