



A Peer Reviewed International Journal of Asian
Academic Research Associates

AARJMD

**ASIAN ACADEMIC RESEARCH
JOURNAL OF MULTIDISCIPLINARY**



EFFECT OF PERFORATION AND AIR DRYING TEMPERATURE ON THE CHEMICAL COMPOSITION OF ROSA RUBIGINOSA FRUITS

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Abstract

The effect of perforation and air drying temperature on the antioxidant capacity of *Rosa rubiginosa* fruits was investigated. Before drying, half the fruit sample was perforated three times at equidistant points along the equatorial plane of the fruit, in order to speed up the drying process. Samples were dried at various air temperatures (50, 70, and 80°C), with an air velocity of 5 m/s and 5% of relative humidity. Ascorbic acid (AA), 5-hydroxymethylfurfural (5-HMF) and total carotenoids were colorimetrically determined. Fruit surface color was determined with a Minolta model CR400 colorimeter. Results show that perforation, although reduced times of processing, was not effective for preventing ascorbic acid degradation during drying. Though the extent of degradation was significant. However, final retention of AA was considerable (50%) in view of the high initial content for this fruit. Total carotenoids content remained practically constant (754 mg/kg dry basis) during dehydration, independently of perforation and drying air conditions. Moreover, development of 5-HMF was not detected under current processing conditions, and fruit surface color changes showed small variations, mainly attributable to browning reactions.

Keywords: *Rosa rubiginosa* fruits, air-drying, antioxidant capacity, chemical composition

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