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MEDICINE

SFP-100

SMART FRISKING PROBE



MAIN ADVANTAGES

- Smart probe, a compact solution with processing electronics in the body of the probe
- High sensitivity, uniform response
- Compact, lightweight, shock resistance design
- Gas-less detection by using a scintillator
- Easy replacement of light-proof foil
- Can be connected to a PC for probe calibration and parameter setting
- Option for contamination indication on probe itself
- Calibration constants are saved in the probe, so probes can be easily replaced without complete calibration of probe/monitor combination.
- Easy decontamination

PURPOSE

The detection part of the SFP-100 probe consists of a plastic scintillator, or scintillators, with a photomultiplier, able to detect alpha, beta and/or gamma surface contamination.

Probe models SFP-100A, SFP-100B, and SFP-100C have **suppressed gamma sensitivity**. They are suitable where the user needs to properly discriminate alpha and / or beta contamination. Models:

- **Type A** measures only alpha contamination and is therefore designed especially for plants for the production and / or processing of nuclear fuel, uranium mining and / or processing.
- **Type B** has the highest sensitivity to beta contamination and is suitable where alpha contamination does not occur.
- **Type C** can distinguish between alpha and beta contamination, and the probe has slightly lower beta sensitivity than B.

Models SFP-100B and SFP-100C are suitable for nuclear power plants, where the background from gamma radiation is increased and variable.

Probe models SFP-100D and SFP-100E **have increased gamma sensitivity**.

- **Type D** is intended for workplaces with virtually no beta contamination. It is suitable for nuclear medicine workplaces where Tc-99m radionuclide and possibly others are used.
- **Type E** measures all types of contamination. It is suitable for training or experimental workplaces. Not suitable for nuclear power plants.

The light and ergonomic body of the SFP-100 probe contains a detector with an active area of 100 cm². The probes are suitable for the fast detection of contamination of personnel or objects.

SFP-100 probes can be connected to:

- FCM-11 Frisking Contamination Monitor
- HM-4 series Hand Contamination Monitors
- HF series Hand-foot Contamination Monitors.

The body of the probe contains the complete processing electronics that digitally transmits the real time measurement of the contamination detected.

The electronics also ensures the protection of the photomultiplier if the light-tight foil of the detector is damaged.

For different measurement optimizations, we supply probes with single channel or two-channel electronics.

The SFP-100 probes supplied with the FCM-11 Frisking Contamination Monitor have an LED circle at the end of the handle, which dynamically indicates the presence of contamination above a preset level. This alarm level threshold is set using the connected display unit (monitor).

SPECIFICATION

Detector type	scintillator
Active area	100 cm ²
Dimensions (W × H × D)	100 × 100 × 270 mm
Weight	0,7 kg
Power supply	+5 V DC/ 0,5 VA
Communication interface	UART, 57 600 Bd

MODELS

Name	1. channel	2. channel
SFP-100A	alpha	-
SFP-100B	alpha + beta	-
SFP-100C	alpha	beta
SFP-100D	alpha + beta + gamma	-
SFP-100E	alpha	beta + gamma

RELATED PRODUCTS

FCM-11	Frisking Contamination Monitor
HF	Hand-Foot Contamination Monitor
HM-4	Hand Contamination Monitor
ExitScan-2	Personnel Exit Monitor
RadCount-2S	Display Unit

OPTIONAL ACCESSORIES

51-A-0000242	Conversion USB Cable for SFP model with LED
51-A-0000256	Conversion Cable USB/7pin for SFP model without LED
53-A-0000006	VF-Setup service software

TYPICAL RADIOMETRIC PARAMETERS

Model	Channel	Radionuclide	Efficiency [%]	Detection threshold [Bq/cm ²]
SFP-100A	α	²⁴¹ Am	42	0,05
SFP-100B	α	²⁴¹ Am	42	0,13
	β	³⁶ Cl	46	0,09
SFP-100C	α	²⁴¹ Am	43	0,04
	β	³⁶ Cl	33	0,12
SFP-100D	α	²⁴¹ Am	39	0,28
	β	³⁶ Cl	47	0,17
	γ	¹³⁷ Cs	42	0,17
SFP-100E	α	²⁴¹ Am	43	0,04
	β	³⁶ Cl	42	0,19
	γ	¹³⁷ Cs	34	0,21