ADVANCED TECHNOLOGY FOR A SAFER WORLD

SABS-579

LARGE AREA ALPHA/BETA MONITOR

The Mirion SABS-579 is a convenient and highly efficient system for monitoring contamination on and other surfaces. A large area (579 cm2) alpha-beta Kirion scintillation detector provides excellent detection performance with superb uniformity with no dead (non-detection areas).

FEATURES:

- Large Area α/β Scintillation Detector
- Excellent Uniformity
- Use with RDS32/31 survey meters
- Data logging of up to 1000 readings
- No dead (non-detecting) areas
- Very manouvrable wheeled base
- Adjustable ground clearance
- Rugged construction

SPECIFICATIONS

Detector
Type: Dual phosphor scintillation type (no counting gas required)
Size: 36 x 16 cm (approx);
Area: 579cm^2
Detector Window Protection: Stainless steel mesh grille, transparency > 75%
Plastic grille, > 90%
Detector Window: Aluminised
'Mylar'™, total window weight approx. 1.2-1.4mg/cm^2.

Detection Performance: Efficiencies over 2π with sources in compliance with the standard NF ISO 8769 and placed on the Detector block (contact).
β-efficiency (typical):
^{90}Sr+^{90}Y: 32%
^{60}Co: 18%
^{36}Cl: 28%
α-efficiency (typical) : ^{239}Pu: 23% ^{241}Am: 25%
^{238}U: 12%
Background in an environment
< 0.1μGy/h (10 μrad/h):
α < 0.1 c/s, β< 20 c/s
Cross talk α to β : < 10 %
Cross talk β to α : < 0.1 %
Energy range:
α > 3 MeV, β> 150keV

Measurement ranges 0 to 10 000 cps

Measurement saturation 10 000 cps

Gamma sensitivity (^{137}Cs)
β-channel: < 150 c/s / μSv/h
(typical 90 c/s / μSv/h)
α-channel: < 0,01 c/s / μSv/h
(typical : 0.008 c/s / μSv/h)

Minimum Detectable Activity MDA according to EN 60325 (Nov 2004) standard.
Measurement time = 10s. Background time = 100s.
False alarms 5%, non detection 5%. Background α = 0.06 c/s. β= 15.7 c/s Beta :
22 Bq ^{90}Sr+^{90}Y
45 Bq ^{60}Co
25 Bq ^{36}Cl
Alpha :
<2.5 Bq ^{239}Pu
Note:
Actual performance achieved also depends on ground clearance
(adjustable) and operator movement speed

Mechanical Characteristics
Length (excl. handle): 39 cm Width: 38.5 cm
Height: 135.5 cm
Weight: 12 kt