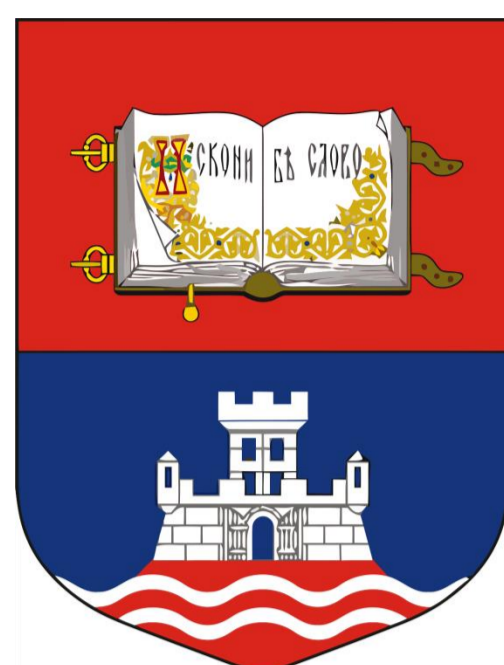


ANALYSIS OF THE IMPACT OF DIFFERENT FINING AGENTS ON THE PHENOLIC COMPOUNDS OF CABERNET SAUVIGNON WINES

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AIM

In this study impact of different fining agents (gelatine and albumin) on the catechin, epicatechin and *trans*-resveratrol content were investigated.

MATERIAL AND METHODS

Grape variety Cabernet Sauvignon was harvested in a state of technological maturity. Phytosanitary state: 100% health, sugar in the must 23% and total acid in the must 6.8 g/l. Alcohol fermentation with maceration was carried out by microvinification method at a temperature of 25°C using the pigeage system (punch-down twice a day). Free sulfur dioxide 5 g/hl was added to the grape must. Yeast *Saccharomyces cerevisiae* (BDX, Lallemand, Canada) in the amount of 20 g/hl and enzyme preparation EXV (Lallemand, Canada) were used. Maceration has lasted 14 days and after that pomace was separated from the must and racked in pilot tanks to finish fermentation. The second operation was bottling and storage until the addition of fining agents.

Two different doses of fining agents – gelatine and albumin (5 and 10 g/hl), were added in wine samples. After two months all samples, including control (without fining), were analysed by Waters Acquity UHPLC H-Class with mass detector.

