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.

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.

iba

Technical Specifications

Radioactive Stability Check Devices

	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 from the surface: (when top is closed)	< 1µSv/h	< 1µSv/h
Weight:	5.5 kg	6.7 kg
Dimensions:	121 mm (L) x 89 mm (W) x 226 mm (H)	104 mm (L) x 104 mm (W) x 124 mm (H)
Available adapters:	FC23-C, FC65-G, FC65-P, CC08, CC13, CC13-S, CC25	PPC05, PPC40, 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.

High Precision Absolute Dosimetry.

Contact details:

info@iba-dosimetry.com

Europe, Middle East, Africa
IBA Dosimetry GmbH
Bahnhofstr. 5
90592 Schwarzenbruck, Germany
Tel.: +49 9128 607 0
Fax: +49 9128 607 10

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

Asia Pacific
IBA Dosimetry Asia Pacific
No.6, Xing Guang Er Jie Beijing
OPTO-mechatronics
Industrial Park (OIP),
Tongzhou District
Beijing 101111, China
Tel.: +86 10 8080 9288
Fax: +86 10 8080 9299

Protect, enhance and save lives

iba