



Metrology for traceable protocols for elemental and oxidised mercury concentrations



The overall aim of SI-Hg project is to develop protocols for SI-traceable calibration, evaluation and certification of elemental mercury (Hg^0) and oxidised mercury (Hg^{2+}) gas generators.

Due to its toxicity, mercury poses a major threat to both human and environment. Therefore reliable measurements **NEED** of its atmospheric concentration are essential for health and safety purposes but also for meeting the requirements of the international monitoring programs, as the Minamata Convention on Mercury. Hence traceable calibration methods for different mercury species are required to will improve the quality, comparability and uncertainty of mercury measurements at both ambient air and emission levels (sub-ng m^{-3} to ng m^{-3}).

The SI-Hg project will: **GOAL**

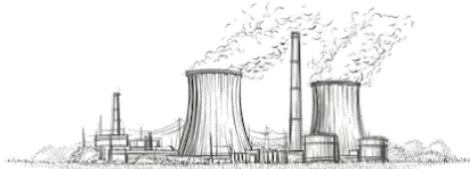
1. Develop and validate a protocol for the certification of Hg^0 gas generators.
2. Validate a protocol for the certification of Hg^{2+} gas generators.
3. Organise a performance evaluation of three Hg^0 and three Hg^{2+} gas generators available on the market
4. Support the development of a suitable calibration system for Hg measurements in the atmosphere by the dissemination of scientific outcomes for accurate field measurement and uncertainty assessment.



Hg^0

Hg^{2+}

Natural sources



Anthropic sources

Project Coordinator: VSL Dutch Metrology Institute
Fund: European Metrology Programme for Innovation and Research
Grant Agreement: 19NRM03 SI-Hg
Duration: 36 months
Start date: 01 Oct 2020
Estimated Project Cost: € 886.654,60
CNR Contact: Dott. Attilio Naccarato



The EMPIR initiative is co-funded by the European Union's Horizon 2020 research and innovation programme and the EMPIR Participating States



PARTNER