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Effect of *Eucalyptus* extract and calcium chloride on grape storage ability

Tamar Shamatava, Maia Kukhaleishvili, Merab Jgenti, Sopio Japarashvili, Iveta Megrelishvili, Ekaterine Bulauri and **Tamar Chipashvili**
Georgian Technical University, Georgia

In this study, the effect of *Eucalyptus* extract and calcium chloride ($CaCl_2$) on grape storage ability was investigated. The treatment includes control (Sulfur dioxide (SO_2) 20-30 minutes exposure, once a month) and two combinations: I. 1% $CaCl_2$+0.5% Eucalyptus extract; II. 2% $CaCl_2$+1% Eucalyptus extract. Two grape varieties: "Italia" and "Alphonse Levallee" were selected for the study, which are the most popular cultivars among consumers in Georgia. After the treatments grape were stored at 0-1°C, relative humidity of 85-90%. Evolution of qualitative features such as percentage of decay caused by microbiological and physiological diseases was done in the middle of the storage (60 days) and at the end of the storage (120 days). Results showed that the loss caused by microbiological and physiological diseases in the middle stage of the storage (60 days) on two species grapes was unimportant control- 0.9%; with the 1% $CaCl_2$+0.5% *Eucalyptus* extract-1.5% and 2% $CaCl_2$+1% *Eucalyptus* extract-1%. Therefore, at the end of the storage (120 days) control loss was 6.1%; on condition 1% $CaCl_2$+0.5% *Eucalyptus* extract-11.4% and 2% $CaCl_2$+ 1% *Eucalyptus* extract-7.3%. Thus, 2% $CaCl_2$+1% *Eucalyptus* extract solution showed the best result from the combined compounds, loss after storage was 7.3%. Sulfur dioxide (SO_2) condition loss was less but it is noteworthy that the solution of 2% $CaCl_2$+1% *Eucalyptus* extract is an ecologically pure mix and the stored grapevines are ecologically pure products, which is a key factor in choosing a storage facility.

Biography

Tamar Shamatava has completed her PhD (2010-2015) from St. Andrew the first called Georgian University of the Patriarchate of Georgia. She is working as Research Scientist in Georgian Technical University, Biotechnology Center. She has published more than 15 papers in reputed journals. She has a great experience in Agriculture and Biotechnology field.

tamarasha_12@yahoo.com

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