

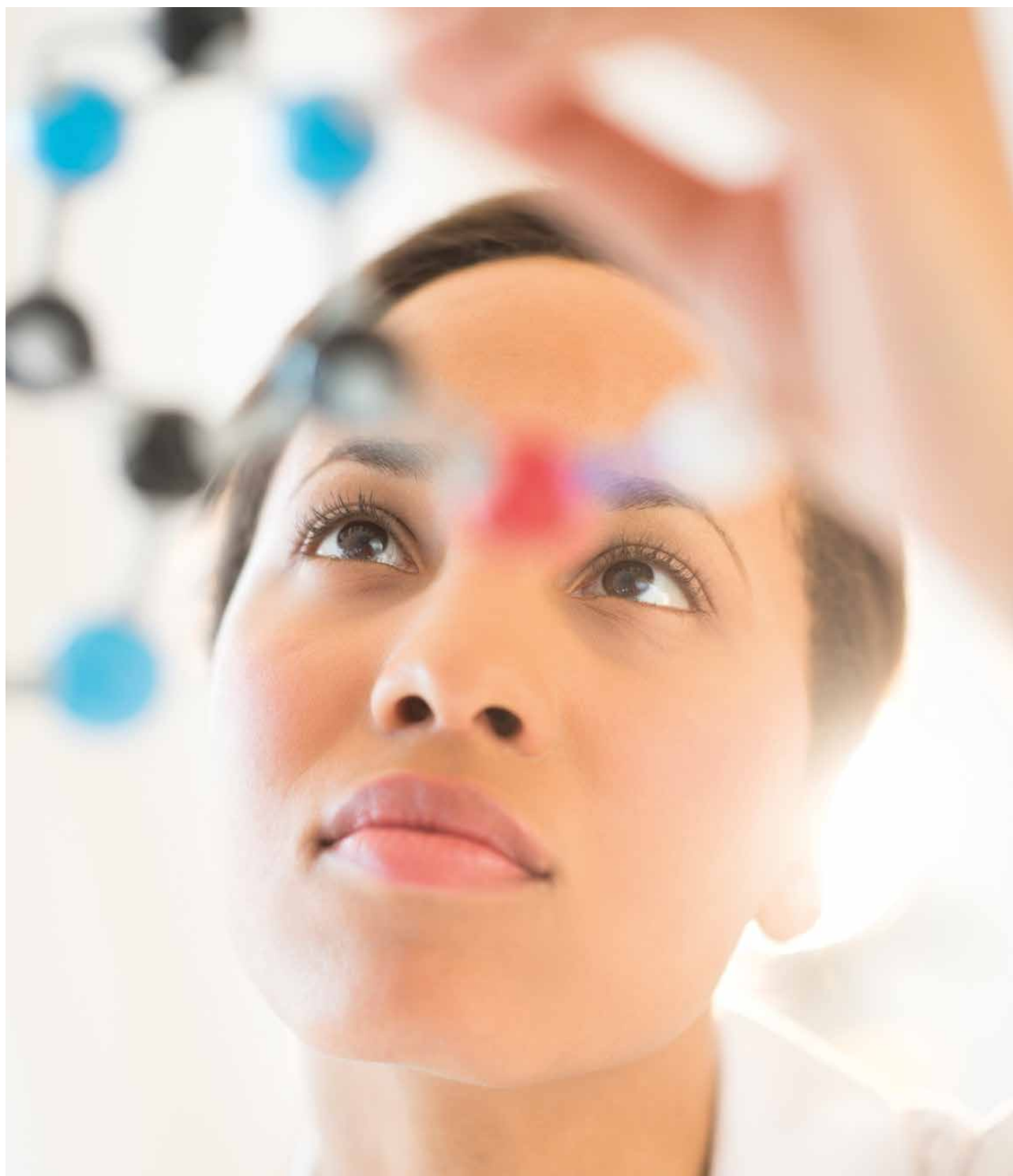
HIDEX



Hidex 300 SL Automatic TDCR  
Liquid Scintillation Counter

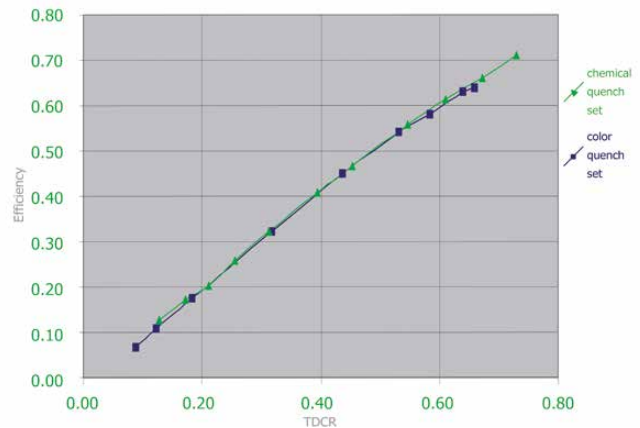
# The new dimension of versatility

Our mission is to help your lab become more effective and make your work a pleasure by providing user-friendly instruments with ultimate performance and versatility. With the right tools we guarantee you can focus on your work.



