

技术及应用

室内²²²Rn/²²⁰Rn子体平衡因子的初步测量

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摘要 为了测量²²²Rn/²²⁰Rn子体水平及其与²²²Rn/²²⁰Rn浓度之间的平衡关系, 采用连续测氡仪和氡钍子体连续监测仪, 选择包头地区几种典型居室和工作场所, 对其空气中²²²Rn/²²⁰Rn及其子体浓度进行测量。结果显示, 工作场所和居室中²²²Rn平衡因子均值分别为0.35和0.43, 工作场所和居室距墙壁20 cm处²²⁰Rn平衡因子均为0.030; 室内²²⁰Rn平衡当量浓度昼夜变化与²²²Rn类似, 即白天低、晚上高; ²²²Rn/²²⁰Rn浓度瞬时测量值与累积结果存在较大差异, 平均比例分别为2.1和1.7。

关键词 ²²²Rn及其子体 ²²⁰Rn及其子体 平衡因子

分类号

Primary Measure of Equipment Factor of ²²²Rn/²²⁰Rn Indoor

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Abstract The activity concentration of ²²²Rn, ²²⁰Rn and their progenies of certain working places and dwellings in Baotou city were measured simultaneously. Based on these results, the equipment factor of ²²²Rn is 0.35 for working places and 0.43 for dwellings, while equipment factor of ²²⁰Rn measured at 20 cm distance from wall is 0.030 for both working places and dwellings. Preliminary results show that the temporal change of ²²⁰Rn equilibrium equivalent concentration is same as ²²²Rn which is high in midnight and low in afternoon, and significant difference between instant and accumulated measure result of ²²²Rn, ²²⁰Rn activity concentration is found, with the factor of 2.1 and 1.7.

Key words ²²²Rn and its progeny ²²⁰Rn and its progeny equipment factor

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