VacuTec Meßtechnik GmbH
Dornblüthstraße 14
01277 Dresden
Germany

Shaft Ionization Chamber

Type 70 130

Order No. 130 00 01

Application

The shaft ionization chamber 70 130 is a radiation detector designed for activity measuring devices (radionuclide calibrators) according to the standard IEC 61303 and DIN 6855-11.

The wide energy range of 25 keV up to 40 MeV enables measurements of all usual radiopharmaceuticals. The chamber is perfectly suitable for activity measurements of nuclides which are used in Positron-Emission-Tomography (PET).

Technical Data

Energy range	25 keV ... 40 MeV
Sensitivity (^{137}Cs)	4.7 pA/MBq
Sensitivity (^{60}Co)	20.5 pA/MBq
Alteration of sensitivity depending on	
Leakage	2 %/year
Position with deviation in axial direction (see figure)	
Depth: 80…210 mm	≤ ±3 %
Depth: 50…265 mm	≤ ±15 %
Leakage current	$< 5 \cdot 10^{-13}$ A
Insulation resistance (Temperature ≤ 26 °C and relative humidity ≤ 80 %)	$> 10^{14}$ Ω
Filling gas	Argon
Filling pressure (absolute)	210 PSI (14.5 bar)
Operating voltage	
Polarity	Negative or positive
Recommended	500 V
Maximum	1000 V
Operating and storage conditions	
Operating temperature range	+5 °C ... +70 °C
Storage temperature range	-40 °C ... +80 °C
Relative humidity	≤ 80 %
Weight	2.9 kg

Notes

The insulators have to be protected against mechanical stress and damage. Insulators should be cleaned with alcohol and dried in clean warm air if required.

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Mechanical Data