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PAPER TITLE

EQUILIBRIUM FACTOR OF RADON IN A HOUSE AND INFLUENCING FACTORS

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ABSTRACT (See instructions overleaf)

Continous and simultaneous measurements of radon, the attached, unattached radon daughters and aerosol particles were performed in a house under normal living conditions which include ordinary living habits and the normal natural ventilation rate in Japan.

Radon concentration was measured by use of a radon monitor which is composed of an electro-precipitation chamber and a ZnS(Ag) scintillation counter. Concentrations of individual daughter (RaA, B and C) were also measured by a continuous-radon daughter monitor, which has air filtration and gross alpha three counting systems. The unattached atoms of radon daughters were measure with another radon daughter monitor with wire screens substituting for the filter.

The experimental data through one annual cycle were focused on the temporal variation and the influencing factors of equilibrium factor. The equilibrium factor of the house was with the range from 0.35 to 0.45 in monthly mean. The present results showed that there are a high correlation between the equilibrium factor and the unattached fraction of radon daughters and the relation is in agreement with the theoretical prediction, which describes a mass balance of indoor radon daughters.