

Assessment of Radionuclides Present in Atmospheric Aerosol in Dar Es Salaam, Tanzania by using Gamma-ray Spectrometry

The presence of Natural Occurring Radioactive Materials (NORMs) and artificial radionuclides in the atmosphere is of special interest to the public health. The fallout of artificial radionuclides from nuclear activities and emissions of NORMs present in the earth's crust can access the atmosphere. The possibility of air to be contaminated with aerosols and radionuclides is very high. When these aerosols are inhaled directly or ingested through food and water, serious health problems may occur. This study aims to assess radionuclides presents in atmospheric aerosol collected from CTBTO Radionuclides station in Dar es Salaam, Tanzania by Gamma – Ray Spectrometry and background radioactivity level of the atmosphere can be established. Aerosol samples will be collected on the roof of Physics Department at University of Dar es Salaam by High volume air sampler with the flow rate of 830 m³ h⁻¹ in discrete segments for 24hours in one month by a filter with particulate efficiency of 80% for aerosols of $\geq 0.2\mu\text{m}$ in diameter. The results may be useful to the Government and other authorities to formulate rules and regulations for monitoring radioactivity level. Also to take action for elevated levels of activity concentration in the atmosphere.

Primary author: SEIF, Dorice Rashid (Tanzania Atomic Energy Commission (TAEC))

Presenter: SEIF, Dorice Rashid (Tanzania Atomic Energy Commission (TAEC))

Track Classification: Theme 2. Events and Nuclear Test Sites