

Sampling and Measuring Complex "SLARS"

Radioactive argon-37 borns in significant quantities when the neutrons of nuclear explosion interacts with the environment elements, its lifetime is optimum for registration on the far distance and during the long period after the explosion. Thereof argon-37 is one of key informative radionuclides who can be "witnesses" of infringements of the Comprehensive Nuclear-Test-Ban Treaty (CTBT). Owing to difficulties of separation, purification and measurement today all over the world there is not enough equipment, capable to register argon-37 at background level in atmosphere (1 mBq/m³), or in subsoil air (<20 mBq/m³), that demands for the on-site inspections (OSIs) applications. In the Khlopin Radium Institute was developed the conception and draft project of Mobile Sampling and Measuring Complex «SLARS» (abbreviation of Subsoil Liquefied ARGon Scintillations). It is intended for measurement of argon-37 in air sample of 2m³ volume on the level better than 20 mBq/m³ at exposition of 12 hours. Equipment complex "SLARS" is portable and easy operated and suitable for work in field conditions at OSI performance.

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