International Journal of ChemTech Research
CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.9, No.12, pp 422-431, 2016

Extending shelf-life of fresh-cut apple slices by controlling browning and microbial load

Gehan Ahmed Mahmoud

Fruit Handling Research Department, Horticulture Research Institute, Agricultural Research Center, Cairo, Egypt

Abstract:. Extending shelf life and keeping quality of Anna apple slices fresh-cut by using ascorbic acid and citric acid as well as aqueous extracts of rosemary and green tea as anti-browning and antimicrobial agents were evaluated. Solutions of 2.5 and 5% were used as dipping treatments prior to storage at 4°C up to twelve days as compared to untreated control. All treatments enhanced storage ability of apple slices as compared to control. Both rosemary and green tea aqueous extracts improved overall antioxidant activities of stored apple fresh-cut by the end of the storage period. Green tea aqueous extract at 5% was the most effective treatment in terms of reducing decay and total count of microbial load as well as inhibition of both peroxidase and polyphenol oxidase enzymatic browning activities.

Keywords : Apple fresh-cut, ascorbic acid, citric acid, rosemary aqueous extract, green tea aqueous extract, browning, microbial load, antioxidants, polyphenol oxidase activity, peroxidase activity.

Gehan Ahmed Mahmoud/International Journal of ChemTech Research**,** 2016,9(12): 422-431.

*****