RESULTS

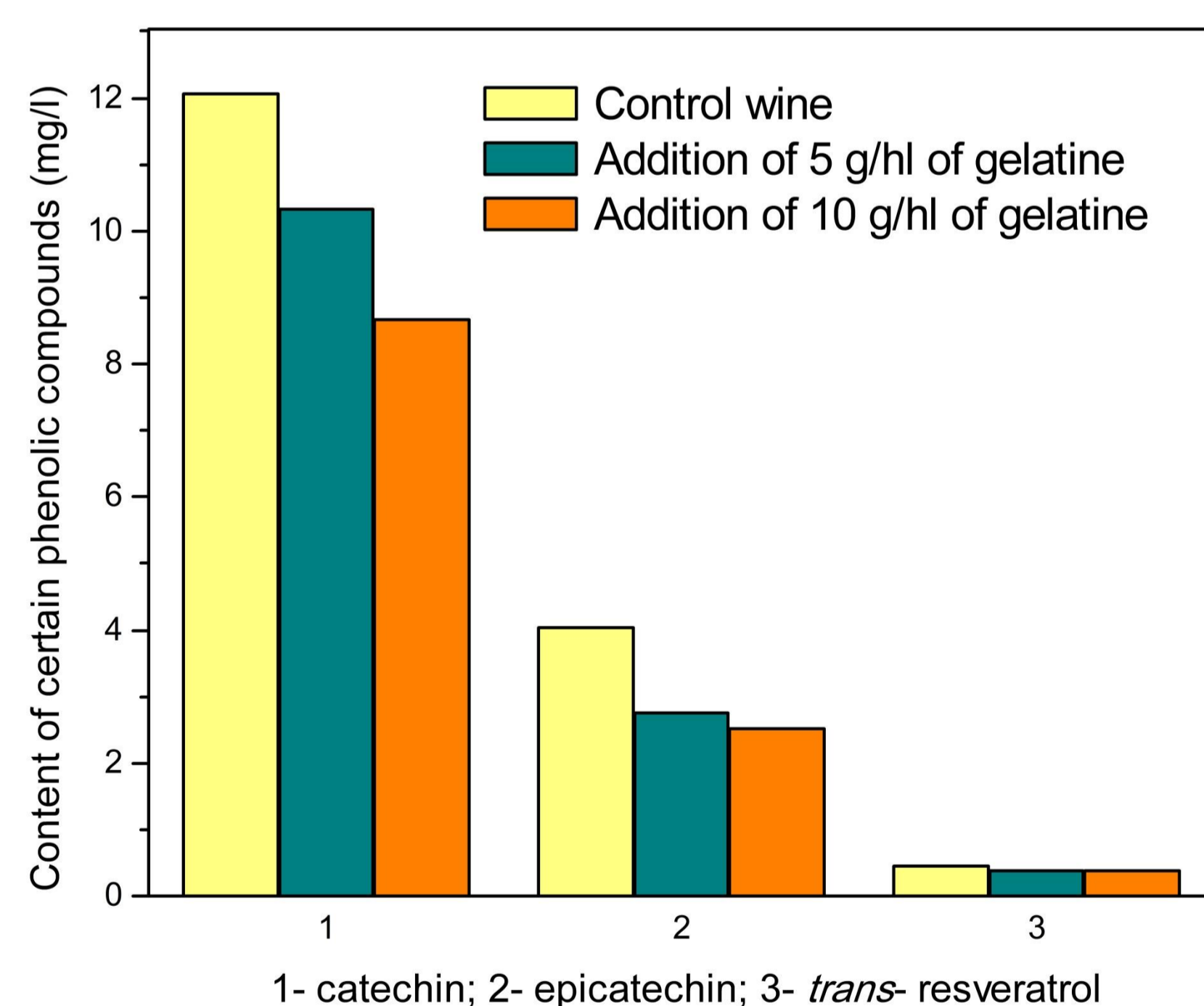


Fig.1. Content of catechin, epicatechin and *trans*-resveratrol affected by clarification with two doses of gelatine.

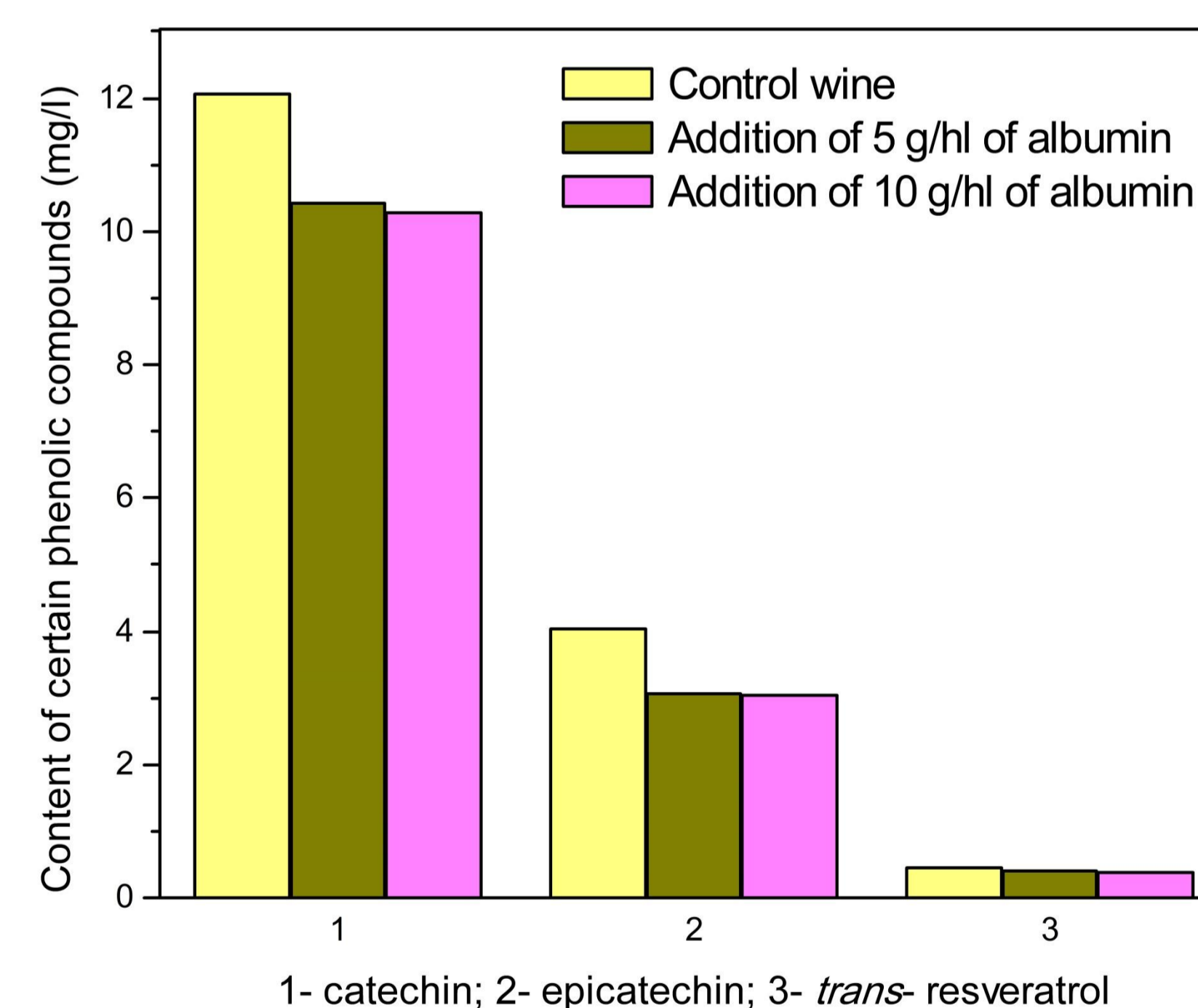


Fig.2. Content of catechin, epicatechin and *trans*-resveratrol affected by clarification with two doses of albumin.

Addition of gelatine and albumin had the highest impact to epicatechin content and it was observed its reduction of about 30% for both doses of gelatine, and 24% for both concentrations of albumin.

CONCLUSION

Although a decrease in the content of analysed phenolic compounds was noted, a statistically significant difference between the control sample and wine with different doses of fining agents was not observed .