MANAGING QUALITY OF AROMATIZED WINE PREPARED BY CO-FERMENTATION OF GRAPE MUST AND BY-PRODUCTS OF ESSENTIAL ROSE OIL INDUSTRY

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ABSTRACT
Aromatized rosé wines with addition of essential rose oil industry wastes during fermentation of grape must were prepared. Six variants: W1-W6 with added 0.05%, 0.1%, 0.25%, 0.5%, 1%, and 2% Rosa damascena Mill. waste, respectively, and control wine were prepared. Slight differences in the color shades were observed: the lower the added rose waste, the more intensive peony color was obtained and this observation was confirmed with the increase of the hue angle value – 46.21±0.84 for the control and 54.95±0.70 for W6. The polyphenol content increased significantly from 355.01±10.14 to 576.08±12.08 µmol GAE L⁻¹ for the control and W6, respectively. The major phenolic acids determined were 3,4-dihydroxy benzoic (up to 65.1±1.1 mg L⁻¹ in W6), gallic (up to 25.9±0.9 mg L⁻¹ in W6) and chlorogenic acid (up to 11.7±0.6 mg L⁻¹ in W5). The GC-FID analysis revealed slight increase of higher alcohols for W5 and W6. β-Caryophyllene, β-citroneellol, phenethyl alcohol, rose oxide, and geraniol content increased significantly compared to control. The sensory evaluation revealed most of the panelists preferred W1 and W2 although some of the testers liked better the variants with higher amounts of added waste. The results suggested that rose waste successfully could be utilized for preparation of new aromatized wines with distinctive rose aroma.