ABSTRACT

A digital radiation ratemeter was constructed using Cadmium Telluride (CdTe) crystal as a detector and CMOS/MSI components in circuit design. This digital ratemeter covers the range from 0.1 mR/hr to 199.9 mR/hr without range switching and emits audible beep at a rate proportional to the photon radiation exposure. The reliability of the readout results has been compared with the standard instrument. Calibration of the instrument was carried out using radiation from a Co-60 source. The experiment showed good dose rate linearity throughout the specified range.