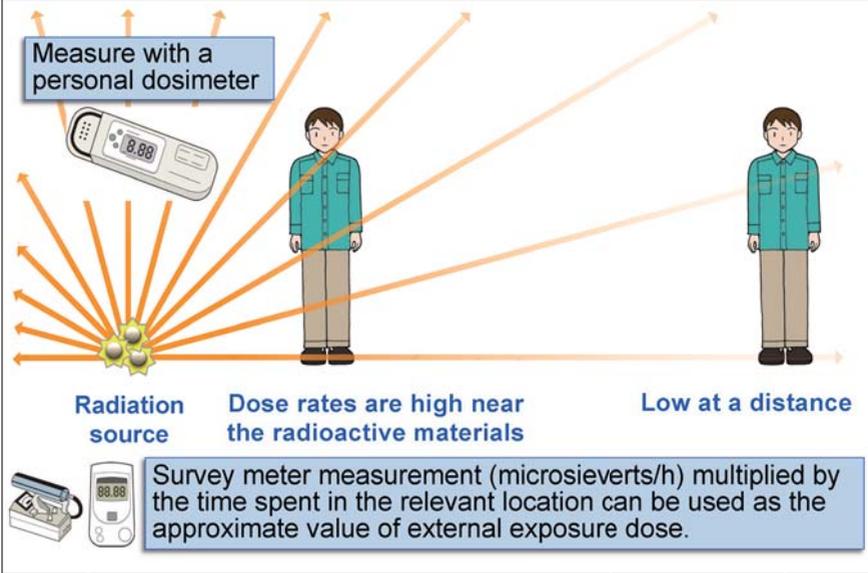


## External Exposure (Measurement)



One of the means to measure doses due to external exposure is to wear a personal dosimeter on the body. Personal dosimeters can measure cumulative amounts of radiation exposure for a certain period of time, and provide dose rate readings.

Another means is to measure radiation dose rates in a workplace with a survey meter to estimate the level of exposure supposing that a person stays in that place. Since  $\alpha$ -particles and  $\beta$ -particles from outside the body do not reach into the body (p.22 of Vol. 1, "Penetrating Power and Range of Effects on the Human Body"),  $\gamma$ -rays are measured to obtain doses due to external exposure. Many recent instruments provide readings in microsieverts per hour ( $\mu\text{Sv/h}$ ), so such readings are multiplied by the time a person spent in a certain location to roughly calculate his/her external exposure dose. However, these measurements must be made with an instrument, such as a NaI (TI) scintillation survey meter, that has proper performance and is well calibrated.

Included in this reference material on March 31, 2013

Updated on March 31, 2021