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Elderberry (Sambucus Nigra L.) Wine: A Product Rich in Health Promoting Compounds

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Abstract

Color components, antioxidative potential, and total phenolic content were monitored in elderberry must and wine. Among individual phenolic compounds, quercetin and kaempferol compounds, phenolic acids, and anthocyanins were detected with high performance liquid chromatography coupled with mass spectrometry. Conventional enological parameters were measured in elderberry wine and compared to grape and other fruit wines. Elderberry wine has a moderate ethanol concentration, intense red coloration, and higher pH value compared to most red wines. Total phenolic content of elderberry must and wine ranged up to 2004.13 GAE L(-1). Antioxidative potential of elderberry wine was in the range of red wine, and a tight correlation was detected between total phenolic content and antioxidative potential of elderberry wine. Anthocyanins were the most abundant phenolics in elderberry wine in tight correlation with color hue, and their content significantly decreased with aging. Similarly, a decrease in total phenolic content and antioxidative potential was determined after storage.

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1750-3841.2009.01343.x. PMID: 20492096

- The study of phenolic compounds as natural antioxidants in wine. López-Vélez M, Martínez-Martínez F, Del Valle-Ribes C. Crit Rev Food Sci Nutr. 2003;43(3):233-44. doi: 10.1080/10408690390826509. PMID: 12822671 Review.

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