

Development of two reference materials within project MetroPOEM

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MetroPOEM will enable and harmonise measurement methods for the detection and characterisation, of both radioactive isotopes and stable polluting elements, in support of the EU Green Deal's aim toward a zero pollution, toxic-free environment. The new reference materials (RMs) developed in this project will address the ongoing need to produce suitable and relevant RMs that can validate measurement capabilities. The scientific outcome of the proposed research will deliver validated and traceable analytical approaches for the analysis of the concentration of pollutants, as well as determining the source and monitoring any contamination of pollutants through isotope ratio measurements. This will close existing metrological gaps and will lead to a harmonisation of methods. MetroPOEM will deliver an improved system of metrology and will establish an infrastructure that directly supports the application of EU regulations or EU directives. By implementing new traceability chains, different methods will be combined in the field of pollution monitoring, which will then lower the detection limits. This will result in better protection of the environment, provide new tools for complex studies in climate observation, support validated data collection. Additionally, accurate waste classification engenders public confidence and ensures inventories are correct for future infrastructure planning, such as the scale and design of pollutant remediation programmes. The aims and objectives of MetroPOEM will be delivered through 4 technical work packages, supported by project and impact management activities. CMI is involved in the development of two radioactive reference materials with the sample matrix containing radioactive pollutants (e.g., U, Np, Pu, Am) for use in an interlaboratory comparison employing techniques, which will demonstrate the variations in parameters including detection limits, sample preparation, sample introduction methods, total procedural time, and uncertainty budgets.

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