



Contribution ID: 99 Contribution code: P2.4-099

Type: e-Poster

Development of New Methods for Measuring Concentration Activities I-131 Using Direct and Indirect Methods in Radioisotope Production Stacks, in the Environment and in Settlements (Indoor and Outdoor)

Wednesday, 30 June 2021 11:45 (15 minutes)

Radioisotope Production Facility in Serpong, has produced and processed I-131 which can be dispersed to residential areas and the environment around the Serpong Nuclear Zone (SNZ). Measurement of the air release dispersion I-131 using an old analogue tool is not functioning, and only a charcoal filter is functioning in the stack of the isotope production facility. Measurement of the I-131 dispersion to the environment and houses around SNZ has not been carried out. Therefore, it is necessary to develop a new method of measuring the release of I-131 concentration in the stack combined with equipment from the CTBTO and I-131 measurement in the environment and settlements (indoor and outdoor) around the SNZ. Direct measurements using a portable in-situ NaI(Tl) detector were carried out in the house, environment, and using the LaBr3 detector in the stack. Indirect measurements using charcoal filters and vacuum pumps were carried out in the stack and outdoors. The newly developed I-131 discharge measurement method can be used to replace the I-131 analog method, because the new measuring system can be operated rapidly and continuously. The concentration of I-131 during rain and high humidity tends to increase, while the presence of sunlight reduces the concentration of I-131.

Promotional text

I hope our abstract can be received

Primary author: Mr SUHARIYONO, Gatot (Indonesia National Nuclear Energy Agency (BATAN), Jakarta, Indonesia)

Co-author: Mr WIDODO, Susilo (Indonesia National Nuclear Energy Agency (BATAN), Jakarta, Indonesia)

Presenter: Mr SUHARIYONO, Gatot (Indonesia National Nuclear Energy Agency (BATAN), Jakarta, Indonesia)

Session Classification: T2.4 e-poster session

Track Classification: Theme 2. Events and Nuclear Test Sites: T2.4 - Atmospheric and Subsurface Radionuclide Background and Dispersion