

## **T2.1-P05. Comparing In situ gamma spectroscopy and laboratory assay of environmental particulate samples, lessons that apply to their application in IFE**

In situ gamma spectroscopy and environmental sampling are two techniques that were applied during the IFE14 in Jordan. In situ gamma spectroscopy was used in the IFE as a “gamma survey technique” but actually has comparable detection sensitivity for many radionuclides to the laboratory assay of environmental particulate samples. The IFE illustrated the logistical limitations of sampling. In addition to wide area survey, the in situ technique might now be better utilized for quantitative assay in the field to guide sampling decisions. An experiment was performed to directly compare the achievable detection sensitivities of the two techniques (environmental sampling and field in situ gamma) as performed in the IFE using comparable equipment and methods. The results illustrate that the techniques are quite complementary. Further consideration of their complementary nature will guide refinement of the concept of operations and procedures and data quality targets as would apply to exercises beyond IFE14.

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