Possible use of magnetic field and organic compounds on shelf-life and quality properties of peeled pomegranate

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Extending shelf -life and maintaining best quality in fresh cut products is mandatory to keep marketability in an acceptable range. Pomegranate (Punica granatum L.) is an important Iranian-native fruit, which many cultivars are cultivated. Two commercial cultivars of Iranian Pomegranates (‘*Shahvar Ferdows*’ and ‘*Ardestani*’) were peeled and packed in polyethylene containers and been treated with two concentrations of *Aloe vera* gel (10 and 15 %), Two different density of magnetic fields (60 and 80 millitesla) in one storage condition (9 degree of centigrade and 85 % relative humidity) in a full factorial randomized method. We aimed to examine best fresh-cut method of postharvest to find a new approach in packaging and exporting pomegranates. maybe further studies with MAP packaging would be beneficial. Titrable acidity, pH, Total soluble solids, Ascorbic acid, total anthocyanin content and total phenolics were measured. Trends of quality changes after harvest for both cultivars were similar although ‘*Shahvar Ferdows*’ was significantly superior in studied quality parameters. Albeit, differences between concentrations of *Aloe vera* gel and density of magnetic fields were not been significant in studied traits, their interaction had significant differences. 60 millitesla of magnetic field and 15% of gel had the best total acceptability. 80 millitesla of magnetic field and 15 % of gel was higher in ph and TA in both cultivars significantly but had lower concentrations of total anthocyanins and phenolic compounds in compare to 60 millitesla and 15 % gel treatment. 80 millitesla of magnetic field density and 10 % gel had the lowest quality parameters in studied characteristics.

Keywords: *Aloe ver ,* ‘*Shahvar Ferdows*’, ‘*Ardestani*’, Ariel quality, Customer acceptance