**Title** Innovative use of *Aloe vera* gel on ready-to-eat pomegranate arils

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**Abstract**

Pomegranate fruit is highly appreciated by consumers but less commercial than other fruits due to its difficult to peel before consumption. Then, there is a need to have available processed and ready-to-eat arils. In this work, several treatments were carried out on arils: I) Distilled water, 2) Citric acid + Ascorbic acid (I+ 1%), 3) Citric acid + Ascorbic acid (0.5+0.5%), 4) *Aloe* gel 100%, 5) *Aloe* gel 50% (v/v), 6) Treatment 2+4, and 7) Treatment 3+5. Treatments were performed by dipping solutions for 10 min and then a mass of 120 g was packed in 280 mL-pots covered with a lid. Pots were stored at 2-4°C for 12 days, and analytical determinations were made after 0, 4,8 and 12 days; sensory analysis, microbial counts, gas composition and quality attributes. For all cases, $CO_2$ and $O_2$ concentration at the end of the experiment was similar (7-10 kPa and 10-15 kPa, respectively). Following the opening of the pots, the highest scores in terms of acceptability were those arils packed with *Aloe* and acids (treatments 6 and 7), although treatments 2 and 6 induced juice leakage due to breakdown of epidermis by acidic conditions. In addition, maintenance of quality parameters in terms of firmness retention and colour was also recorded for treatments 6 and 7. Microbiologically, arils treated with treatments 6 and 7 showed the lowest counts in mesophilic aerobics and yeast and moulds (CFU < 10 g") compared with control (CFU > $10^3$ and $10^2$ g-', respectively). Overall, the best treatment for maintaining ready-to-eat arils was the combination of *Aloe* gel and Citric acid + Ascorbic acid (0.5+0.5%), which could be considered as an innovative treatment with health repercussions, due to the presence of *Aloe vera* gel.