

High precision absolute dosimetry

Radioactive Stability Check Devices

Radioactive stability check devices are recommended to check the constancy of your absolute dosimetry equipment. Moreover, they can be used to determine air density correction factors when using air vented ionization chambers. Two types of check devices are available:

Type CDC for cylindrical ionization chambers

The check device includes a shielded ^{90}Sr source. Various adapters are available to accommodate the full range of our cylindrical ionization chambers for absolute dosimetry. The holders have a unique mounting mechanism that facilitates accurate and reproducible positioning of the chamber with respect to the source. The CDC is optionally delivered with a precision thermometer to determine the temperature at the position of the ionization chamber.



Type CDP for parallel plate ionization chambers

The CDP consists of a ^{90}Sr shielded source in a protective container. Adapters for our parallel plate ionization chambers are available.

Automated air density correction and consideration of source decay in Dose 1 electrometer

The initial activity of the ^{90}Sr source is approx. 30 MBq. The halftime of ^{90}Sr is 28.7 years. The check source

library of the Dose 1 reference class electrometer allows for an initial calibration of the check devices and storage of the data in the internal library. Upon subsequent constancy measurements, the Dose 1 automatically corrects the measurement for the decay of the radionuclide.

The determined air density factor can be entered in the Dose 1 and is automatically used for correcting the measurement.

Technical specifications

Radioactive Stability Check Devices

Type:	CDC	CDP
Suitable chamber types:	cylindrical	parallel plate
Radionuclide:	⁹⁰ Sr	⁹⁰ Sr
Initial activity:	30 MBq ± 10 %	30 MBq ± 10 %
Halftime:	28.7 years	28.7 years
ISO classification:	C6X444	C6X444
Dose rate at 10 cm distance: (when top is closed)	< 1µSv/h	< 1µSv/h
Weight:	5.5 kg	6.7 kg
Dimensions:	121 x 89 x 226 mm ³	104 x 104 x 124 mm ³
Available adaptors:	FC23-C, FC65-G, FC65-P, CC08, CC13, CC25, RK	PPC05, PPC10, NACP

Thermometer for CDC

Type:	Aluminium encapsulated, mercury with a glass capillary
Temperature range:	-10 °C to +50 °C
Resolution:	0.1 °C
Accuracy:	± 0.3 °C
Time constant:	95 sec.
Long term stability:	15 years

Note: Please observe the local safety regulations regarding radiation protection and regarding use, transport, import, export and disposal.

Technical data is subject to change without prior notice.

Sweden: Scanditronix Wellhöfer AB – Stålgatan 14 – SE-754 50 Uppsala
Tel.: +46 18 18 07 00 Fax: +46 18 12 75 52

Germany: Scanditronix Wellhöfer GmbH – Bahnhofstr. 5 – DE-90592 Schwarzenbruck
Tel.: +49 9128 607 0 Fax: +49 9128 607 10

USA: Scanditronix Wellhofer North America – 3150 Stage Post Drive, Suite 110 – Bartlett, TN 38133
Tel.: +1 901 386 2242 Fax: +1 901 382 9453

www.scanditronix-wellhofer.com info@scanditronix-wellhofer.com

Member of the IBA group