

## Preharvest and Postharvest Factors Influencing Resveratrol, Myricetin and Quercetin Content of Wine

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**Abstract :** The influence of preharvest and postharvest factors on resveratrol, myricetin and quercetin content of wine was studied during the experiment. The content of cis and trans resveratrol, myricetin and quercetin were analyzed by HPLC. In frame of experiment, the various factors affecting on wine composition were researched: variety, climate, viticulture practices, grape maturity, harvesting methods and wine making techniques. The results have shown that varietal potential and amount of yield play the most important role in formation of antioxidant compounds. Based on achieved results, the usage of medium roast oak chips protects resveratrol, myricetin, and quercetin from coagulation and precipitation. Compared to the control samples, the wines, produced by addition of oak chips were approximately four times richer with these antioxidant compounds. The retention of resveratrol was lowered with 45 % in wines, producing in Qvevri by Georgian traditional technology without controlling temperature during fermentation. The opposite effects in case of myricetin, quercetin and total phenolics content were determined. Their concentrations were higher with 56-78%, then in the fermented tank at 22 -25 °C. As the result of the experiment, the optimal technology scheme of wine was worked out, reached by biologically active compounds: resveratrol, myricetin, and quercetin.

**Keywords :** resveratrol, miricetin, quercetin, wine

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