



Contribution ID: 253

Type: Verbal

## The impact of polyethylene vials on reactor channel characterization in $k_0$ -NAA

*Tuesday, 20 April 2010 05:50 (20 minutes)*

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  $k_0$ -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)

**Session Classification:** Nuclear Analytical Methods 3

**Track Classification:** Nuclear Analytical Methods