

## BIPM Support for the CIPM MRA in Radionuclide Metrology and Collaboration with the IAEA for Environmental Radioactivity Measurements

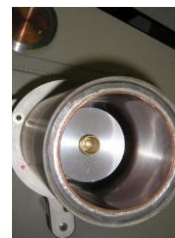
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The SIR



The SIRT



The ESIR

### THE ON-DEMAND COMPARISON SERVICES

The Bureau International des Poids et Mesures (BIPM) actively supports the CIPM Mutual Recognition Arrangement (CIPM MRA) by providing on-demand comparison services for activity measurements. These services enable National Metrology Institutes (NMIs) and Designated Institutes (DIs) to demonstrate their expertise in producing standard solutions with precise activity of radionuclides.

The International System of Reference (SIR) serves as an international reference for comparison of standard solutions containing gamma-ray-emitting radionuclides, offering exceptional stability that has been consistently monitored for the past 50 years. The SIRT, a transportable instrument, is designed to measure short-lived radionuclides critical to nuclear medicine. More recently, the ESIR has been commissioned to address challenging radionuclides, such as pure beta emitters, commonly found in environmental sample analysis.



### THE BIPM AND IAEA COOPERATION

The BIPM Ionizing Radiation Department and the IAEA Terrestrial Environmental Radiochemistry Laboratory are exploring collaboration opportunities to facilitate Supplementary Comparisons and enhance metrological traceability in environmental laboratories.

Leveraging its unique capability to produce Certified Reference Materials (CRMs) at large scale, the IAEA will support the metrology community in conducting Supplementary Comparisons. With the BIPM's guidance, the IAEA will co-pilot and actively participate in these comparisons to strengthen the metrological traceability of the reference materials it produces for its member states.

