

Hand-feet-clothes monitor for the measurement of surface contamination of staff working with unsealed radioactive sources in nuclear medicine laboratories, radiochemical and production centers.

It is specifically designed and optimized for measuring contamination from radioisotopes used in nuclear medicine conventional therapy and PET.

The system measures the level of contamination of each probe and provides to compare it with the alarm thresholds set, providing the operator with a visual and acoustic information.



SPECIFICATIONS

- Four independent channels
- Large LCD Touch-Screen Display
- Routine daily quality checks
- Data of measurements and quality checks permanently saved in a SQL database
- Data exportable to USB support
- Ethernet connection
- Password levels
- Main isotopes stored
- Made in stainless steel with decontaminated surface area
- Mechanical probes with fold flat to be easily transported and handling
- Separate and independent probes for easy maintenance

GENERAL FEATURES

The hand – feet - clothes monitor use a scintillation probes (plastic scintillators) coupled to a photomultiplier with high gain.

The thickness of the detectors (20 mm) allows a good efficiency, even with γ isotopes with high energy and is able to reveal even β radiation with energy > 500 KeV.

The four independent detectors allows the operator to simultaneously know the contamination of each hand and each foot, making only one measurement.

The limit of detection for the most common isotopes used in nuclear medicine lags far $1\text{Bq}/\text{cm}^2$ with measurement time of 10 seconds.

It is possible to use a password for each operator so that the system stores measurements and alarms related to the login that has been made.

The instrument has a voice guidance in English to assist the operator during the measurements.



PROBE FOR HANDS AND CLOTHES MEASUREMENT

N. 2 independent channels for left hand and right hand.

The probe of the right hand is easily detachable and can be used to measure the contamination of the clothes.

Surface of each detector: 375 cm^2

Total area of detectors: 750 cm^2

Sensitivity Probe hands and clothes (reference source Cs-137)

MDA (Minimum Detectable Activity): $<1\text{ Bq}/\text{cm}^2$ in 10 sec.



PROBE FOR FEET MEASUREMENT

The probes for the measurement of contamination of the feet take a particular grill with octagonal drilling and ensuring greater transparency compared to grill with perforated plate. Not being also present the micro switch under the plane probes have the fixed grids so as to minimize the distance between the detector and the foot.

Surface of each detector: 525 cm^2

Total area of the detectors 1050 cm^2

Sensitivity Probe feet (reference source Cs-137)

MDA (Minimum Detectable Activity): $<1\text{ Bq}/\text{cm}^2$ in 10 sec.



TECHNICAL SPECIFICATIONS

Power supply 110-230 V -50 / 60 Hz

Maximum current consumption 0.6 A @ 110 Vac, 0.3 A @ 230 Vac

LCD touch screen display 6.5 "

Temperature range 0-40 ° C

Mouse interface and virtual keyboard (on touch-screen monitor)

Alarms can be set for each detector

Startup system 25 s

Cat.5E Ethernet network connection (RJ45 female)

4 dry contact relay output for alarm

Subtraction and automatic background compensation.

Measure unit c.p.s. or Bq/cm^2

Database with preset radionuclides

Calibration factors for each probe set individually

DIMENSIONS and WEIGHT

Dimensions: (L x W x H) mm 570 x 665 x 1330

Weight: 50 Kg