## Absolute activity counting with TDCR technology

The detector with 3 PMTs enable triple-to-double coincidence ratio counting TDCR, which is an absolute counting method for obtaining counting efficiency of the samples without external or internal standard sources. Unlike external standard methods, TDCR is a universal method applicable for both chemical and color quenching, for aqueous and organic samples and for different cocktails and range of isotopes. TDCR method can be used not only for counting of typical beta isotopes but also for absolute activity determination of Cerenkov radiation e.g. from  $^{90}\text{Y}/^{90}\text{Sr}$ .



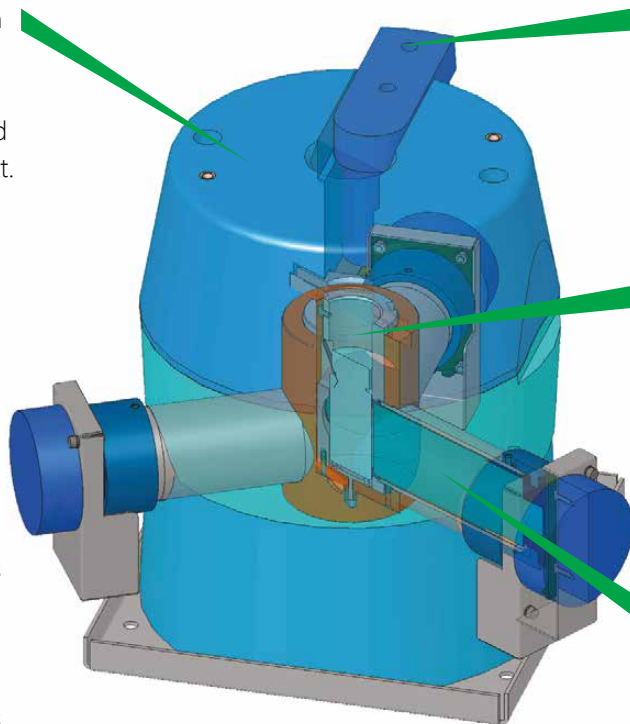
Optimal lead shield design with a minimum of 70 mm shielding in all directions provides good shielding and minimizes instrument weight.

Lead shutter provides optimal shielding from cosmic radiation.

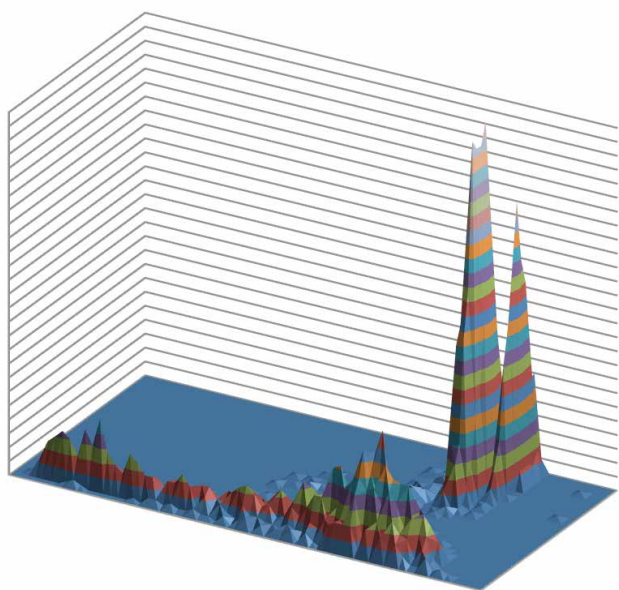
Measurement chamber with high reflective opaque paint maximises light collection.

Robotic loading arm removes the need for a complex elevator mechanism. Vertical shielding both on top and bottom of detector chambers provides biggest reduction of background effects.

Three PMTs with highly reflective measurement chamber design provide optimal measurement geometry and facilitate TDCR counting.



# Technical innovations



## Luminescence free counting

Hidex 300 SL can be used in triple coincidence mode only, which removes interference from chemiluminescence. Samples with long luminescence decay such as  $^{14}\text{C}$  in NaOH can be counted immediately without the need to dark adapt.

