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Tests and Comparison of Two Mobile Industrial Analytical Systems for Mercury Speciation in Flue Gas

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Abstract : Combustion of solid fuels is one of the main sources of mercury in the environment. To reduce the amount of mercury emitted to the atmosphere, it is necessary to modify or optimize old purification technologies or introduce the new ones. Effective reduction of mercury level in the flue gas requires the use of speciation systems for mercury form determination. This paper describes tests and provides comparison of two industrial portable and continuous systems for mercury speciation in the flue gas: Durag HM-1400 TRX with a speciation module and the Portable Continuous Mercury Speciation System based on the SGM-8 mercury speciation set, made by Nippon Instruments Corporation. Additionally, the paper describes a few analytical problems that were encountered during a two-year period of using the systems.

Keywords : continuous measurement, flue gas, mercury determination, speciation
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