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Título artículo: Potential of Different Natural Antioxidant Substances to Inhibit the 1-Hydroxyethyl Radical in SO_2-Free Wines

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RESUMEN:
The potential of different natural antioxidants to inhibit the 1-hydroxyethyl radical formation in SO_2-free wines was analyzed by electron paramagnetic resonance (EPR). Chitosan, glutathione, inactive dry yeast, oak and grape seed extracts, and ascorbic acid were tested in white and red wines. The ability of these substances to prevent the formation of acetaldehyde after the Fenton reaction and the oxygen consumption capacity were measured. Ascorbic acid was the antioxidant substance that offered higher percentages of 1-hydroxyethyl radical inhibition at 30 min of reaction. However, wines with ascorbic acid showed higher concentrations of acetaldehyde after the Fenton reaction. Grape seed extract and chitosan provided higher percentages of radical inhibition in red wine than those in white wine, in contrast to the inactive dry yeast that only produced radical inhibition in white wine. Although oak extract did not produce changes in the 1-hydroxyethyl radical, wines with that extract had lower concentrations of acetaldehyde.

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