

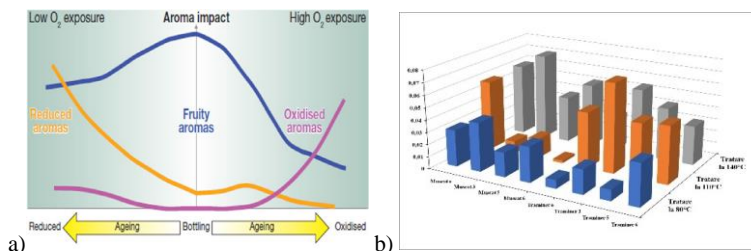
## OXIDATION OF AROMATIC WHITE WINES UNDER THE INFLUENCE OF CONTROLLABLE TECHNOLOGICAL FACTORS

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Wine oxidation is one of the major problems of wine. Recently, it has been reported that up to 48% of qualified wines being defected by juries at wine competitions have presented aromas that can be related to their oxidation throughout the technological process. Of all the gases that can be dissolved in wine, oxygen and carbon dioxide can be considered the most important. Oxygen must be considered as a highly reactive chemical agent that has the potential to modify wine by oxidation (figure 1 a). Different oxygen levels can have a great influence on the color, aroma, aromas and general perception of the wine. The total oxygen absorption capacity is 80 mg/l for white wines and 800 mg /l for red wines.



**Figure 1.** Description of effects: a) results of oxygen exposure on the aroma of bottled wine and b) the coloring intensity for the wine samples experimentally oxidized with Iron and Copper ions at different thermal regimes

In laboratory conditions, by monitoring the oxidation processes throughout the technological process 2 dry white aromatic quality wines were developed. In the dynamics, a series of analyzes on the grapes, must and wine obtained, such as: physico-chemical indices, specific indices (pH, oxidability; 420 nm absorption; antioxidant capacity, Pom test) were performed.

Generalizing the results of the experimental and applied presented study, it is revealed that the decomposition rates of oxygen in wines described a good correlation with the total concentration of exogenous copper and iron in the wine samples, both for total and residual concentrations compared to decomposition oxygen rates. In summary, it can be noted that the results obtained from this research are the first to show the influence of the administered concentration of exogenous copper and iron species in dry white wines.

**Keywords:** aroma compounds, physico-chemical indices, technological process, white wine

**Acknowledgment:** The research was funded in the framework of State Project 20.80009.500727 "Physico-chemical mechanisms of redox processes with electron transfer involved in vital, technological and environmental systems", running at Technical University of Moldova, Department of Oenology and Chemistry, Microwinery Center.