

CORRELATION BETWEEN ANTIOXIDANT ACTIVITY AND TOTAL POLYPHENOLS CONTENT OF AUTOCHTHONOUS WINE VARIETY - FETEASCĂ NEAGRĂ

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Abstract

Autochthonous wine variety Fetească Neagră is a red wine known for high quality rich flavor, pleasant and complex associated with black currant flavor and balanced taste, consistent and vigorous. Red wines produced in four different wine growing regions of Romania were analysed for total polyphenols content and antioxidant activity. The total polyphenols content was determined by Folin - Ciocalteu method and antioxidant activity was measured DPPH method. Determined values of antioxidant activity in observed wines were within the interval 56.74 – 94.08% inhibition of DPPH (average value was 70.92% inhibition of DPPH) and total polyphenol content ranged from 1776 to 2935 mg gallic acid/liter (average content was 2218 mg gallic acid/L). Our results showed that the antioxidant activity of tested wines were directly influenced by the total phenolic contents. As a result, we mention that wines with a higher total phenolic contents showed the highest values of antioxidant activity. Particularly, autochthonous wine variety Fetească Neagră had the highest total polyphenols content, the highest concentration of important antioxidants and significantly higher antioxidant activity. There was a very high correlation between antioxidant activity and total polyphenols content in all of the tested wines.

Key words: red wine, Fetească Neagră, antioxidant activity, polyphenols, spectrophotometry
