

**P-80 (81)****THE EFFECT OF WATER DEFICIENCY ON STORING CITRULLUS COLOCYNTHIS FRESH-CUT FRUITS IN DIFFERENT TEMPERATURE**

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*Citrullus colocynthis* (Colocynth) is one of the medicinal species of the Cucurbitaceae family which is native to West Asia, Arabia, the Mediterranean region, and Tropical Africa. It also found in most of Iran. The fruit's pulp is an efficient laxative, cathartic, and hydragogue due to its glucosides content like colocynthin. Since the quality losses in fresh-cut products can be completely attributable to an interaction of abiotic stress and stress-induced senescence and *Citrullus colocynthis* had a special tolerance against drought stress, the storage of fresh-cut Colocynthis fruits is high paramount. The aim of this study is to investigate the effect of water deficiency on the storage time of *Citrullus colocynthis* fresh-cut fruits. Thus, this study was carried out as a two-factorial split-plot experiment with randomized complete block. Our results indicated that the highest total soluble solids (TSS), titratable acidity (TA) content were achieved in the fresh-cut fruits treated by 80% available water (AW) after 4 and 5 weeks of storage under 5 and 10 °C, respectively. Furthermore, the lowest loss of water belonged to fresh-cut fruits under 80% and 40% AW, respectively. Also, the storage time of fresh-cut fruits that treated by 40% AW was extended up to 6 weeks in 0 °C. The lightness (L\*) of fresh-cut fruits was increased with increasing the storage time and the highest L\* was achieved at 0 °C in fruits that treated by 40% AW. Based on our results, the severe drought stress can extend the length of storage in *Citrullus colocynthis* fresh-cut fruits and also at 40% AW, fresh-cut fruits had the lowest loss of water in comparison with other treatments. The best temperature for storing of *Citrullus colocynthis* fresh-cut fruits was 0 °C.

**Keywords:** Fruit flesh color, Total soluble solids, Titratable acidity, Loss of water, Colocynth