NUVIATECH INSTRUMENTS

HFC

Hand-foot-clothing contamination monitor with plastic scintillation detectors

Contamination can occur wherever open radioactive material is used. An SHFM contamination monitor has to be used to check personnel leaving controlled areas. The limit values of surface contamination are defined specifically for each nuclide. Our SHFM-monitors are available in various models and versions, all made by NUVIA.

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
· Detachable hand probe, no additional frisker probe required
· Background measurement and subtraction
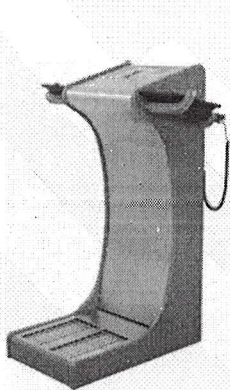· User-friendly interface via touch screen
· Network-compatible

Key figures

2-6 ➡ detectors

5 ➡ models available

43-94 cm ➡ system width

Supporting your energy

Ref: HFC_2019_001_En

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5 basic models

BaseLine

Our SHFM BaseLine model meets all expectations for a user-friendly handfoot-clothing contamination monitor. Like all our SHFM models it can be upgraded with a number of options (see below) and adapted to individual requirements.
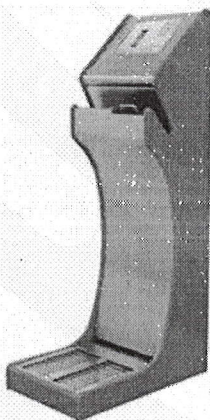
SlimLine

The SHFM SlimLine with hand detectors integrated in the front panel is ideal for use in small areas. Optional transport wheels and a handle allow the system to be easily relocated. Like the BaseLine model, it is available with single or double hand detectors. You can even choose between vertically or horizontally mounted hand detectors
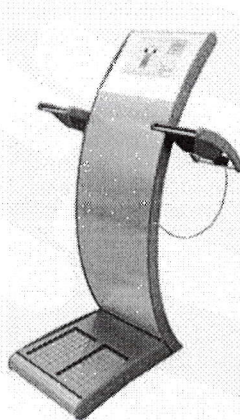
TrendLine

The SHFM TrendLine incorporates the latest result of our continuous product development in an elegant housing. The state-of-the-art PC technology with large touch-screen allows intuitive operation and provides virtually unlimited networking and data transfer options, as well as connection of printers, transponders or card readers.
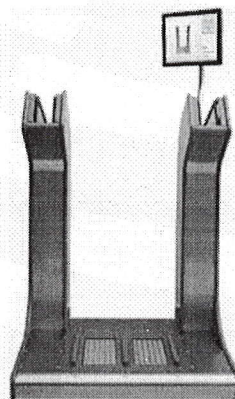
CrossLine

The SHFM CrossLine is designed as a walk-through monitor. Like all our SHFM monitors it has output relays available for door controls or other interlocks to ensure everyone is free of contamination before leaving the area.
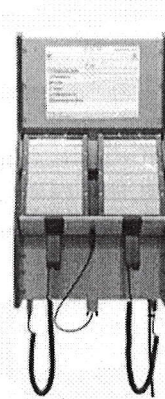
EcoLine

The SHFM EcoLine is a compact, cost effective solution in case only the hands need to be measured. This model is based on the same technology and electronics as the entire SHFM line.

Product specs

- Innovative detector technology based on thin-layer plastic scintillation detectors
- No gas-filled or gas-flushed detectors, low operating and maintenance costs
- Simultaneous, selective α- and β/γ-contamination measurement, no need to change detectors
- Measuring system automatically detects and indicates whether α-radiation is present
- PC-based measuring electronics
- User-friendly interface, large-area colour display

- Nuclide selection menu, user-configurable
- Personal-related measurement via selection menu, card, barcode or transponder
- Hand probe detachable for clothing measurement, no additional frisker probe required
- Integrated calibration software (auto-calibration)
- Ergonomic housing design with stainless steel front

- Network-compatible
- Software available for data administration and parameter setting
- Calibration according to DIN ISO 7503 or DIN 25482

- **Optional:** detection limit calculation according to DIN ISO 11929

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INSTRUMENTS

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Versions

Our SHFM monitors are available in various versions. You can select the number and position of the hand detectors as well as the size of the foot detectors. The following table lists the different options per model. The combination of the letters shows the version.

*Example: BaseLine HF is the BaseLine model in the version with 2 hand detectors and 2 normal foot detectors.*

Model	2 hand horizontal	4 hand horizontal	4 hand vertically	2 feet normal	2 feet bigfoot
BaseLine	H	D	V	F	B
SlimLine	H	D	V	F	B
TrendLine	H	D		F	B
CrossLine			V	F	B
EcoLine	H				B

Model	Transport wheels	Transpond.	Admin software	Special card reader /barcode
BaseLine	✔	✔	✔	✔
SlimLine	✔	✔	✔	✔
TrendLine	✔	✔	✔	✔
CrossLine		✔	✔	✔
EcoLine		✔	✔	✔

Radionuclide efficiency for hand detector (average values from measurements with 100 cm² sources)			
Am-241 α	20%	K-40	30%
Au-198	23%	P-32	25%
C-14	13%	Pu-238 α	12%
Cl-36	42%	Re-188	20%
Co-57	8%	S-35	5%
Co-60	30%	Sr-90 / Y-90 (based on Sr-90)	46%
I-123	7%	Tc-99 m	4%
I-125	12%	Tl-201	6%
I-131	20%	Tl-204	23%

Radionuclide efficiency for foot detector (average values from measurements with 100 cm² sources)			
Am-241 α	20%	K-40	30%
Au-198	23%	P-32	25%
C-14	13%	Pu-238 α	12%
Cl-36	42%	Re-188	20%
Co-57	8%	S-35	5%
Co-60	30%	Sr-90 / Y-90 (based on Sr-90)	46%
I-123	7%	Tc-99 m	4%
I-125	12%	Tl-201	6%
I-131	20%	Tl-204	23%

Options
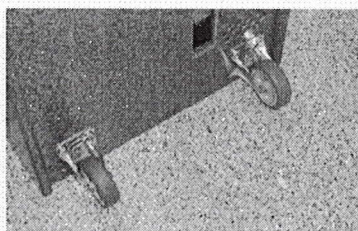
Transport wheels
Mounted castors and hand grip
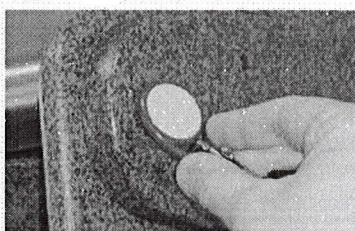
Transpondeur
Transponder system for automatic identification of personnel, containing identification system and software expansion

Admin Software
For remote data administration and parameter setting