

عنوان مقاله:

Evaluation of Biochemical Composition and Enzyme Activities in Brownd Arils of Pomegranate Fruits

محل انتشار:

مجله بین المللی علوم و فنون باغبانی، دوره 1، شماره 1 (سال: 1393)

تعداد صفحات اصل مقاله: 13

نویسندگان:

.Hossein Meighani - *Department of Horticultural Science, University of Guilan, Rasht, Iran*

.Mahmood Ghasemnezhad - *Department of Horticultural Science, University of Guilan, Rasht, Iran*

.Davood Bakhshi - *Department of Horticultural Science, University of Guilan, Rasht, Iran*

خلاصه مقاله:

Aril browning threatens production, consumption, and exports of pomegranates, because affected fruit cannot be externally distinguished from healthy fruit. This study compared the mineral, biochemical composition, and related enzyme activities in affected brown arils with healthy ones in 'Malase Saveh' pomegranates. The results indicated that concentrations of Cu in the aril and K, Mg, and Mn in the peel were higher in the healthy fruit than in the affected fruit. The total soluble solids, titratable acidity, total phenolics, total flavonoids, total anthocyanins, antioxidant activity, and color parameters (L^* , a^* , b^* , hue, and chroma) decreased in the brownd arils of pomegranates, whereas fruit respiration rate and acidity, peroxidase (POD), and polyphenol oxidase (PPO) enzyme activity were higher in the brownd arils. No difference was found for phenylalanine ammonia lyase (PAL) activity. There were positive correlations between total anthocyanins and both color values and total phenols, and a negative correlation between PPO and POD activities was observed. Overall, the nutritional and functional value of the affected fruit is anticipated to be far less than that of the healthy fruit.

کلمات کلیدی:

Anthocyanins, aril browning, biochemical composition, disorders

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/704993>

