



## **Present status and strategic plan for the stable isotope reference materials at the IAEA.**

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The presentation will give the overview of the stable isotope reference materials (SI-RMs) under distribution by the IAEA, its stable isotope laboratory and capacities related to material testing & production as well as future plans. Historically, most of the IAEA reference materials were produced and made available via collaborations with expert stable isotope laboratories worldwide. The IAEA plans include several directions as follows:

- Maintaining the scale-defining SI-RMs at the highest level and introducing adequate replacements when needed;
- Monitoring existing SI-RMs for any potential alteration(s) and of isotopic values assigned;
- Identifying and then addressing the needs for new SI-RMs, with the priority to address the most critical applications (environmental and climate related applications, human health, food safety studies) and newly emerging analytical isotope techniques;
- Performing all measurements aimed for characterisation of new SI-RMs and the corresponding uncertainty evaluation in accordance to the latest metrological concepts;
- Promoting metrological approaches on traceability and uncertainty evaluation in every day practice of stable isotope measurements;
- Expanding the IAEA capacities for SI-RMs by (i) planning a renewed laboratory at IAEA; (ii) enlarging collaboration with expert laboratories aimed to help IAEA in production and characterisation of new SI-RMs.

These major directions will help to address the increasing demand for Stable Isotope Reference Materials.