Comparison of Potentiometric and ETAAS Determination of Copper and Iron in Herbal Samples

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The metal content (iron and copper) was potentiometrically analyzed in 44 tea samples. The analyzed samples included chamomile (*Matricaria chamomilla*), green tea (*Camellia sinensis*), sage tea (*Salvia officinalis* L.), linden (*Tilia* L.) and mint (*Mentha piperita*) in tea bags and bulk purchased at local supermarkets and marketplaces in Split, Croatia. Tea samples digestion was performed in microwave oven by using nitric acid and hydrogen peroxide mixture. Potentiometric determination was performed by using FISE for Fe³⁺ and CuISE for Cu²⁺, respectively, by using potentiometric methods previously developed in our laboratory. The measured results were compared with atomic absorption spectrometric measurements from our previous research and showed notable statistical superposition.

Keywords: iron, copper, tea, potentiometric determination, ion-selective electrode

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