



HIDEX 300 SL

SUPER LOW-LEVEL SCINTILLATION COUNTER

Based on the success of the Hidex 300 SL TDCR scintillation counter, Hidex has developed a version for detection of low-level activities.

New model

Similar to the standard instrument the Hidex 300 SL super low-level scintillation counter is equipped with three photomultiplier tubes to facilitate TDCR counting as well as extremely good counting efficiency for low energy isotopes such as tritium.

Applications:

- Low level environmental radioisotope monitoring
- Radiocarbon dating
- Biofuel verification

Improvements

The new improvements in the design include:

- Improvements in the passive shielding. Additional and improved lead shielding.
- Active guard. The instrument is equipped with a special scintillator detector. This guard detector detects cosmic radiation and other high-energy background radiation, which causes extra background pulses. When the guard detector and actual detector detect a pulse simultaneously, it is neglected.

Advantages

- Dramatic reduction in background levels with variety of samples
- Hidex guard can also be used to measure high activity betas. The guard detector is separated from the actual detector, therefore it does not react to high-energy betas originating from the sample and causing false counts in the guard.
- Hidex guard can also be used with alpha beta separation mode as the background reduction is not based on pulse length properties.
- Hidex Guard is separate from the actual detector therefore counting efficiency of standard samples is not affected and remains high over the lifetime of the counter.



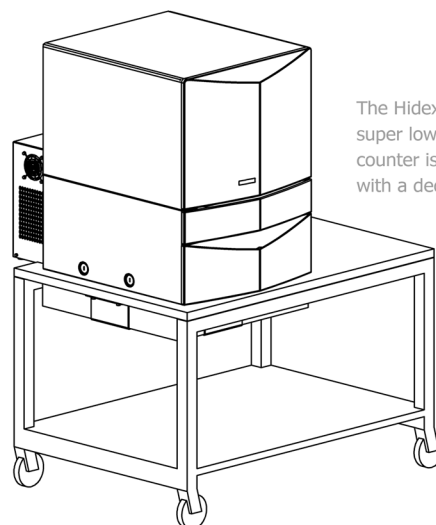
HIDEX 300 SL SUPER LOW-LEVEL LIQUID SCINTILLATION COUNTER

Performance examples:

Table 1. Example results with H3 in water; 8ml of sample, 12ml of cocktail

Counting Efficiency %	Background in cpm	FOM	LLoD in Bq/l 10 hours meas. time (Uncertainty 4.65 sigma)
33,5	4,7	239	2,6

Example data recorded at customer laboratory in Switzerland.



The Hidex 300 SL super low level counter is equipped with a dedicated table.

Table 2. Example results with standards measured at Hidex Factory in Turku Finland

Instrument Count mode	Hidex 300 SL Super Low Level Guard		
	Standard	Triple mode	Triple mode
Energy ROI	5 to 650 (full)	5 to 650 (full)	300 to 570 (optimized)
Sample type	C-14 LL unquenched standard	C-14 LL unquenched standard	C-14 LL unquenched standard
Figure Of Merit	333	708	1179
Energy ROI	5 to 350 (full)	5 to 350 (full)	50 to 270 (optimized)
Sample type	H3 LL unquenched standard	H3 LL unquenched standard	H3 LL unquenched standard
Figure Of Merit	203	282	355

Technical data:

Dimensions of table:	W: 1000mm	H: 590mm	D: 700 mm
Dimensions of Hidex 300 SL:	W: 520mm	H: 680mm	D: 630 mm
Total weight:	180 kg		

Ordering information

Code No	Item
425-020	Super low-level Liquid Scintillation Counter

Code No	Options
462-019	External standard
525-003	Alpha/Beta separation option
425-2001	Temperature Control

Code No	Software
426-110	MikroWin 2000 Full Data reduction/instrument control 21CFR part 11 software
426-110N	MikroWin 2000 net user license

Performance data is measured in Hidex factory at Turku, Finland
No maximum is specified for background.
Data and specifications are subject to change, Hidex reserves the right to alter specifications
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