

Multi-sample Holders for On Site Inspection: Efficiency Calculation and Experimental set up

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During search logic, the technique of environmental sampling can play a role in narrowing down the areas of interest and prioritizing the field mission. One methodology to achieve this purpose is to collect several samples from the same search zone and screen out any anomaly in the gamma spectra of the samples. To ensure a high throughput screening process it can be useful to gang the samples collected in the same search zone and to perform a single long measurements. In order to have a fixed geometry we have fabricated a multi-sample holder, with two separate layers, for the purpose of analysing simultaneously up to 13 samples with a defined IFE geometry. The geometry of the system has been simulated by Geant4 code and an experimental set up has been implemented using spiked samples put in different positions of the holder (upper and lower layers) in order to characterize this geometry and to compare the efficiency of each positions. Two different scenarios has been simulated: one with several sample containers and identical content and one with the same number of containers but with only one with spiked sample.

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Promotional text

Ganging samples characterization.

Oral preference format

in-person

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