

A SURVEY OF BACKGROUND URANIUM AND POLONIUM RADIOACTIVITY
CONCENTRATION IN URINE BIOASSAY OF KOREAN GENERAL PUBLIC

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In radiation emergency of nuclear power plant and terror using radiation source, rapid response for internal contamination and dose assessment should be performed. Especially, the screening process of internal contamination for general public has to be launched in a short time for public radiation protection. The comparison method between artificial and naturally occurring radionuclides of bioassay samples would be a useful method in the beginning response steps. In the event of using natural originating contamination source like Po-210 and nuclear fuel accident, it will be conducted effectively. In other countries, background survey of urine bioassay for workers and general public has already been conducted, and also many international organizations of radiation protection have recommended similar survey results to member states. However, background level of natural occurring radionuclide of human body is dominantly influenced by food stuff, lifestyle, environment radiation level, and so on. In this study, background urine bioassay survey of naturally occurring radionuclide (Uranium and Po-210) for Korean general public was performed and the distribution characteristics according to basic personal information such as job, age, sex, etc. were investigated. In addition, smoking, residential areas and dwelling types were also discussed in regard to the correlation among other factors.