Fact Sheet: Kryptoscan™: $^{81}\text{Rb}/^{81m}\text{Kr}$ Generator

**KryptoscanTM:**
$^{81}\text{Rb}/^{81m}\text{Kr}$ Generator
- Half-Life (of $^{81}\text{Rb}$): 4.57 hours

KryptoScan™ is a radionuclide generator. The mother-radionuclide (Rubidium-81) is immobilized on a membrane, through which the daughter radionuclide (krypton-81m) is eluted with the passing of air.

Krypton-81m is ideally suited for lung ventilation studies. Its very short half-life results in a low radiation burden for the patient. With a gamma energy higher than that of $^{99m}\text{Tc}$, it enables lung ventilation studies to be performed immediately after a perfusion study of the pulmonary vascular bed.

**Product Specification**

**Pharmaceutical form**
Radionuclidic generator

**Available quantities**
75 - 740 MBq per generator at calibration

**Expiry**
20 hours from time of calibration

**Radionuclide purity**
$^{81}\text{Rb}$ breakthrough:
<50 Bq/GBq/L $^{81m}\text{Kr}$

**Packaging**
Radionuclidic generator

**Availability**
Dispensed daily

**Calibration**
12:00 p.m. CET at day after production

**Delivery Service**
Covidien is our partner in the distribution of our $^{81}\text{Rb}/^{81m}\text{Kr}$ generators. In Covidien we found an established global healthcare company that offers us effective logistic solutions for distributing our products outside the Benelux region. Their international presence, with products sold in over 140 countries, supports the compliance of our strict quality and safety requirements when it comes to shipping overseas.
Decay Table ($^{81}$Rb)

Physical half-life: 4.576 hours
Rubidium-81 is in equilibrium with krypton-81m

<table>
<thead>
<tr>
<th>Hours</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<tbody>
<tr>
<td>0</td>
<td>1.000</td>
<td>0.859</td>
<td>0.739</td>
<td>0.635</td>
<td>0.546</td>
<td>0.469</td>
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<tr>
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<td>0.189</td>
<td>0.162</td>
<td>0.140</td>
<td>0.120</td>
<td>0.103</td>
<td>0.089</td>
<td>0.076</td>
<td>0.065</td>
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<td>2</td>
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<td>0.023</td>
<td>0.019</td>
<td>0.017</td>
<td>0.014</td>
<td>0.012</td>
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</tbody>
</table>

Physical Data ($^{81m}$Kr)

Physical half-life: 13.1 seconds

<table>
<thead>
<tr>
<th>Rad. Type</th>
<th>Energy (keV)</th>
<th>Radiation Intensity (%)</th>
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<tbody>
<tr>
<td>G</td>
<td>190.46</td>
<td>67.7</td>
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