RPL Dosimeter

Personal Dosimetry System

Institut de Radioprotection de Sûreté Nucléaire (IRSN) is providing Dose Monitoring Service in Europe using our products. Our accumulated Know-how is available through the French Institute. Chiyoda Technol also helps you to consult your needs and provides Personal Dosimetry System. Please contact us.

RPL Dosimeter is the flagship among our products, resulting from our long years’ research and experience. Chiyoda Technol has been engaging in personal dose monitoring business since 1954. At present, we operate the service with a total number of 4 million units in Japan.

Technical Benefits

- Proven European-scale performance recognized by the major European laboratories that choose the institute’s dosimeter (see intercomparison results)
- Recording threshold: 0.05 mSv
- Less than one percent of fading over a period of 12 months

Specifications

<table>
<thead>
<tr>
<th>Detected energy range (A)</th>
<th>Dose range (B)</th>
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</thead>
<tbody>
<tr>
<td>Photon (Mg)</td>
<td>From 16 keV to 6.6 MeV</td>
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<tr>
<td>Beta</td>
<td>From 100 keV to 3 MeV</td>
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(A) These limits are not operating limits but corresponds to the reference and maximum energies available to the reference facilities that conducted the tests.
(B) In laboratory conditions, the detection limit is a few µSv only.

Automatic Reader FGD-660

RPL is the only dosimeter with non-destructive reading center that is able to routinely take 50 measurement points per dosimeter which can be read repeatedly without fading. We associated it with RPL Dosimetry Reader (FGD-660), the read-out system for glass detector, using solid-state (UV) laser that is capable to drive continuous pulses to the ultra violet excitation source.

RPL emission model of Ag⁺-doped phosphate glass.

The composition of luminescence of silver doped glass has been clarified by recent research. Please refer to: Y. Miyamoto et al. Radiation-induced luminescence from alkali-doped phosphate glass. Radiation Measurement 46: 1480-1483, 2011