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Simultaneous Determination of Inorganic Anions and Organic Acids by Capillary Electrophoresis

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<u>Abstract:</u> A rapid, easy, and reproducible method for the simultaneous determination of inorganic anions and organic acids is reported. The method is based on the separation of anions in a capillary coated with a cationic polymer, polyethyleneimine (PEI). Four inorganic anions (chloride, sulfate, iodate and phosphate) and eight organic acids (oxalate, tartarate, malate, succinate, citrate, acetate, lactate, and propionate) were separated and quantified within 7 min by using 2,6-pyridinedicarboxylic acid (PDC) as the background electrolyte. The minimum detection limits are 0.67-2.87  $\mu$  g/mL for inorganic ions and 0.38-2.84  $\mu$  g/mL for organic acids. Reproducibilities in migration times (RSD%) for both inorganic and organic anions were 0.27-1.05. The method was applied to the analysis of white wine.

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