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## Measurement of $^{14}\text{C}$ in the environmental samples around nuclear facilities in Korea

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Monitoring the fluctuations of radiocarbon in environmental samples (air, biological, groundwater, etc.) around nuclear facilities is a commonly used tool to assess the safe operation of the facility. Measurements of radiocarbon in environmental monitoring programs around the nuclear facility are primarily performed using liquid scintillation counters, which are known to be capable of assessing levels of approximately 0.2 Bq/g-C. However, the instability of the LSC method due to the magnitude and fluctuation of the background counts and the measurement of carbon absorption weight require the need for method validation. However, AMS (Accelerator Mass Spectrometry) has very excellent precision and accuracy for the measurement of radiocarbon and a lower limit of detection than that of LSC. Therefore, this study evaluated the accuracy of the measurement method of radiocarbon in environmental samples collected around nuclear facilities (nuclear power plants and research reactor) in Korea using LSC by comparing it with the results of AMS.

### Student Submission

No

**Primary author:** LIM, Jong-Myoung (Korea Atomic Energy Research Institute)

**Co-authors:** Dr KIM, Hye-Hyun; Ms KIM, Hee-won; Ms KIM, Hye-Ri

**Presenter:** LIM, Jong-Myoung (Korea Atomic Energy Research Institute)

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