

stability. The results presented by the measurements revealed that the Laser ablation ICP-MS technique offers a rapid and accurate way to perform uranium isotope ratios without any sample preparation, since it allows carrying out the measurements straight on the sample, besides to preserve the sample that is very important to safeguards and nuclear forensics.

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THE USE OF ICP-MS AND LA-ICP-MS TECHNIQUES FOR URANIUM ANALYSIS IN REAL-LIFE SWIPE SAMPLES FOR SAFEGUARDS PURPOSES

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Environmental swipe sampling is a powerful tool to detect undeclared materials and activities in States under safeguards agreements and has been used by the International Atomic Energy Agency since 1996. This work describes the utilization of the inductively coupled plasma mass spectrometry (ICP-MS) and laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS) for determining uranium isotopic ratios in a real-life swipe samples collected in a conversion plant at IPEN/CNEN, Brazil. Uncertainties were estimated by following the International Organization for Standardization –Guide to the Expression of Uncertainties in Measurement (ISO GUM), with a confidence level of 95%.

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