Standards for LSC
Hidex provides $^3$H and $^{14}$C standard sets for testing Hidex 300 SL and Hidex Triathler scintillation counter performance, as well as internal standard capsules for preparing own $^3$H and $^{14}$C standard solutions. The unquenched and quenched standard sets are manufactured for Hidex by Eckert & Ziegler. They are prepared gravimetrically from NIST traceable solutions. After preparation, all standards are QC tested with calibrated counting system of Eckert & Ziegler. Uncertainties are estimated using the guidance in NIST Technical Note 1297, “Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results”.

The radioactivity levels of the $^3$H and $^{14}$C components of these standards are far below the threshold levels specified in the International Air Transportation Administration (IATA) regulations pertaining to Dangerous Goods and are therefore not classified as radioactive material in transportation. The deliveries include QA test certificate and MSDS.
Unquenched LSC Standard
Set of $^3$H, $^{14}$C and Blank

A set contains $^3$H, $^{14}$C, and a background sample. Standards are prepared gravimetrically from NIST traceable solutions and flame-sealed in glass ampoules. The set can be used for verification of instrument performance. Manufactured for Hidex by Eckert & Ziegler.

$^3$H activity: 5 kBq (300,000 DPM)
$^{14}$C activity: 2.16 kBq (130,000 DPM)

Cat. No. 462-307 Unquenched standard set for $^3$H, $^{14}$C and Blank for LCS calibration, 7 ml ampoules
*Contains toluene, UN 1294 for transportation

Cat. No. 462-320 Unquenched standard set for $^3$H, $^{14}$C and Blank for LCS calibration, 20 ml ampoules
*Contains toluene, UN 1294 for transportation
Quenched LSC Standard Set of $^3$H and $^{14}$C in DIN and toluene

Each set contains ten (10) pcs of 20 ml ampoules of either $^3$H or $^{14}$C standard samples with constant level of activity and variable level of quenching. The quench sets are available either in toluene or in di-isopropyl naphthalene (DIN) solvent. Intended use is creating either External standard - or TDCR-quench curves. Sample volume 15 ml. Standards are prepared gravimetrically and flame-sealed in glass ampoules. Manufactured for Hidex by Eckert & Ziegler.

$^3$H activity /vial: 4.17 kBq $^3$H +/- 20% (250,000 DPM)
$^3$H total activity /set: 41.7 kBq
$^{14}$C activity/vial: 1.67 kBq $^{14}$C +/- 20% (100,000 DPM)
$^{14}$C total activity/set: 16.7 kBq

Cat. No. 462-7303 $^3$H DIN Quenched Standard Set, 10 x 20 ml vials
Cat. No. 462-7314 $^{14}$C DIN Quenched Standard Set, 10 x 20 ml vials
Cat. No. 462-8303 $^3$H Toluene Quenched Standard Set, 10 x 20 ml vials
*Contains toluene, UN 1294 for transportation
Cat. No. 462-8314 $^{14}$C Toluene Quenched Standard Set, 10 x 20 ml vials
*Contains toluene, UN 1294 for transportation
To allow convenient, accurate quench correction, Hidex supplies a range of Internal Standard Kits of $^3$H and $^{14}$C with known activity (DPM). Each kit contains 40 glass capsules with activity in dried form, processed in press-through strips. You simply drop a capsule into the vial, let the activity dissolve and count to find out the counting efficiency. The activity is either in water soluble or organic soluble form. The former is first dissolved in water and cocktail then added. The latter can be directly dissolved in a lipophilic cocktail.

The absolute activity of each type of Internal Standard capsule has been calibrated by comparison with reference standards of the National Institute of Standards and Technology (NIST), USA. Capsules will keep to within 1% of absolute activity for at least one year from the date of calibration. The standards are manufactured for Hidex by PerkinElmer.

$^3$H activity/capsule: near 200,000 DPM  
$^{14}$C activity/capsule: near 100,000 DPM

Expiration date: 5 years from the date of preparation.

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>462-011</td>
<td>$^3$H water soluble</td>
<td>box of 40 capsules</td>
</tr>
<tr>
<td>462-012</td>
<td>$^3$H organic soluble</td>
<td>box of 40 capsules</td>
</tr>
<tr>
<td>462-013</td>
<td>$^{14}$C water soluble</td>
<td>box of 40 capsules</td>
</tr>
<tr>
<td>462-014</td>
<td>$^{14}$C organic soluble</td>
<td>box of 40 capsules</td>
</tr>
</tbody>
</table>
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.

Products

**HIDEX 300 SL**
A very compact automated TDCR Liquid Scintillation Counter featuring absolute activity/DPM without external radioactive standards enabling a wide variety of applications.

**RADIOWATER GENERATOR**
An automated production system for $\text{H}_{2}\text{O}$ for Positron Emission Tomography studies.

**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.

**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 fingertips.

Contact Hidex

**Call us**
Tel. +358 10 843 5570  
Fax. +358 2 241 0075

**Address**
Mustionkatu 2  
FIN-20750 Turku  
Finland

**E-mail**
info@hidex.com  
firstname.lastname@hidex.com

www.hidex.com