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A Study on Beryllium-7 Concentration at MYP42 During Northeast Monsoon Seasons in Malaysia

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ABSTRACT

Detection of natural radionuclides in surface air provides a valuable opportunity for researchers to investigate the behavior of radionuclides on the environment and weather patterns. Researchers can gain insights into the factors that influence their distribution and dispersion in the atmosphere. Such information is crucial to enhance the understanding of how radionuclides interact with the environment and how they may contribute to weather phenomena, such as precipitation or atmospheric transport. This study aimed to assess the activity concentrations of Beryllium-7 (⁷Be), a cosmogenic radionuclide, in surface air and meteorological data in the region of Tanah Rata, Cameron Highlands, Malaysia. The study spanned from January 2011 to December 2021 and sought to determine the influence of atmospheric conditions and processes on airborne radioactivity levels during the Northeast Monsoon seasons. Through the analysis, this study is further aimed to identify the impact of monsoon season on changes in airborne radioactivity levels. By gaining insights into the behavior of radionuclides in different meteorological conditions, one can better understand the mechanisms that drive changes in airborne radioactivity levels and how these changes may be related to seasonal weather patterns. This increased knowledge may contribute to a deeper understanding of the monsoon season itself and aid in the development of more effective strategies for mitigating the potential impacts of the monsoon on human health and the environment.

Keywords: Radionuclide, Beryllium-7, the Northeast Monsoon, surface air