CoMo-170/-300

Portable contamination monitor for highly sensitive measurements of α- and β-/γ-contamination

Working with open unsealed radioactive material can lead to contamination of persons, equipment and surfaces. Therefore, regular controls are mandatory to ensure the safety of humans and the environment. Mobile contamination monitors such as the CoMo-170 or CoMo-300 are used for direct and indirect contamination measurements. Combined with dedicated accessories, these powerful measuring devices provide a complete solution for contamination control and clearance measurements.

Benefits

· No gas-filled or gas-flushed detector
· 2 in 1 instrument: α- and β-/γ-contamination measurement with only one detector, no detector change required
· Large detector surface allows fast and effective monitoring
· Combination of robust design and high efficiency
· Very light device with ergonomic housing design allows one hand operation
· Background measurement and subtraction
. User-friendly menu structure operated by just 5 function keys
· Various accessories

Key Figures

170cm^2
➡ detector size

5
➡ versions available

800g
➡ total weight

Supporting your energy

CoMo-170/-300
Portable contamination monitor
for highly sensitive measurements of α- and β-/γ-contamination

Options

Wipe test station

The wipe test station is used to measure wipe samples of various sizes (60, 120 mm, screening filters). A wipe test factor can be taken into account.

Wall station

The wall station allows you to reliably check hands without picking up the monitor. With power supply for charging the CoMo's NiMH-batteries.

Floor trolleys for up to 3 CoMo

Floor trolleys for 1 - 3 CoMo systems are available to monitor large floor areas. This makes it easy to carry out indoor or outdoor measurements.

Product applications

· Nuclear technology

· Clearance measurements

· Research centers

· Nuclear medicine

· Civil protection

· Industry

CoMo 170 DL with integrated dose rate measurement

Options

A selection of special, external detectors expands the field of application of our contamination monitors:

Dose rate probes

The external dose rate probes turn the mobile contamination monitor into a flexible dose rate meter.

Pipe detector

Designed for complete monitoring of pipes. The pipe detectors can measure α- and β/γ- contamination. Guiding elements and optional collars ensure the detector being centralized within the pipe.

Pancake contamination probe

The pancake contamination probe has the ideal size for finding hot spots or checking the interior of respirators.

Flat detector

Areas that are inaccessible due to the housing height of the CoMo 170 can be easily monitored using the flat detector. Its robust design makes it very versatile.

Lantern detector

The lantern detector with its 4 detector surfaces can be used to monitor storage chutes for contamination, for example, in fuel element transport containers.

Corner detector

When carrying out clearance measurements, especially during the decommissioning of nuclear facilities, the detector can be used for the measurement of corners.

Our corner detector has no dead zone at the edge. This type of detector has also proved itself for clearance monitoring of corrugated sheets, e.g. of ISO-containers.

CoMo-170/-300
Portable contamination monitor
for highly sensitive measurements of α- and β-/γ-contamination

Product specifications

Detector type:

· Thin-layer plastic scintillation detector with ZnS coating, two aluminium vaporised Mylar foils (2 μm each), a fine-mesh honeycomb grid and a protective cover

· Alpha- and beta-/gamma-separation via count height analysis

Detector size:

· CoMo-170: 170 cm²

· CoMo-300: 300 cm²

Detector unit:

· Autonomous, easily exchangeable assembly, integrated in the bottom of the overall housing

Background:

· CoMo-170: α approx. 0.1 cps, β/γ approx. 15 - 20 cps

· CoMo-300: α approx. 0.1 cps, β/γ approx. 20 - 30 cps

Background subtraction:

· Automatic background measurement and subtraction, background measuring time programmable

· Option of net or gross measurement

Measuring electronics:

· Microcontroller-based electronics

Keyboard:

· Foil keyboard with 5 function keys

Alarm:

· Individually configurable for each type of measurement

· Visual warning

· Acoustic warning (approx. 80 dB at a distance of 30 cm)

· Optional vibration alarm

· Earphones can be connected for audible feedback in noisy or sensitive environments

Nuclides:

· Preset calibration ex works

· Settings and calibrations adjustable by user

· Auto-calibration function

· Library for up to 25 nuclides

Measuring time:

· Continuously in search mode or with user-configurable measuring time

LC display:

· Large-area graphic LC display (128 x 64 pixel)

· Automatic illumination via photocell (LDR) or adjustable fixed duration

Power supply:

· 2 batteries (AA battery LR 6) or rechargeable batteries (NiMH),

· Approx. 25 h operating time

· Can be recharged via charger or wall station

Nominal operating range:

· -10 °C to +40 °C (special version down to -20°C)

· up to approx. 90 % RF (non-condensing)

· IP 54

Dimensions:

· CoMo-170: 280 x 125 x 135 mm (L (with handle) x W x H)

· CoMo-300: 318 x 157 x 172 mm (L (with handle) x W x H)

Weight:

· CoMo-170: approx. 800 g (including batteries)

· CoMo-300: approx. 1,000 g (including batteries)

Housing:

· Ergonomically shaped plastic housing

Interfaces:

· USB interface (for connection with PC), battery charge/mains operation, external detectors, active wall station/wipe test station
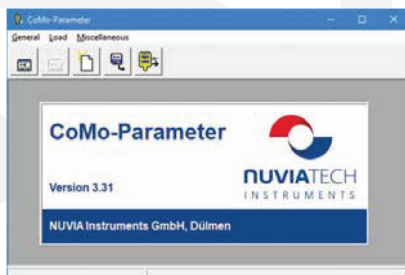
Special versions:

· CoMo-170 DL: with additional GM counter tube integrated into the front for measurement of the dose rate

· CoMo-170/-300 G: with a thicker plastic scintillation detector for pure gamma measurements

CoMo-170/-300
Portable contamination monitor
for highly sensitive measurements of α- and β-/γ-contamination

| Radionuclide efficiency (according to surface emission rate (ISO 7503-1) Average values from measurements with 100 cm² sources)		Radionuclide efficiency (according to activity (DIN 25482) Average values from measurements with 100 cm² sources)	
C-14	40%	C-14	15%
Cl-36	63%	Cl-36	40%
Co-60	62%	Co-60	31%
Cs-137	67%	Cs-137	41%
Sr-90	73%	Sr-90	95%
Am-241 α	56%	Am-241 α	26%
Pu-238 α	42%	Pu-238 α	20%
U-238 α	45%	U-238 α	41%

CoMo Software

CoMo Parameter

Software for parameter setting of the CoMo-system

CoMo Data

Software for read-out and further processing of stored measuring data
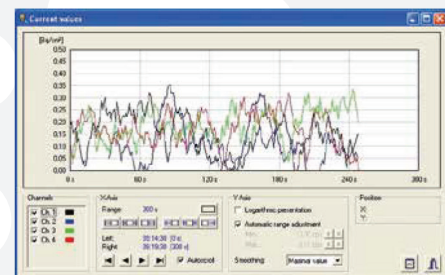
CoMo Logger

Software for direct display of measuring values on a PC incl. alarm monitoring