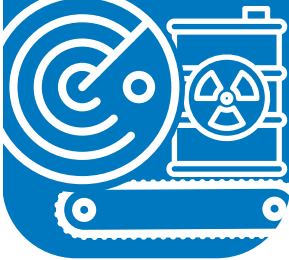




ELSE
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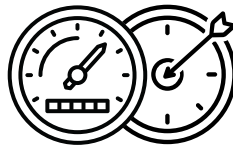


MHOS HWM-P, HWM-S

CONTAMINATION MONITORS FOR HOSPITAL WASTE



Highly adaptable
systems



Fast and accurate
measurement procedure



Simple
user interface

Detectors: plastic
scintillators

Touch-screen panel PC for
data acquisition and analysis

Automatic background
subtraction

Storage and/or print of
alarm and malfunction events

Activity concentration
calculation (HWM-S)

The **MHOS** gamma monitors are designed to measure the level of radioactive contamination in hospital wastes while they are transported in carts inside small containers.

The measurement procedure is different according to the specific model and the required specifications.

MHOS is available in two main configurations:

- portal-shaped **MHOS HWM-P** contamination monitor
- single column **MHOS HWM-S** with digital scale

MHOS HWM-P allows to detect contaminated material passing through the transit area defined by the two columns. This monitor is equipped with two plastic scintillators, each installed in one of the columns.

Data are expressed in counts per second (cps).

MHOS HWM-S performs a static measurement of the material, which is automatically started by the system once the bag/small container is placed upon the scale platform. This monitor employs a single plastic scintillator, mounted directly in front of the scale.

The weight and activity data are then elaborated to provide the radioactive concentration, expressed in Bq or Bq/g.

The acquisition and processing electronics is housed inside the detector columns, directly connected to the detectors. Through the built-in touch-screen panel PC, the operator can easily interact with the visualization software and manage the data, as well as the measurement parameters

The user, in both systems, can set an alarm threshold; when alarms or anomalies occur, they are signalled through luminous and acoustic warnings on the display and also by an integrated LED alarm column with siren.

The MHOS monitors are able to perform high-sensitivity, continuous measurements according to a pre-set integration time, minimizing the false-negative and false-positive events.

- The HWM-P version can detect activity concentrations < 1 Bq/g in 15 kg of material.
- The HWM-S version can detect concentrations < 1 Bq/g in 5 kg of material with a 30 seconds measurement.

Both monitors perform an automatic subtraction of the environmental background. Each alarm event is archived and displayed in a graphical form.

MHOS HWM-S is also equipped with printers, which produce a report label of each measurement (green or red for non-contaminated and contaminated waste, respectively).

The MHOS monitors have also an auto-diagnosis feature which continuously checks the electronics status.

SOFTWARE FEATURES

- Autorun at the start-up of the system
- Main panel indications:
 - Good-functioning/alarm status
 - Net measure
 - Measure unit
 - Instantaneous rate graph of the last 2 minutes
 - Net cps of each detector
- Principal settable parameters:
 - Measurement time
 - Alarm threshold
 - Calibration factor
 - Lower limit for the alarm event's saving
- Graphic archive of acquired data
- Protection password to access the parameters panel



MHOS HWM-S operative example



MHOS HWM-S user interface

TECHNICAL SPECIFICATIONS

MHOS HWM-P

Control console

- Computer: industrial panel PC
- Display: 8.4" LCD touch-screen (typical)
- Ethernet port for remote PC communications
- Relay: NO/NC contact available for interlock management

