

# Portable Contamination Monitor CoMo 170

with thin plastic scintillation detector for highly sensitive measurement of  $\alpha$ -,  $\beta$ - and  $\gamma$ -contaminations



## Technical Features

- thin-layer plastic scintillation detector with ZnS-coating, with integrated photo multiplier and detector electronics, 170 cm<sup>2</sup> detector surface, mechanically protected by a honeycombed protective grid
- ergonomically and modern designed housing with large LC-display (128 x 64 pixels), illuminable
- easy to operate operator surface, touch-sensitive keyboard with 5 function keys
- indication of measured values either in cps or nuclide referred in Bq and Bq/cm<sup>2</sup>, digital and analog (bar graph) display of measured values
- calibrated reference nuclide file, free expandable
- settings and important measurement parameters secured by a code word
- data storage
- integrated calibration software
- possibility to connect external detectors, e. g. for dose rate measurements, automatic detector identification
- serial interface RS-232 for PC-system
- low weight, approx. 750 g
- stationary use in wall station (option) with power supply

## New Detector Technology

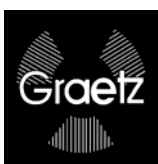
The considerable advantage of the CoMo 170 is the detector technology using a thin-layer plastic scintillation detector with ZnS coating, which completely works without gas filled or gas flow proportional detectors. Thus it is possible to effect  $\alpha$ -,  $\beta$ - and  $\gamma$ -measurements with only one detector. Expensive costs for consumable gas or for repairs of Xenon detectors are avoided. A defective detector foil can be replaced by the user himself.

The nuclide referred efficiencies of the scintillation detector can be compared with the efficiencies of common counter tubes.



## TECHNICAL DATA

<b>Detector type:</b>	thin-layer plastic scintillation detector with ZnS coating
<b>Detector size:</b>	170 cm <sup>2</sup>
<b>Background counts:</b>	$\alpha$ : approx. 0,1 cps $\beta / \gamma$ : approx. 15 – 25 cps
<b>Background counts subtraction:</b>	with adjustable measuring time



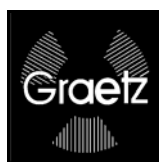
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- Keyboard:** touch-sensitive keyboard, 5 function keys
- Alarm:** for each nuclide separately adjustable, acoustic alarm
- Indication of measured values:** either in cps or nuclide referred in Bq or Bq/cm<sup>2</sup>
- Nuclides:** 25 nuclides, preset calibration factors, variable acc. to user requirements (user-specific nuclides can be added), integrated auto-calibration
- Measuring time:** continuous (adjustable attenuation), for stationary operation adjustable in s
- Display:** large graphic LC-display (128 x 64 pixels), with illumination, illumination time adjustable
- Power supply:** 2 batteries, AA Mignon or corresponding accumulators (NiCd, NiMH), rechargeable by recharger unit or by wall station (option) during stationary use
- Temperature range:** -10 °C up to +40 °C, special version up to -20 °C
- Dimensions:** 280 mm x 125 mm x 135 mm (handle included)
- Weight:** approx. 750 g (batteries included)
- Housing:** ergonomically shaped plastic housing
- Interfaces:**
- serial interface RS-232
  - recharge / mains operation
  - external detectors

Efficiencies for various radionuclides (average values of measurements with 100 cm <sup>2</sup> substances)			
C-14	~ 14 %	Tc-99m	~ 3 %
F-18	~ 18 %	In-111	~ 8 %
P-32	~ 25 %	I-123	~ 7 %
S-35	~ 5 %	I-125	~ 12 %
Cl-36	~ 42 %	I-131	~ 21 %
K-40	~ 30 %	Cs-137	~ 35 %
Co-57	~ 7 %	Au-198	~ 23 %
Co-60	~ 27 %	Tl-204	~ 43 %
Sr-89	~ 27 %	Am-241 α	~ 22 %
Sr-90 /Y-90 (referred to Sr-90)	~ 42 %	P-238 α	~ 12 %
		U-238 α	~ 26 %



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