



Journal

**J. Biol. Chem.
Environ. Sci., 2017,
Vol. 12(2): 179-216
www.acepsag.org**

EFFECT OF SOME TREATMENTS ON POST-HARVEST ROTS DISEASES AND CHEMICAL COMPOSITION OF POMEGRANATE (*PUNICA GRANATUM* L.).

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ABSTRACT

Eight different treatments, *i.e.*, Mustard oil (4.0%), Neem oil (4.0%), Castor oil (4.0%), Soybean oil (4.0%), cedar oil and linseed oil (4.0%); calcium chloride (CaCl₂) (2% (w/v)) and the fungicide Thiobendazole (Tecto 45%) at concentration of 1.5 ml/l with and without wax were tested against postharvest rots on pomegranate (*Punica granatum* L.). Treated fruits stored at 7°C for nine weeks followed by one month at room temp (22±2°C). Wax treatments, Mustard oil, Neem oil, Castor oil, linseed oil and CaCl₂ gave complete inhibition in natural infection of fruit rot diseases (0.0%), 100% efficiency. All treatments with wax showed significant reduction in loss of weight compared to control. Essential oils especially Mustard oil (4.0%), Neem oil (4.0%) and linseed oil, maintained the quality parameters as delayed in the changes in the losses of weight, and vitamin C and acidity, soluble solids, total sugars content, total phenols, anthocyanin content, and extended post harvest life (shelf life) of pomegranate fruits. Oils treatments with wax were more effective than oil treatment without wax. The mustard oil with wax was the best treatment.

Key words: antioxidant enzymes, management, oils, physicochemical analysis, pomegranate, postharvest diseases,