BOOK OF ABSTRACTS

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Determination of Organic Acids in Wines Using Capillary Zone Electrophoresis-Electrospray Ionization /Quadrupole-Time-of-Flight-Mass Spectrometry (CZE-ESI/QTOF-MS)

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Organic acids, inlcuding tartaric, malic, lactic, citric, succinic and shikimic, were determined in red wines using capillary zone electrophoresis hyphenated to electrospray ionization/quadrupole-time-of-flight-mass spectrometry (CZE-ESI/QTOF-MS). Separation of the analytes was perfomred using 50 mM ammonium acetate buffer, with pH 6, as a background electrolyte. The capillary was coated with 1 % (*m/v*) solution of hexadimetrine bromide. The applied voltage for the capillary electrophoretic separation was – 20 kV with anodic detection. The method was validated presenting best recoveries ranged from 98.4 % to 112 % for all organic acids. The calibration curves were linear with correlation coefficients r^2 > 0.99, ranging from 0.9902 for shikimic acid to 0.9990 for tartaric acid. Developed method was applied for analysis of Vranec wines from different wine regions. Tartaric acid was the main ogranic acid in wines (range: 2.09 – 4.96 g/L), followd by malic acid (range: 0.29 to 4.03 g/L). The total content of oraganic acids ranged between 3.53 to 8.5 g/L, concluding that climate conditions in the wine areas inlfuenced the acids amount in grapes and wine.

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