## Exceptionally high counting efficiency

The 300 SL utilizes three PMTs aligned at  $120^\circ$  from each other. Optimum detection geometry yields in

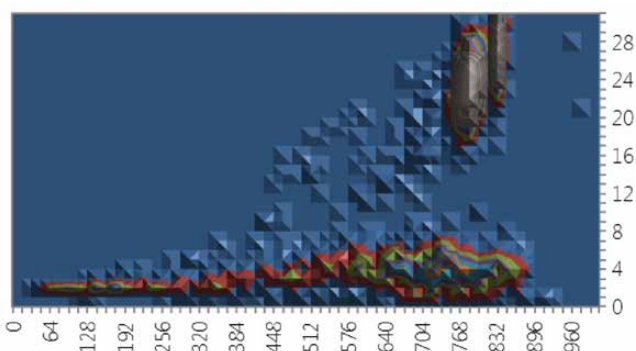
better detection geometry than conventional double coincidence detector. And the more there is quenching, the greater the advantage of triple coincidence detector

Example: Efficiency for  $^3\text{H}$  (in 20 ml vials)

	Hidex 300 SL	Traditional Double Coincidence Counters
Unquenched	> 70 %	65 %
$^3\text{H}$ in water	> 35 %	25 %
$^3\text{H}$ in water, high quench	10 %	5 %

## Alpha/beta separation

Most advanced alpha beta separation is available as an option on the Hidex 300 SL. It facilitates extremely sensitive detection of alpha isotopes in presence of high beta radiation. Calibration and results validation can be done using convenient and reliable 2D/3D spectrum analysis tool without laborious and isotope specific misclassification run. Separation works even for unknown mixture of alpha and beta isotopes. Typical applications include detection of  $^{222}\text{Rn}$ ,  $^{226/228}\text{Ra}$ ,  $^{241}\text{Am}$  and gross alpha/beta.



# The most advanced transportable and user friendly LSC on the market

The Hidex 300SL is a revolutionary instrument which incorporates the most advanced triple-PMT detector technology facilitating

- exceptionally high counting efficiency,
- luminescence free counting mode
- absolute activity counting without external radioactive source using triple-to-double coincidence ratio (TDCR) method.

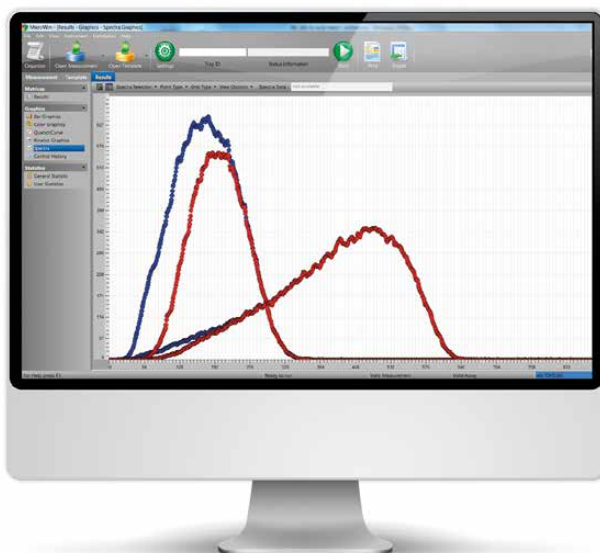
## Compact and transportable

The 300 SL has a modern and compact design measuring half the size and weight of some of its long standing rivals. It is therefore much easier to install and fit it into smaller, more space conscious laboratories, such as transporting in research vessels or mobile labs.



## User friendly software

The 300 SL is operated using an external PC with Windows 7 and 8 based MikroWin 300 SL software, featuring an easy-to-use graphical interface and extensive data reduction capabilities including quench curve analysis and half-life correction. The software is designed for multiuser environment, enabling unlimited number of methods for different isotopes and easy data export to Excel or other programs. Users can add samples with new methods, and high priority samples while the instrument is counting. MikroWin is also 21 CFR Part 11 compliant.



## Models and technical data

	Hidex 300 SL #425-201	Super Low Level #425-020	Metrology #425-202	Hidex 600 SL #425-206
Sample capacity, 20mL/7mL	40/96	40/96	40/96	210/500
Counting efficiency $^3\text{H}/^{14}\text{C}$ (%)	70/96	70/96	70/96	70/96
Background $^3\text{H}$ in water (CPM)	12	3	12	12
Dimensions, W/H/D (cm)	52/68/63	52/68/63	52/68/63	125/69/64
Weight (kg)	125	180	125	200

### Optional features

525-003 Alpha/beta separation	425-019 External Eu-152 std source
425-2001 Cooling	425-018 LL PM tubes

### TRIATHLER

A single-sample counter, which provides fast and accurate results for several life science and environmental applications, measuring all radioisotopes including tritium in a variety of sample formats.



LSC



Luminometer



Gamma Counter

### HIDEX SENSE

The Hidex Sense microplate reader is loaded with several unique innovative features to provide full flexibility at top performance. With touchscreen operated software and the compact application ready microplate reader, we turn your applications into results, simply at your fingertip.



### HIDEX AUTOMATIC GAMMA COUNTER

The compact design and superior user experience of our touch screen software makes the Hidex Automatic Gamma Counter ideal for nuclear medicine applications.



## About Hidex



**Hidex is a family owned high technology company** which develops and manufactures high performance analysis equipment for life science research, nuclear measurements and nuclear medicine. Our products utilize modern technology and excellent tradition of workmanship. With strong links to the scientific community we continue to innovate and develop to improve scientific research and safety of everyday life.