Hidex **300 SL** and **600 SLe**

Liquid Scintillation Counters

www.**lablogic**.com

LabLogic
EXPERIENCE & EXPERTISE

The most advanced, compact counter available

The Hidex 300 SL is a compact liquid scintillation counter with exceptionally high counting efficiency. It is the most advanced counter available featuring luminescence free counting and three PMT detectors for Triple-to-Double Coincidence Ratio (TDCR), a method for absolute activity counting without using an external source for calibration.

Being smaller and lighter than other counters, the Hidex 300 SL is ideal for mobile labs and smaller research spaces. Because it is front-loading, it can be conveniently installed underneath benches or in tighter spaces, such as transporting in research vessels or mobile labs.

In addition to the standard counter, the Hidex 300 SL is available in other models for specific applications.

Hidex 300 SL

Standard counter model.

Specifications	
Dimensions	25" (L) x 20" (W) x 27" (H)
Weight	287 lbs
Sample Capacity (20 mL/7 mL)	40/96
Electrical Connections	100 - 240 V 50 - 60 Hz
Energy Range β's	0 - 2,000 keV
Energy Range α's	0 - 10,000 keV
Efficiency	^{3}H unquenched > 70% ^{3}H (8 mL water, 12 mL cocktail) > 30% quenched ^{14}C unquenched > 96% α's (^{210}Po, ^{234}U/^{238}U, ^{241}Am, ^{222}Rn, ^{226}Ra) >95%

Please refer to the Technical Specification Sheet for further information

Hidex 300 SL Academic

Designed for academia and research, the Hidex 300 SL Academic is an affordable counter for applications using beta-emitting isotopes. It is ideal for cell studies, cytotoxicity measurements and contamination control in universities and research institutes.

Specifications	
Dimensions	25" (L) x 20" (W) x 27" (H)
Weight	253 lbs
Sample Capacity (20 mL/7 mL)	40/96
Counting Efficiency ^{3}H/^{14}C	65/96%
Background ^{3}H in Water (8 + 12)	15 cpm

Please refer to the Technical Specification Sheet for further information

Hidex 300 SL Super Low Level

The Hidex 300 SL Super Low Level is designed for measuring ^{3}H in water, environmental monitoring, radiocarbon dating and biofuel applications. It has additional lead shielding, a digital lead shield, low-level PMT detectors and an active guard detector to further reduce background.

The active guard is a separate scintillator detector which detects and subtracts background radiation. It can be turned off for high-energy samples and does not interfere with alpha/beta separation.

Specifications	
Dimensions	25" (L) x 20" (W) x 27" (H) cm
Weight	397 lbs
Sample Capacity (20 mL/7 mL)	40/96
Counting Efficiency ^{3}H/^{14}C	65/96%
Background ^{3}H in Water (8 + 12)	4 cpm

Please refer to the Technical Specification Sheet for further information

Hidex 300 SL Metrology

Designed for isotope metrology applications, the Hidex 300 SL Metrology includes TDCR data required for metrology calculation models.

Specifications	
Dimensions	25" (L) x 20" (W) x 27" (H)
Weight	275 lbs
Sample Capacity (20 mL/7 mL)	40/96
Counting Efficiency ^{3}H/^{14}C	65/96%
Background ^{3}H in Water (8 + 12)	12 cpm

Please refer to the Technical Specification Sheet for further information

A high throughput automatic TDCR liquid scintillation counter

Designed to meet the needs of laboratories processing large quantities of samples, the Hidex 600 SLe features an optional QR code reader for compliant sample identification, with barcodes read directly from the vial cap to improve traceability from sample to result. A cooling conveyor is included, with samples cooled at 5˚C or greater than below ambient room temperature in normal laboratory conditions.

21 CFR Compliant

Hidex 600 SLe

Standard counter model.

