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The impact of polyethylene vials on reactor channel characterization in k₀-NAA

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Reactor channel characterization is commonly performed by irradiation of bare and cadmium-covered "fluence rate-monitors", avoiding as much as possible the use of irradiation vials/capsules and spacers for positioning
the monitors inside the channel.
However, in routine k0-Neutron Activation Analysis is generally necessary to pack the samples in polyethylene vials
prior to irradiation.
This work aims at studying the impact of polyethylene vials on the f (thermal-to-epithermal flux ratio) and alpha (epithermal flux distribution) parameters through the bare, cadmium-covered and Cadmium-ratio methods.
The accuracy of each method will be discussed.

Primary author: Mr FARINA ARBOCCÒ, Fulvio (Ghent University; SCK-CEN)

Co-authors: Dr STRIJCKMANS, Karel (Ghent University); Ms SNEYERS, Liesel (SCK-CEN); Mr VERMAERCKE, Peter (SCK-CEN)

Presenter: Mr FARINA ARBOCCÒ, Fulvio (Ghent University; SCK-CEN)

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