Survey Meter SM 8 D

Portable survey meter for the detection of low intensities of alpha, beta, X and gamma radiation
The Survey Meter SM 8 D is a hand-held, battery powered radiometer to detect low intensities of alpha, beta, X-ray and gamma radiation.

**Product Characteristics:**

- wide energy range for photons (10 keV … 1.3 MeV)
- qualitative detection of Alpha and Beta activities
- large graphical display with a high resolution
- measurement of equivalent dose and equivalent dose rate
- audible and optical impulse detection
- USB port with data acquisition and evaluation software (optional)
- adjustable alarm thresholds
- switchable measured variable: dose rate (µSv/h), dose (µSv), counts per second (cps), area activity (Bq/cm²)
- wide range of accessories (e.g. energy compensation filter, sample cup, positioning frame)

**Areas of application:**

- Medicine, Life-Sciences, Industry, research and development facilities
- Measurement of pulse rates in mixed alpha, beta and gamma radiation fields
- Measurement of equivalent dose rates und area activities
- Evaluation of workplaces

Because of the high sensitivity of the detector, the device is suited for school experiments with natural radioactivity.

**Optinal Equipment:**

- energy compensation filter
- sample cup
- positioning frame
- USB cable, data acquisition and evaluation software
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Technical specifications

Measuring range
- Pulse rate 0 .. 1999.9 cps (measurement range overflow indication)
- Timer / Impulse 1 .. 119940 counts
- Measuring time adjustable (10 sec, 30 sec, 60 sec)

Local dose rate of photon radiation
- 0.1 µSv/h ... 299 µSv/h (calibrated with Co-60) (Signal at overflow)

Area activity (calibrated at Am-241 and Sr(Y)-90, typical value)
- 0.1 .. 199.9 Bq/cm² · k_a (k_a = 6 for Am-241)
- 0.1 .. 199.9 Bq/cm² · k_b (k_b = 2 for Sr(Y)-90, typical value)

adjustable alarm thresholds

Sensitivity
- 6 cps / µSv/h (refering to Co-60)

Energy range
- Photons: 10 keV bis 1.3 MeV
- Beta: qualitatively, energies > 160 keV
- Alpha: > 2 MeV

Radiation detector
- End window Geiger-Mueller tube (area mass density < 2 mg/cm²), not energy-compensated, effective diameter 44.5 mm

Display
- Large graphical display with a high resolution, background lighting
- Audible and optical impulse signalisation

Outputs
- USB-port
- Evaluation software (optional)

Power supply
- Batteries: 2 x LR 6 Type AA 1.5 V
- Battery lifetime: approx. 100 hrs (at background radiation level)

Operating conditions
- Temperature: 0 °C ... + 50 °C
- Rel. Humidity: max. 75 % (at 30 °C)

Weight
- ≤ 400 g

Dimensions
- 152 x 83 x 35 mm (L x W x H)