Detection units

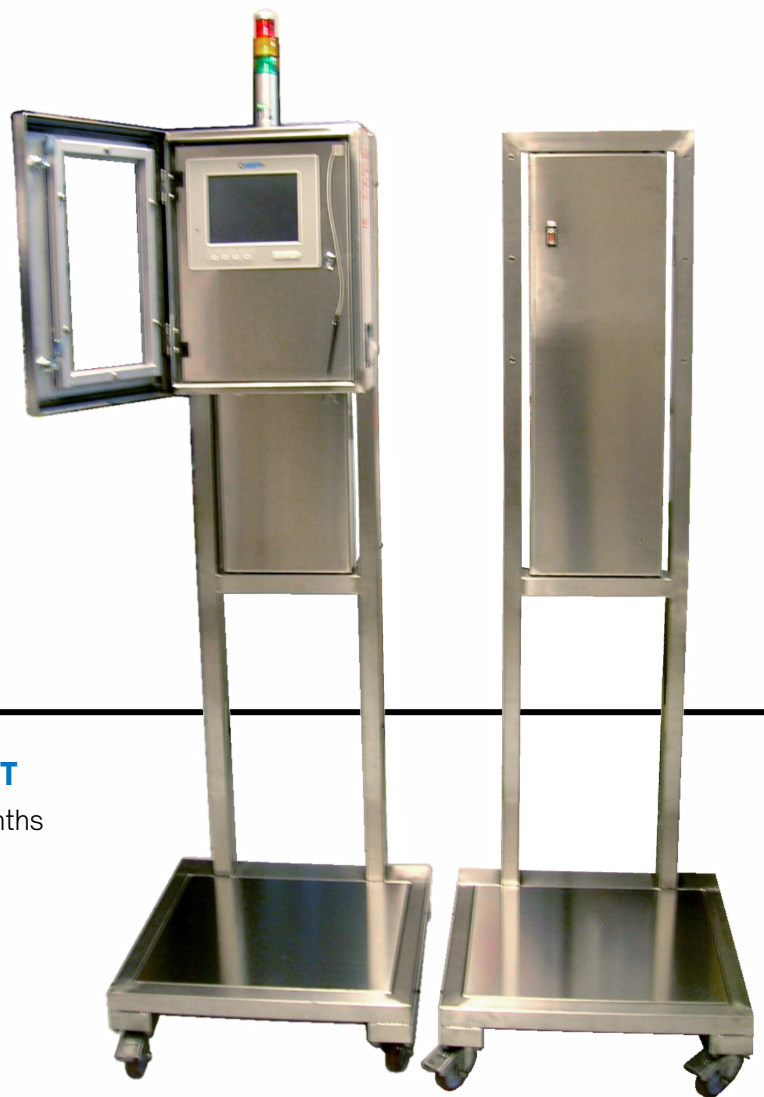
- Detectors: 2 plastic scintillators 50 x 20 x 5 cm
- Lead shielding on the external sides, 10 mm thick
- Energy range: 35 keV ÷ 2 MeV

Housing

- 2 steel columns
- Dimensions, each column (HxWxD): 200 x 57 x 57 cm
- Mobility: 2 fixed wheels, 2 pivoting wheels, for each column

Alarm column - ALU

- LED with siren
- Green: good functioning, Red: alarm



ACCESSORIES AVAILABLE UPON REQUEST

- Warranty extension from 12 months to 24 months

MHOS HWM-P contamination monitor

TECHNICAL SPECIFICATIONS

MHOS HWM-S

Control console

- Computer: industrial panel PC
- Display: 10" LCD touch-screen (typical)
- Ethernet port for remote PC communications
- Label printers (green and red labels, according to the measurement result)

Detection units

- Detector: 1 plastic scintillator 50 x 20 x 5 cm
- Lead shielding on the external sides, 10 mm thick
- Energy range: 35 keV ÷ 2 MeV

Housing

- 1 steel column
- Dimensions (HxWxD): 200 x 58 x 62 cm
- Mobility: 2 fixed wheels, 2 pivoting wheels

Digital scale

- Maximum payload: 150 kg
- Weighting resolution: 50 g
- Platform dimensions: 40 x 40 cm

Alarm column - ALU

- LED with siren
- White: ready, Yellow: measurement ongoing, Green: not contaminated, Red: alarm



MHOS HWM-S contamination monitor

ACCESSORIES AVAILABLE UPON REQUEST

- Barcode/QR reader
- Warranty extension from 12 months to 24 months

