

Title Influence of essential oil treatments on physico-chemical traits of table grape (*Vitis Vinifera* L. Cv. Askari)

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Abstract

Numerous chemicals have been examined to control Gray mould with a varying degree of success worldwide. A healthy and safe method to control postharvest diseases and increasing storage life, using natural essential oils was discussed. Present study investigated the effect of essential oil (lemon grass and cumin) on the storage life of Askari grapes. All bunches were harvested from a commercial vineyard in the Sisakht region and then treated with different concentrations of the cumin oil (800 and 1000 µl/lit) and lemon grass (20 and 40 µl/lit). After essential oil treatments, bunches were packed in plastic box of two kg capacity and were stored at 1 °C and 80- 85 % RH for 60 days. The experiment was laid out in a randomized completely design, with three replications. Results showed that the effects of essential oil treatments on fruit firmness, berries shattering and browning of bunch rachis were significant. There were no significant effects on biochemical traits such as TSS, TA and pH of fruit juice. Treatment of 1000 µl/lit of Cumin oil and 20 µl/lit lemon grass oil increased the fruit firmness compared with control. According on the results of this study, application of 800 Ili/lit of Cumin and 20 µl/lit lemon grass oils for shelf life improvement of table grape cultivar Askari is recommended.