

Supplementary Material to “Designing and Building a Low-Cost Geiger-Müller Detector for Radiation Safety Experiments in Physics Education”

Table S1: Environmental background reference and GM comparison.

(a) Background dose-rate measurements using PM1405

Measurement No.	Dose rate ($\mu\text{Sv/h}$)
1	0.15
2	0.14
3	0.14
4	0.14
5	0.15
6	0.12
7	0.13
8	0.11
9	0.12
10	0.11
11	0.12
12	0.11
13	0.12
14	0.12
15	0.13
Mean $\pm$ SD	$0.13 \pm 0.01 \mu\text{Sv/h}$

(b) Reference values for G-M background comparison

Quantity	Value
GM count rate (background)	0.71 cps
Background conversion factor	$0.18 (\mu\text{Sv} \cdot \text{h}^{-1})/\text{cps}$