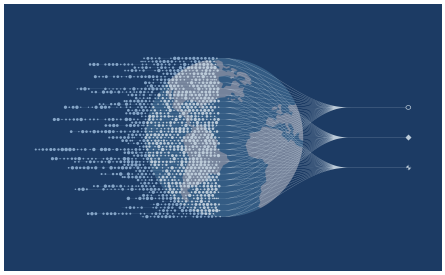

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activity concentration of naturally occurring radioactive material (NORM) in the environment of the Nuclear Power Research Organization, National Research and Innovation Agency, South Jakarta, Indonesia, in 2023

This study aims to identify the variety of NORM (Naturally Occurring Radioactive Material) radionuclides in the Nuclear Energy Research Organization, National Research and Innovation Agency, Pasar Jumat, South Jakarta, Indonesia, along with the concentration levels received by workers and to see the influence of radionuclides from countries outside Indonesia during 2023. Air sampling using the High Volume Air Sampler (HVAS) and Snow White tools. The results of NORM measurements in the air were analyzed by gamma spectrometry using a HPGe detector. The highest concentration detected by the snow white tool was K-40 with an average concentration of around $8.19\times10^{-4} \pm 2.65\times10^{-5}$ Bq/m³, followed by Th-232 with a concentration of around $1.29\times10^{-5} \pm 3.67\times10^{-6}$ Bq/m³, Th-228 Around $8.78\times10^{-6} \pm 1.23\times10^{-6}$ Bq/m³, and Ra-226 As the lowest around $7.75\times10^{-6} \pm 6.43\times10^{-7}$ Bq/m³. The results of NORM radionuclide concentrations from air monitoring with the HVAS tool are lower than those from the Snow White tool. The concentration results are still below the threshold value of the activity concentration set by BAPETEN (Nuclear Energy Regulatory Agency) regarding the radiation safety of NORM storage, namely Ra-226 around 0.05 Bq/m3, Th-228 around 0.003 Bq/m3, Th-232 around 0.006 Bq/m3, and K-40 around 3 Bq/m3.

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