

ENVIRONMENTAL γ -RADIATION SPECTROMETRY AND ISOTOPE IDENTIFICATION

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Abstract—A mobile scintillation spectrometry system is described, which, with the aid of computer analysis, is capable of making high resolution measurements of gamma radiation spectra. Any mixture of line and continuous spectra with photon energies in the range 0·1–10 MeV may be measured provided that the total exposure-rate is less than about 1 mR/hr.

The system has been applied to the problem of the direct measurement of artificially produced radioisotopes on the ground in the presence of naturally occurring radiation. The accuracy and sensitivity of the method for direct measurement of isotopes of interest is discussed.