Specifications	
Dimensions	49" (L) x 27" (W) x 25" (H)
Weight	441 lbs
Sample Capacity (20 mL/7 mL)	210/500
Electrical Connections	100 - 240 V 50 - 60 Hz
Energy Range β's	0 - 2,000 keV
Energy Range α's	0 - 10,000 keV
Efficiency	^{3}H unquenched > 70% ^{3}H (8 mL water, 12 mL cocktail) > 30% quenched ^{14}C unquenched > 96% α's (^{210}Po, ^{234}U/^{238}U, ^{241}Am, ^{222}Rn, ^{226}Ra) >95%

Please refer to the Technical Specification Sheet for further information

Hidex 600 SLe Super Low Level

Similar to the standard instrument the Hidex 600 SLe super low-level scintillation counter is equipped with additional lead shielding, low-level PMT detectors, and an active guard detector for further background reduction.

Ideal for ^{3}H in water measurements, other low-level environmental monitoring, radiocarbon dating and biofuel verification.

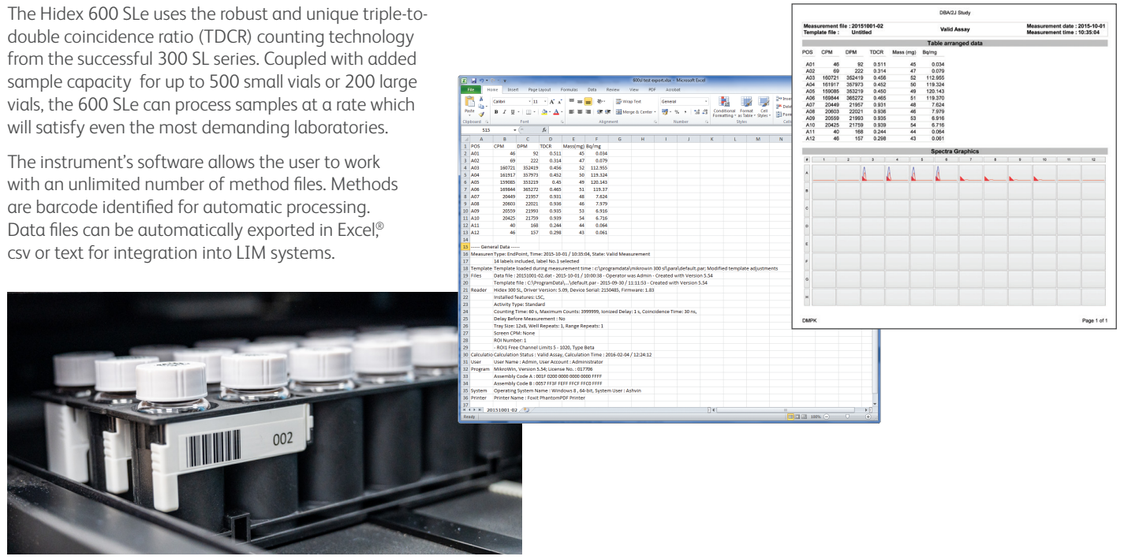
Specifications	
Dimensions	49" (L) x 27" (W) x 25" (H)
Weight	441 lbs
Sample Capacity (20 mL/7 mL)	210/500
Counting Efficiency ^{3}H/^{14}C	65/96%
Background ^{3}H in Water (8 + 12)	4 cpm

Please refer to the Technical Specification Sheet for further information

Proven technology

The Hidex 600 SLe uses the robust and unique triple-to-double coincidence ratio (TDCR) counting technology from the successful 300 SL series. Coupled with added sample capacity for up to 500 small vials or 200 large vials, the 600 SLe can process samples at a rate which will satisfy even the most demanding laboratories.

The instrument's software allows the user to work with an unlimited number of method files. Methods are barcode identified for automatic processing. Data files can be automatically exported in Excel,® csv or text for integration into LIM systems.



TDCR technology

The 300 SL and 600 SLe utilise a unique design with three photomultiplier detectors aligned 120 degrees from each other, which offers superior efficiency and counting results for both advanced research and environmental work.

In addition, both the 300 SL and 600 SLe models can be used in triple coincidence mode only, which removes interference from chemiluminescence and the need to dark adapt. The counters can also be operated in dual coincidence mode using conventional standards and quench correction methods.

