

# Measurement of $^{63}\text{Ni}$ sources for Beta-voltaic Battery by using PIN diode detector

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Beta-voltaic battery using  $^{63}\text{Ni}$  radioisotope has been developing in KAERI for long term power source at severe circumstances. We developed the plating device to coat  $^{63}\text{Ni}$  on natural nickel plate and made various  $^{63}\text{Ni}$  plates of different activities. For measuring activities of  $^{63}\text{Ni}$ , we need to conduct LSC(Liquid Scintillation Counter) which takes time little. We made a beta activity counter using PIN diode detector to measure activity of  $^{63}\text{Ni}$  *in situ*. By using the counter, we measured cps (counts per second) from different activities of the samples. And we measured the activities of the samples by using LSC and compared the cps data with the activity data from LSC. We make correspond to the cps data to the activities of LSC. As a result, To measure the activity of  $^{63}\text{Ni}$  sources for beta-voltaic battery is available immediately without LSC.

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