

# ISOMED 2010

## PC-based Dose Calibrator

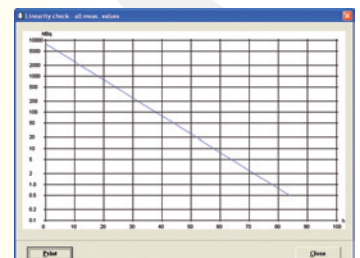


### Use and Function

The ISOMED 2010 is a PC-based dose calibrator of the newest generation. It is available with several types of PC-systems (nettop, laptop, mini-PC, terminal) with LCD-monitor or LCD-touch-screen, combined with the well-established MED ionization chamber. The integrated library with nuclides, compounds, containers and contents can be edited and expanded by the user or system operator, which allows very precise measurements and detailed data storing. System extensions like automatic lift units or links to RIS-databases via HL7-interfaces belong to the large scope of options and accessories available. Please contact your dealer for more info.

### Optimised Quality Control

The integrated menu for quality control consequentially fulfils all requirements of DIN 6855-11 and the requirements of medical authorities (e.g. national institute for standards and metrology). The user's menu of the dose calibrator supports in performing the (partially daily) quality controls (background, responsiveness) and documents the results as an evidence. For background quality control, a measurement with and without sample holder are made after each other. The activated schedule check reminds of the linearity check which has to be made every 6 months. It is practical and useful to carry out the linearity check automatically during weekend. In that case, a measurement of the Tc-elution is made every 3 hours. The linearity progress can also be printed as a curve. Additionally, a menu for checking Molybdenum breakthrough according to DIN 6854 is available.



No.	Date/Time	Interval [h]	Measuring range	Activity [MBq]	Error [%]
11	14.07.2010 14:45:58	27,214	2	295,802	0,24
12	14.07.2010 17:45:10	30,528	2	247,862	0,20
13	14.07.2010 20:45:27	33,829	2	178,302	0,32
14	14.07.2010 23:45:37	36,822	2	174,862	0,40
15	15.07.2010 02:45:40	39,824	2	87,872	0,43
16	15.07.2010 05:45:56	42,827	2	82,842	0,55
17	15.07.2010 08:46:06	45,840	2	43,862	0,57
18	15.07.2010 11:46:15	48,842	2	21,842	0,70
19	15.07.2010 14:46:24	51,845	1	21,862	-0,58
20	15.07.2010 17:46:34	54,847	1	15,292	-0,70
21	15.07.2010 20:46:43	57,850	1	16,822	-0,58
22	15.07.2010 23:46:53	60,853	1	7,848	-0,58
23	16.07.2010 02:47:02	63,856	1	5,418	-0,57
24	16.07.2010 05:47:12	66,858	1	3,821	-0,52
25	16.07.2010 08:47:21	69,861	1	2,714	-0,11
26	16.07.2010 11:47:31	72,863	1	1,917	-0,17
27	16.07.2010 14:47:40	75,866	1	1,264	0,49
28	16.07.2010 17:47:50	78,868	1	0,866	0,88
29	16.07.2010 20:47:59	81,871	1	0,679	0,12
30	16.07.2010 23:48:09	84,874	1	0,483	0,76

MED

## Characteristics

- calibrated for more than 30 nuclides, also for  $\beta$ -emitting nuclides
- calibration factors for different containers, container sizes and contents (volumes) are taken into account to reduce the total error
- measurement of nuclides used in radiosynoviorthesis (Y-90, Er-169, Re-186) and radiopharmaceuticals used in pain therapy (Sm-153, Re-188)
- activity measurement of all nuclides used for PET production and application
- activity calculation for freely definable application times
- measurement and compensation of background
- measuring chambers with several dimensions available
- software based on operating system Windows XP or Windows 7
- integrated quality control according to EN 61303 and DIN 6855-11 with data storage, protocol print and period schedule check
- Mo-99 breakthrough check according to DIN6854
- integrated database with measuring value storage
- network integration possible
- network connection with patient information system possible
- integration in nuclide management and balancing systems



ISOMED 2010 with nettop and 15" LCD-touch-screen

## The ISOMED 2010 Dose Calibrator is a certified medical device!

### Technical Data

Measuring range	
e.g. Tc-99m	40 kBq to 50/200* GBq (* 7% additional error)
F-18	60 kBq to 70/300* GBq
Measuring range setting	automatically, alternative: fixed measuring range adjustable e.g. for PET filling
Energy range for $\gamma$ -sources	25 keV to 3 MeV
Measurement time	with meas. range change-over 2s – 15s without meas. range change-over 1s – 3s
Basic error	< 5%
Linearity error	< 2%
Result display	4-digits including display of unit, nuclide and chemical compound
Stored isotope table	C-11, N-13, O-15, F-18, P-32, Cr-51, Mn-54, Co-57, Co-58, Fe-59, Co-60, Ga-67, Ga-68, Se-75, Sr-89, Y-90, Mo-99, Tc-99m, In-111, In-113m, I-123, I-124, I-125, I-131, Xe-133, Cs-137, Ba-140, Sm-153, Er-169, Yb-169, Re-186, Re-188, Hg-197, Tl-201, Ra-224
Containers:	Injector syringe 1, 2, 3, 5, 10, 20 ml
Bottles	5, 10 (P6), 15, 20 ml
Ampoules	5 ml
Capsules	for Co-57, Co-58, I-131
Contents (sample quantity)	0.1 ml – 99.9 ml
Measurement chamber	chamber $\varnothing$ 125, well $\varnothing$ 47 mm
Dimensions	total height 320 mm, well depth 205 mm
Shielding	4 mm Pb basic shielding, additional shielding 20 or 50 mm
PC-System	Nettop, Laptop, mini- PC or terminal, Windows XP or Windows 7
Monitor	any, e.g. 17" LCD or 15" LCD with touch-screen
Keyboard (option)	Foil keyboard, operation of user's menu also possible by means of mouse or touch screen