Quench curves can be generated and stored within the MikroWin software, which can be automatically applied or manually fitted to recalculate previous data.

No internal or external standard source

The TDCR method allows easy determination of sample counting efficiency without the use of any internal or external standard source of radioactivity, offering many benefits for the modern lab including no hidden disposal costs, no health hazard when servicing, and no transportation restrictions.

Optimal Lead Shield Design

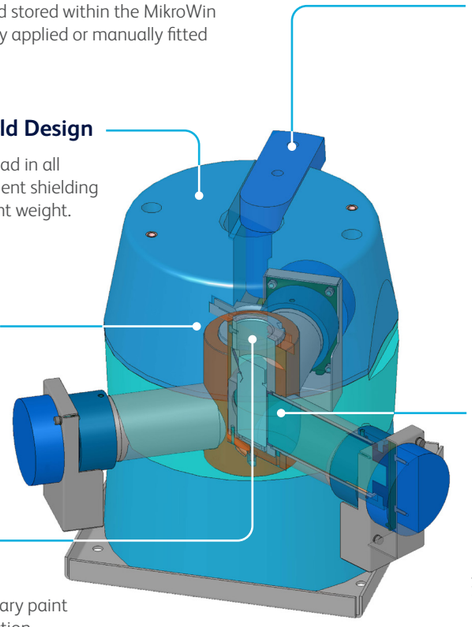
A minimum of 70 mm lead in all directions provides excellent shielding and minimises instrument weight.

Copper Shielding

Eliminates X-rays from lead shield.

Measurement Chamber

Highly reflective proprietary paint maximises photon detection.



Lead Shutter

Reduces cosmic radiation.

Robotic Loading Arm

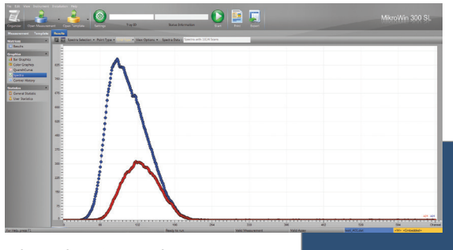
Removes the need for a complex elevator mechanism, preventing jams, and is easily serviceable.

No Source Required

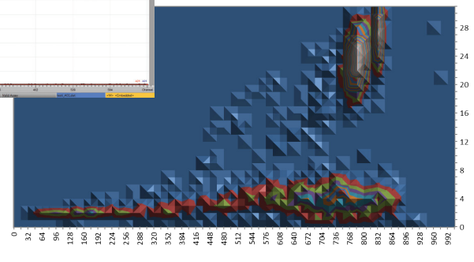
Eliminating hazards and cost without compromising results.

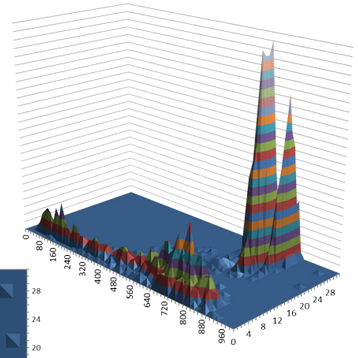
PMTs

Three PMTs detectors in coincidence mode provide optimal counting geometry and facilitate TDCR calculations.



Advanced spectrum analysis highlighting triple and double count spectrums for each sample.





2D/3D spectral separation of alpha's from beta's based on pulse length discrimination.

Software

The Hidex 300 SL and 600 SLe can be controlled by either Hidex's MikroWin software or LabLogic's Laura software running on an external computer. Other counters typically feature an internal computer physically built-in to the counter itself. If these integrated computers fail, it renders the whole instrument inoperable, whereas the Hidex instrument's operations are unaffected with software running on any computer. This also allows regular software and operating system updates, meaning users always have access to the latest versions.

21 CFR Part 11 Compliance

Laura, LabLogic's industry-standard radiochromatography software, provides all the tools to enable the counter to be used in a 21 CFR part 11 compliant manner.

