

**ChemTech****International Journal of ChemTech Research**CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.9, No.09 pp 178-187, 2016**The efficiency of using some medicinal and aromatic plant extracts on keeping quality and resists postharvest diseases of apple****Gehan A. Mahmoud****Fruit Handling Research Department, Horticulture Research Institute, Agricultural Research Center, Egypt**

Abstract : The use of natural products in horticultural practices instead of synthetic chemical products for improving growth, nutritional status and productivity of fruit crops is becoming as a main target for many fruit crop producers. Blue mold is a very common postharvest fungal disease of pome fruits that may cause more than 70% of decay in stored apples. Accordingly, the present experiment was carried out during two successive seasons (2013/2014) to evaluate the efficiency of using garlic and onion extracts as natural products on improving storage ability and control the blue mold in apple fruits. Trees were sprayed twice at pink bud and 80% petal-fall stages using aqueous and ethanolic extracts of garlic and onion at concentrations of 0, 5, 10 and 15%. Different measurements were carried out starting from zero time of storage at ambient temperature (25-28°C) and continued for four weeks. Plant extracts specially garlic ethanolic extract at 15% had beneficial effects on keeping fruit quality as physical properties (decay, weight loss and firmness) and chemical properties in terms of increasing TSS and total sugars as will as decreasing total acidity. Both garlic extracts and onion ethanolic extract significantly decreased activity of enzymatic browning compared to control and different concentrations of onion aqueous extract. Both garlic and onion extracts were effective against *Penicillium expansum*, blue mold, where the best significant inhibition was shown by 15% garlic ethanolic extract.

Keywords : Apple- natural extracts- storage ability- blue mold- enzymatic browning- fruit quality.