

ABSTRACT

The glass-enveloped Geiger-Müller (GM) counters were constructed from available materials in Thailand. A detailed description of the gas filling technique was given for argon-alcohol filled GM counter tubes. The studies of the effect of argon-ethanol mixtures and pressures on the plateau and starting voltage showed that a mixture of 90% argon, 10% ethyl alcohol and the total pressure of 100 mm Hg was optimum condition. The study of variation of pulse size and shape along the plateau was conducted, and showed that the counters could produce pulses of several volts without amplification. The ways to develop the counter tubes were shown for the further study. General characteristics of a gas-filled detector and the determination of starting voltage of GM counter were also discussed.

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