A major benefit is that time-stamped audit trails are generated automatically and cannot be modified, making it easier to track end-user activity.

Also in line with the data integrity guidelines, each end-user will have their own unique, secure ID login and password. Different levels of access can also be granted to specific end users.

Database data storage option

Allows database only storage of precious data. Laura supports both Oracle and MSSQL, with the data only accessible through Laura.

Multi-level security

Definable levels of access are controlled for each user.

Project level access

User access can be defined on a project basis.

Configurable audit trail

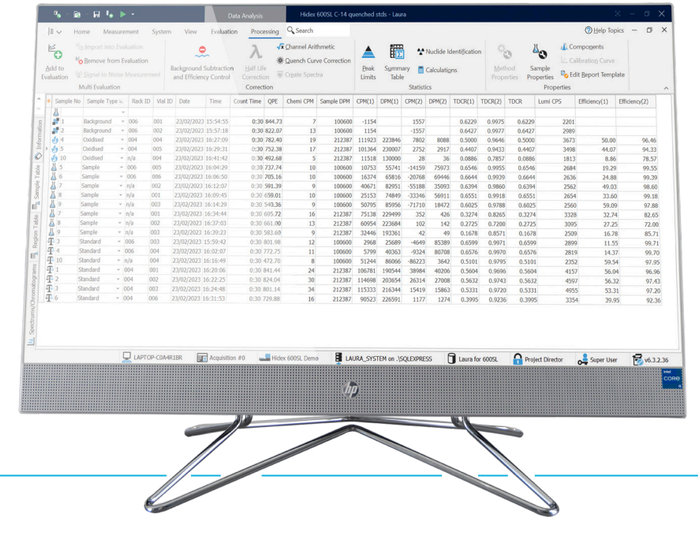
A comprehensive audit trail provides full accountability for data and user actions.

Electronic signatures

Configurable e-signatures are available, including dual signatures if required.

Lock projects, methods, evaluations against editing

Areas can be secured against editing using the user's login information.



Temperature Control

An optional temperature control module maintains sample integrity when conducting long count times, with 15 - 20 °C being the optimal range. Temperature control is not necessary for luminescence mitigation.

Luminescence Free Counting

The Hidex 300 SL and 600 SLe can be used in triple coincidence mode which removes interference from chemiluminescence and reduces the effect of other low-energy noise events. Samples with long luminescence decay such as ^{14}C in NaOH can be counted immediately without the need to dark adapt.

Alpha/Beta Separation

Alpha/beta separation is an optional feature which provides extremely sensitive detection of alpha-emitting isotopes in the presence of high beta radiation. Calibration and results validation can be done using spectrum analysis. Separation even works for unknown mixtures of alpha and beta isotopes.

This reduces the possibility of measurement errors typical for conventional misclassification methods, where calibration is often done using different conditions and isotopes than those found in unknown samples. Typical applications include the detection of ^{222}Rn, ^{226}Ra, ^{228}Ra, ^{241}Am and gross alpha/beta.

Optional External Standard Source

An optional external ^{152}Eu standard source may be included for additional quench correction for users who prefer to continue measurements adhering to ISO 17025 accredited methods.

Service and Support

Users of our systems can benefit from our comprehensive, fully inclusive service and support.

We can give reassurance that if things go wrong or you need expert advice, help is only an e-mail or phone call away.

Validation Services

Our Validation Service enables you to implement and get maximum value from your investments as soon as possible.

We work as a partner with your Quality Manager, System Manager and users to provide a tailored Validation Plan, suited to your needs. Our Validation Specialists who have many years' of experience in GLP system validation, detailed knowledge of our systems, together with other industry standard systems to help you meet company and regulatory requirements.

Training

LabLogic can provide a variety of training courses and workshops to help you get the most out of your instrument and software.

All training is performed by our expert Product and Support Specialists who have many years experience in the development and use of the instruments and software.

Certificates can be provided to complement your internal GLP training records.

Visit our website

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We invest in people Gold

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