

Scientific Production Company "Doza"

Radiometry

Radiation control equipment



RZB-05D: Hand-foot-clothing monitor

- No gas supply needed
- Clothing control: detachable right hand detector
- Alpha detector optional connection
- Numeric and color (red, green) indication of control results
- LED sensor of hand-foot positioning for start of measurement
- Automatic compensation of gamma background and contamination of detector
- Audible alarm signals of the excess of preset thresholds
- Measurement value indication: $\text{min}^{-1}\text{cm}^{-2}$ or Bq/cm^2

Physical characteristics

Detectors:

- Gamma, beta - GM counters
- Alpha - scintillator ZnS(Ag)

Detecting nuclides:

- Alpha: Pu-239, U-234, U-238
- Beta: Sr-90+Y-90, F-18, Cs-137, Co-60, Tc-99, O-15, N-13, Sr-89, C-11, I-131, Na-22, Ru-106+Rh-106, Tl-204
- Gamma: Tc-99m, I-123

Efficiency:

- Alpha:
Pu-239: 40%
U-234: 25%
U-238: 15%
- Beta: Sr-90 + Y-90: 40%

Measurement range:

- Alpha: $1 \div 10^3 \text{ min}^{-1}\text{cm}^{-2}$
- Beta: $10 \div 10^3 \text{ min}^{-1}\text{cm}^{-2}$
- Gamma: $10^4 \div 10^7 \text{ min}^{-1}\text{cm}^{-2}$

Energy range:

- Alpha: 3.0 ÷ 8.0 MeV
- Beta: 0.08 ÷ 3.5 MeV
- Gamma: 0.05 ÷ 3.0 MeV

Operation temperature range:

- Minus 10 ÷ +50 °C

Electrical characteristics

- Power supply: 220 V, 50 Hz

Mechanical characteristics

Overall dimensions, weight:

- 740×750×1180 mm, 45 kg

Reference standards:

- Nuclear: IEC 61098



RZB-05D

Versions:

- With/without alpha detector
- Indication: ($\text{min}^{-1}\text{cm}^{-2}$) or (Bq/cm^2)

Detectors overall dimensions, sm:

- Hand: 178 x 235
- Foot: 185 x 436

Whole body contamination monitor RZBA-04-04M

Whole body contamination monitor RZBA-04-04M

- No gas supply needed
- Compensation for background gamma radiation and contamination of detector units
- Individual threshold setting for each measurement channel
- Visible and audible alarms "CONTAMINATION" and "CLEAN"
- Indication of contaminated body parts on the panel with image of the body
- Optional remote alpha-detector

Physical characteristics

Detectors:

- Beta - GM counters
- Alpha - scintillator ZnS(Ag)

Measurement range:

- Beta: $5 \div 15000 \text{ min}^{-1}\text{cm}^{-2}$
- Alpha: $0,1 \div 10000 \text{ min}^{-1}\text{cm}^{-2}$

Energy range:

- Alpha: $4.0 \div 5.6 \text{ MeV}$
- Beta: $0.15 \div 2.5 \text{ MeV}$

Operation temperature range:

- $+5 \div +50 \text{ }^\circ\text{C}$

Electrical characteristics

Power supply:

- 220 V, 50 Hz

Interfaces:

- RS-232, RS-485

Mechanical characteristics

Overall dimensions, weight:

- 2650×940×930 mm, 310 kg

Reference standards:

- Nuclear: IEC 61098

Versions:

- With/without alpha detector
- Indication: ($\text{min}^{-1}\text{cm}^{-2}$) or (Bq/cm^2)



RZBA-04-04M

UMF-2000: Low level alpha-, beta-counter

- Simultaneous measurement of alpha/beta activities in the sample
- Active shielding: anti-coincidence background subtraction using GM counters
- Lead shielding 30 mm

Physical characteristics

Detectors:

- Silicon specrometric detector 450 or 1000 mm²

Measurement range:

- Alpha: 0,01 – 1000 Bq
- Beta: 0,1 – 3000 Bq

Energy range:

- Alpha: 3,5 – 8,0 MeV
- Beta: 0,05 – 3,5 MeV

Electrical characteristics

Power supply:

- 220 V, 50 Hz

Interfaces:

- RS-232\USB

Mechanical characteristics

Overall dimensions, weight:

- 337×286×190 mm, 22 kg

Versions:

- Detector area 450 mm²
- Detector area 1000 mm²



UMF-2000
Detector area
1000 mm²



UMF-2000
Detector area
450 mm²



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