LB 790 SCINT

10-fold Alpha-Beta/Gamma Counter

BERTHOLD

LB 790 SCINT

10-fold Alpha-Beta/Gamma Counter

The new LB 790 SCINT enables precise and simultaneous measurements of alpha and beta/gamma radiation. The system not only offers state-of-the-art technology, but also a wide range of functions to meet your radiation protection requirements. With five innovative sample slides for two measuring planchets of a diameter of 60 mm, this system offers maximum flexibility.

The scintillation detectors with amplifier electronics are surrounded by a 10 mm thick steel cylinder to reduce ambient radiation. The system can therefore be operated without lead shielding or counting gas. The modular structure of the LB 790 SCINT includes detector pairs, i.e., each module contains two detectors.

The connection between the detector system and PC, directly in the detector housing, ensures smooth data transfer. In addition, the system has been designed with service-friendliness in mind so that maintenance and repairs can be carried out effortlessly.

10-fold Alpha-Beta/ Gamma Counter

6-fold Alpha-Beta/ Gamma Counter

Highlights and features

- Space-saving and compact design.
- Can be used as location-independent, mobile systems.
- Without counting gas thanks to innovative scintillation technology.
- Lightweight construction, as no lead shielding is required.
- Low zero effect and low detection limits.
- Available as a 10-fold or as a 6-fold measuring station (upgrade to 10-fold possible).

EVALUATION & REPORTING WITH AMS

Easy to use & optimize your productivity

The LB 790 SCINT includes the easy-to-use AMS Evaluation Software for improved data analysis and device control.

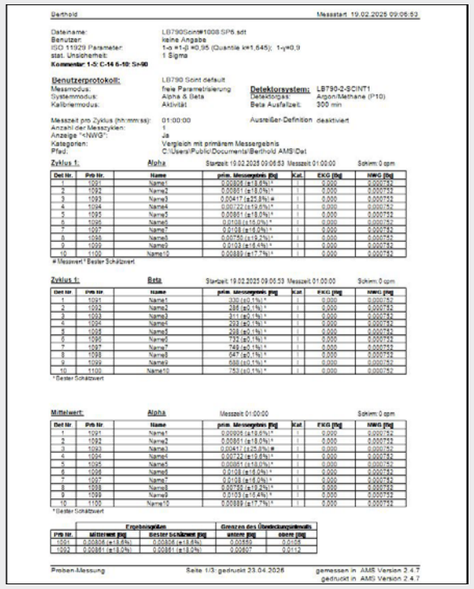
LB 790 AMS Display of measured values for all 10 detectors and both channels

Innovative approaches for analyzing your data

- User protocols can be used to store measurement parameters in the AMS software for various applications. Data analysis with extensive graphical commands and with full ISO 11929 conformity is featured.
- Statistical check of the measurement data for outliers.
- Automatic half-life correction separately for alpha and beta channels.

Powerful productivity features

- Control of up to four systems that work with individual system parameters.
- Real-time monitoring of all systems: live display of activities, cpm values, statistical inaccuracies for alpha and beta channels during the measurement, and the different measurement range categories.
- Integrated service functions such as underground measurement, calibration and system tests with reports.



Example of a measurement protocol

TECHNICAL SPECIFICATIONS

Technical data LB 790 SCINT

Technical Data	
Total external dimensions	approx. 490 x 318 x 365 (W x H x D in mm)
Total weight	approx. 75 kg
Detector module dimensions	262 x 92 x 30 (L x W x H in mm)
Weight single detector module	1.55 kg
Measuring planchet height	up to 8 mm
Measuring planchet Ø	60 mm
typ. Background α	≤ 0.09 cpm comparable withLB 790-5UL
typ. Background β	≤ 12 cpm
Connection to PC	USB 2.0 B (incl. 3 m connection cable)
Detector window	2 x 3.5 µm Hostafan foil, 3-fold aluminium vaporised
Working temperature range	0° C to 50° C

	Source	typ. efficiency	Detection limit (1 h Measuring time) according to ISO 11929
Alpha-radiation	Am-241	28 %	0.010 Bq
	Pu-238	34 %	0.010 Bq
Beta-radiation	C-14	11 %	0.33 Bq
	Cl-36	45 %	0.07 Bq
	Co-60	≥ 35 %	0.10 Bq

	Source	Spillover
Spillover α in β channel	Am-241	< 30 %
	Pu-238	< 20 %

Order information		
76595	LB 790 Scint Hybrid (5x2-fold module)	
76882	mobile table LB 790 Scint	
51582	Steel support table for LB 790	
Sample planchets aluminium (100 pcs. per pack)		
6061	50 mm x 3 mm	
6059	50 mm x 8 mm	
6067	60 mm x 3 mm	
6063	60 mm x 8 mm	
Sample planchets stainless steel (100 pcs. per pack)		
6062	50 mm x 3 mm	
6060	50 mm x 8 mm	
6065	60 mm x 3 mm	
6064	60 mm x 8 mm	
6066	30 mm x 8 mm	
Calibration sources		
26873	Ø 60 mm x 3 mm	Am-241, 185 Bq
26874		Sr-90/Y-90, 185 Bq
Subject changes without prior notice.		

TRANSFORMING SCIENCE INTO SOLUTIONS

Experience and expertise are of great importance to be able to ensure safety-relevant measurements properly and reliably. With more than 70 years of experience in planning and design, installation and commissioning, calibration, documentation and service of radiation protection measurement systems, we continue to support our customers in their task to continuously optimize their work processes and to ensure the safety of the environment and personnel.

Berthold Technologies GmbH & Co. KG

Calmbacher Straße 22 · 75323 Bad Wildbad · Germany
+49 7081 1770 · nuclear@berthold.com · www.berthold.com/rp

LB 790 SCINT dt · Id. 76595PR2 · Rev.00