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Developing Nuclear Forensics Signatures in the Southern African Region: A case study of South Africa and Namibia

Illicit trafficking of nuclear material has led to the International Atomic Energy Agency (IAEA), to require that all her Member States should develop nuclear forensics signatures for their Countries. These fingerprints are used to trace the origin and intent of the interdicted nuclear material.

At the Center for Applied Radiation Science and Technology, we used an NexION 2000, ICP-MS to resolve the nuclear forensics signatures from different uranium mines in South Africa and Namibia. Results show that the South African uranium (nuclear material) is significantly different from that from Namibia.

Hence it is concluded that nuclear material from these countries can be identified and attributed back. We recommend that this work be repeated in all the Countries of the Southern African Region.

Apply to be considered for a student award (Yes / No)?

Yes

Level for award (Hons, MSc, PhD, N/A)?

MSc

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