



Radiation Safety and Nuclear Security Authority

Protecting People and the Environment

**Guidance for the
Procurement of a Portable Radiation Survey
Meter for Workplace Monitoring**

Guidance for the Procurement of a Portable Radiation Survey Meter for Workplace Monitoring

Workplace monitoring is basically the regular monitoring and assessment of the radiation levels to ensure a safe working environment at radiation facilities. For workplace monitoring, licensees should ensure that appropriate radiation detecting equipment are being used, and in most cases, where there is a potential risk of exposure to Gamma or X-Ray radiation, a portable radiation survey meter is required for the conduct of the exercise.

The RSN SA has received several requests from licensees to provide the technical specifications for the procurement of a portable radiation survey meter. The RSN SA has developed this guidance document to spell out the technical specifications and requirements for a portable radiation survey meter to be used for workplace monitoring.

A. Technical Specifications

The portable Radiation Survey Meter shall meet the following requirements -

1. Radiation: Capable to measure Gamma and X-Ray radiation
(Energy range: 40 keV to at least 1.5 MeV)
2. Detector: Geiger Mueller Tube (energy compensated)
3. Gamma dose rate: Ambient dose equivalent, H*(10)
4. Measurement Range: 0.01 μ Sv/h to 100 mSv/h
5. Measurement Accuracy: $\pm 15\%$.
6. Unit of measurement: Sievert per hour (Sv/h)
7. Operating temperature: 10°C to 50°C
8. Relative humidity: up to 85% at +35°C
9. Norm: Meets CE requirements and IEC 60846
10. Design and Weight: Compact in design, portable, hand-held and lightweight
(less than 400 g including batteries)
11. Display: Digital LCD
12. Alarm: Audible signal with modulated sound which can be muted.

B. Additional requirements

- *Marking*
The equipment shall have all safety markings in English language.
- *Manual*
The equipment shall be supplied with an operating manual in English language.
- *Calibration*
The equipment shall be supplied with its Calibration Certificate.

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