Dosimeter-Radiometer MKS-05

TERRA with Bluetooth channel

Top product of ECOTEST trademark

NATO Stock Number (NSN) 6665 61 000 0177

Data transfer via Bluetooth

Complies with CE standards

FEATURES

- Big display with luminescent backlight
- Simultaneous indication of units of measurement, measurement errors, threshold level and real time on the display
- Analog ten-segment indicator of registered radiation intensity
- Ability to perform measurements with a preset error
- Four-level indication of battery discharge
- Built-in memory which allows storing up to 1 200 measurements
- Mode of PC connection via Bluetooth
- Five independent measuring channels with alternate indication of data on the single liquid crystal display
- Built-in gamma-beta-sensitive Geiger-Muller counter
- Prompt evaluation of gamma background within 10 seconds
- Automatic subtraction of gamma background at measurement of beta contamination
- Measurement results averaging, manually and automatically interrupted
- Automatic setting of measurement intervals and ranges
- Audio, vibration and vibration-audio alarm of each detected gamma-quantum or beta-particle that can be switched off
- Two-tone audio, vibration and vibration-audio alarm of exceeded programmed threshold levels
- Clock and alarm clock
- Software is used for:
  - readout of measurement results from the dosimeter memory into the PC as a dosimeter measurement protocol
  - viewing measurement results on the PC monitor, preparation and printout of the report, saving measurement results to a file without changes or as a report for further use

DESCRIPTION

TERRA is a professional device for official measurements, which measures the level of gamma background, beta contamination, accumulated dose and its accumulation time.

Measurement results of the device can be transferred to smartphones and tablets running Android™ OS via Bluetooth channel in real-time. A specially designed "GS Ecotest" application is available on Google Play.

TERRA is exported to over 70 countries. The device is in operation in many governmental institutions and agencies worldwide.

PURPOSE OF USE

- Measurement of ambient dose equivalent rate (DER) of gamma and X-ray radiation (photon-ionizing radiation)
- Measurement of ambient dose equivalent (DE) of gamma and X-ray radiation
- Measurement of surface beta-particles flux density
- Measurement of ambient dose equivalent accumulation time

SPECIFICATIONS

Measurement range of photon-ionizing radiation DER	0.1 … 9 999 μSv/h
Main relative permissible error limit of photon-ionizing radiation DER measurement with confidence probability of 0.95	(15+2/H*(10)) %, where H*(10) is a numeric value of the measured DER in μSv/h
Measurement range of photon-ionizing radiation DE	0.001 … 9 999 mSv
Main relative permissible error limit of photon-ionizing radiation DE measurement with confidence probability of 0.95	± 15 %
Energy range of registered photon-ionizing radiation	0.05 … 3 MeV
Energy dependence when measuring gamma radiation DER and DE relative to 0.662 MeV energy (^{137}Cs) in the energy range from 0.05 to 1.25 MeV, not more	± 25 %
Measurement range of surface beta-particles flux density	10 … 100 000 part./(cm²·min)
Main relative permissible error limit of beta-particles flux density measurement with confidence probability of 0.95	(20+200/φβ) %, where φβ is a numeric value of the measured surface flux density in part./(cm²·min)
Energy range of registered beta-particles	0.5 … 3 MeV
Measurement range of DE accumulation time	9 999 h
Resolution of DE accumulation time display in the range - of 0 h to 100 h - of 100 h to 9 999 h	 1 min 1 h
Absolute permissible error limit at DE accumulation time measurement during 24 h	± 1 min
Time of the dosimeter operating mode setting, not more	1 min
Battery life (AAAx2 of 1 280 mAh capacity) under + 20 °C temperature, natural background radiation and switched off display backlight, not more	2 000 h
Operating supply voltage	3 V
Operating temperature range	- 20 … + 50 °C
Dimensions, not more	55 × 26 × 120 mm
Weight, not more	0.2 kg

DELIVERY KIT

- dosimeter-radiometer
- leather case
- software
- operating manual
- package

BRANCHES OF USE

- LAW ENFORCEMENT AGENCIES
- EMERGENCY SERVICES AND CIVIL DEFENSE
- CUSTOMS AND BORDER SERVICES
- VEHICLES MONITORING, SEAPORTS AND AIRPORTS
- RADIOLOGICAL LABORATORIES
- SANITARY DOSIMETRY AND ECOLOGY
- MEDICINE
- EDUCATIONAL PROGRAMS

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