Hidex **ULLA**

Ultra Low Level Analyzer

www.**lablogic**.com

The ultimate ultra low level analyzer

Hidex has served the liquid scintillation counting community for three decades. In recent years, the global market has been missing a true ultra low level LSC that would meet the most demanding needs. Applications in hydrogeology when mapping the global clean water resources, detection of biogenic carbon content in materials or measuring trace concentrations of alpha and beta isotopes in soil, food and drinking water require absolute accuracy and precision. True to their heritage of constant innovation Hidex have developed the next state-of-the-art counter to meet these requirements.

Ultra low background and triple coincidence detector

Low background is achieved with heavy passive lead shield and geometrically optimal active guard, which surrounds modern triple-PMT detector facilitating exceptionally high counting efficiency, luminescence free counting, and absolute activity counting by TDCR technique familiar from isotope metrology.

Vials are deionised prior to loading to remove static electricity. Cooling modules maintain the samples stable and in optimum temperature for highest counting efficiency, and detector can be flushed with nitrogen to remove ^{222}Rn gas often found in underground laboratories.
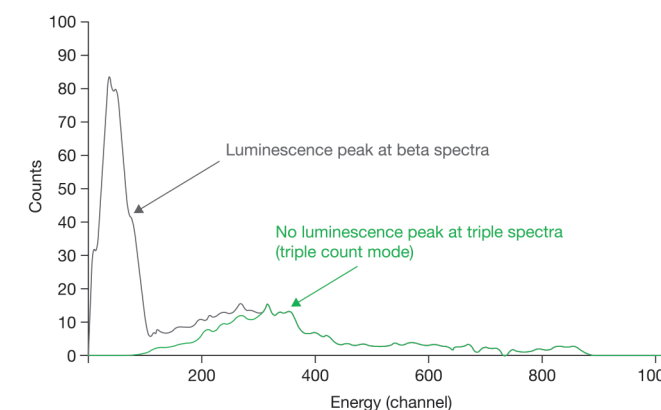
Digital Pb shield and Hidex biofuel method

Unique mathematical methods for Hidex TDCR counters. Digital Pb to decrease background uncertainty and biofuel method to find background count rate for samples when similar blank is not available.

Ideal for:

- ^3H in water.
- ^{14}C dating.
- Detection of biogenic carbon content in materials, such as fuels.
- Alpha and beta isotopes in soil, food and drinking water.

Quench correction with TDCR

Default quench correction is done by TDCR method. External ^{152}Eu standard source is available as an option for conventional quench correction. Alternatively, it is possible to use QPC method, which uses natural cosmic radiation as the external radioactive source instead of built-in gamma source.

Specifications	
Sample Capacity (20/7/5 ml)	80/192/192
Isotopes (Typical examples)	^3H, ^{14}C, $^{90}Sr/^{90}Y$, ^{226}Ra, ^{222}Rn, Gross a/b
Counting Efficiency $^3H/^{14}C$ (%)	70/97 (unquenched), > 35 for ^3H in 8+12 ml H_2O
Background (CPM) *25 % ^3H ROI in 8+12 ml H_2O	< 1 CPM in normal surface lab condition
FOM ^3H in 8+12 ml H_2O	> 600 without optimization, > 900 with optimization and DigitalPb
Dimensions W/H/D (inches)	25.5/49/354 (with cooler)
Weight (lbs)	~1,763

*Performance values were measured at the Hidex facility in Turku, Finland. Please refer to the Technical Specification Sheet for further information.

Combining existing technology with the latest innovations
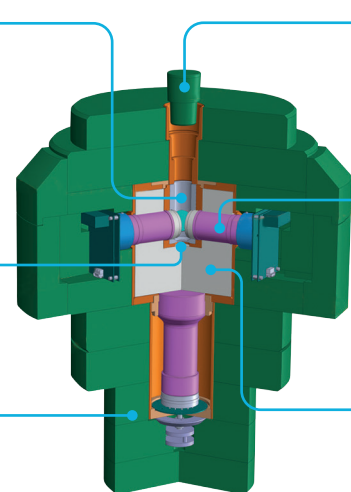
Maximum light collection

Measurement chamber with highly reflective opaque paint maximizes light collection.

Flushing

Gas inlet for flushing the measurement chamber.

Protection from environmental radiation

Extensive lead shield surrounding the detector and the guard provide optinal shield from environmental radiation.

Shielding

Lead cap shields the detector during counting.

TDCR counting

Three PMTs provide optimum measurement geometry and enable TDCR counting.

Active plastic scintillator guard

An active plastic scintillator guard, coupled to a PMT, surrounds the measurement chamber for effective background pulse detection and removal.

Alpha/beta separation

Unique Hidex alpha beta separation electronics with 3D graphical AB-calibration tool facilitating reliable and sensitive detection of alpha isotopes in the presence of beta isotopes.
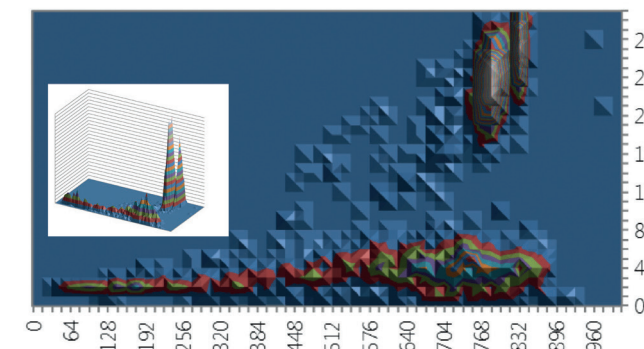
Hidex VALO user software

VALO is a modern user-friendly software designed specifically for Hidex automatic LSC. The development was based on user feedback with special attention on usability – from building up the methods, to loading of samples, to evaluation of the results. The features include automatic reprocessing of data with new energy ROIs and a/b discriminator without remeasuring the samples.

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.

LabLogic
EXPERIENCE & EXPERTISE

Certificate No: 10926
ISO 9001

Certificate No: 1535
ISO 9001

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