

RADIATION SAFETY AND DOSIMETRY IN UTILIZING OF NATURAL SOURCES OF RADIATION

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Handling, storage or any other operations involving materials containing high radioactivity always cause some excess exposure to the workers. The exposure varies considerably in different operations depending on the exposure conditions. Exposure can not be assessed only on basis of the activity concentrations of the used materials. Therefore, it is useful to have an estimate for the levels of activity concentrations above which it is possible to exceed some predefined level of exposure. These levels of radioactivity in materials have been evaluated by assuming the presence of some extreme exposure conditions as the workers are continuously exposed to external gamma radiation from a semi-infinite source of the materials in some applications. Measurement of an external gamma dose rate by using a calibrated survey meters gave some indication of the need for further investigations using TLD materials. Also, the possible radiation dose caused must be assessed with respect to the safety requirements of The National Centre for Nuclear Safety and Radiation Control (NCNSRC).

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