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# Evaluation of Tolerance Rate of Some Commercial Grape (*Vitis vinifera* L.) Cultivars to Salinity Stress

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Grape is one of the most important and economic horticultural crops in Iran. One of the problems of grape cultivations is its relative sensitivity to salinity stress. So evaluation of tolerance rate and sensitivity range in grape cultivars has a great importance. This research was conducted to investigate the effects of salinity treatment (NaCl) at different levels (0, 25, 50 and 100 mM) on enzymatic activities, chlorophyll content and morphological changes in four cultivars of grape including 'Sahebi', 'Fakhri', 'Soltani', and 'Khalili'. The experiment was conducted as factorial based on a randomized complete blocks design with three replications. The results showed that under salinity stress conditions and the consequent oxidative stress, 'Fakhri' and 'Khalili' showed the highest tolerance. This higher tolerance is due to more antioxidative enzymes and less accumulation of peroxide hydrogen in 'Fakhri' specially. By increasing in salinity levels, morphological characteristics and chlorophyll content reduced and antioxidative enzymes and free radicle of $H_2O_2$ and malondialdehyde enhanced and these changes had variety between different cultivars. It seems that 'Fakhri'cultivar is among the cultivars tolerant to salinity stress.

**Keywords:** Abiotic stress, Sodium chloride, Tolerance, Oxidative stress, Grape.



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