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**Abstract:** A pneumatic flow injection-tandem spectrometer system, without a delivery pump, was used for the speciation of manganese (Mn). In this system the suction force of the pneumatic nebulizer of a flame atomic absorption spectrometer (FAAS) was used for solution delivery through the manifold. Mn(VII) and total Mn (Mn(VII) and Mn(II)) concentrations were determined using a UV-Vis spectrometer and FAAS, respectively. The Mn(II) concentration was determined by the difference between the two. The calibration curves were linear up to 15.00 mg L<sup>-1</sup> for Mn(VII) and total Mn, with a detection limit of 0.08 mg L<sup>-1</sup> and 0.05 mg L<sup>-1</sup> for Mn(VII) and Mn, respectively. The mid-range precision and accuracy were < 1.89% and  $\pm$  2.50% for the 2 species, respectively, at a sampling rate of 80 samplings h<sup>-1</sup>. This system was used for the determination of Mn(VII) and Mn(II) in spiked and natural water, as well as industrial water.

**Key Words:** Pneumatic flow injection analysis, tandem spectrometer, manganese, speciation, UV-Vis spectrometer, flame atomic absorption spectrometer

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