RESEARCH PAPER International Journal of Agricultural Sciences, January to June, 2010, Vol. 6 Issue 1 : 61-64

Effect of storage conditions on the residual polyphenol oxidase (PPO) activity of raisins

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ABSTRACT

Polyphenol oxidase (PPO) activity profile of various morphological parts of grape was considered as an index to specify its suitability to process in the form of raisins. In the present investigation the presence of residual PPO in different morphological parts of grapes and the effects of pH, temperature and storage conditions on the PPO activity were studied. The raisins stored at refrigerated condition significantly retained the golden yellow colour, as compared to raisins stored at room temperature. Residual PPO activity during processing and storage was found to be an important factor affecting the changes in colour and external appearance of raisins. The PPO activity of the skin (108) was found more than the flesh (55) which indicates that the PPO is located in skin than flesh. Also the PPO activity was found maximum at pH 5.4 and at 25ºC. Raisin sample prepared in the laboratory by Australian cold dip method and stored in low temperature was best with respect to colour.

Key words : Grapes, Raisins, Polyphenol oxidase (PPO), Browning, Storage.

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