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[\[PDF \(310K\)\]](#) [\[References\]](#)**Simultaneous Injection-Effective Mixing Analysis of Palladium**[Norio TESHIMA](#)<sup>1)</sup>, [Daisuke NOGUCHI](#)<sup>1)</sup>, [Yasutaka JOICHI](#)<sup>2)</sup>, [Narong LENGHOR](#)<sup>2)</sup>, [Noriko OHNO](#)<sup>3)</sup>, [Tadao SAKAI](#)<sup>1)</sup> and [Shoji MOTOMIZU](#)<sup>2)</sup>1) *Department of Applied Chemistry, Aichi Institute of Technology*2) *Graduate School of Natural Science and Technology, Okayama University*3) *Chemistry Laboratory, School of Business Administration, Asahi University*

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A novel concept of simultaneous injection-effective mixing analysis (SIEMA) is proposed, and a SIEMA method applied to the spectrophotometric determination of palladium using a water-soluble chromogenic reagent has been demonstrated. The flow configuration of SIEMA is a hybrid format of flow injection analysis (FIA), sequential injection analysis (SIA) and multicommutation in flow-based analysis. Sample and reagent solutions are aspirated into each holding coil through each solenoid valve by a syringe pump, and then the zones are simultaneously dispensed (injected) into a mixing coil by reversed flow toward a detector through a confluence point. This results in effective mixing and rapid detection with low reagent consumption.

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