

**Title** The effect of calcium chloride spray on quality & storage characters of two grape cultivars 'Rishbaba' & 'Ghzlouzum'

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### **Abstract**

In order to improve the grape quality during handling and storing this research was conducted in a Factorial experiment using a complete randomized block (CRBD) with three treatment and replication. Treatments were including CaCl<sub>2</sub> concentration at a four level (0, 0.5, 1 and 1.5 %), two grape cultivars (Rishbaba and Ghzlouzum) and two-spray time (10 and 20 days before the harvest). Each experimental unit had one tree and in total 48 trees was used. At harvest time, the ripen fruits was picked and packed in 48 woody box and handled to cold storage. Before the transport to storage and every 30 days in cold storage, some berry traits including TSS, pH, TA, loss of weight, dropping and browning rate, calcium content and percent of decay was measured. Results showed that Ca content of fruit was increased by 0.5 % CaCl<sub>2</sub> spray treatments also the Ca and K content of rachis was increased in range of 0 to 1 percent CaCl<sub>2</sub> concentrations. The effect of other level of CaCl<sub>2</sub> treatment on those traits wasn't significant. Spray of CaCl<sub>2</sub> at 20 days before harvest time increased the berry calcium content. The most content of brix, TA, berry and rachis calcium, rachis K and the less pH rate were found in Rishbaba grape. During the storage of fruit in storage, amount of TSS, pH and loss of weight were increased the TSS and pH and decreased the TA of fruit juice. The effect of CaCl<sub>2</sub> treatments between 1 and 1.5 % on rate of fungal decay was not significant but less then the control treatment. Appearance condition in Rish Baba grape cultivar was better than and decay rate was less than the Gzelozum grape.