

**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.

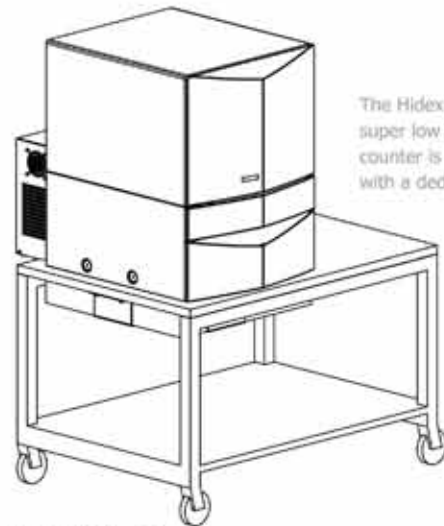
# HIDEX 300 SL SUPER LOW-LEVEL LIQUID SCINTILLATION COUNTER

## 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 <small>(Uncertainty 4.65 ug/ml)</small>
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



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