



Source Ra-226, 4,0 kBq

09041.00

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## Operating Instructions



Fig. 1: Source Ra-226, 4.0 kBq in storage-box, 09041.00.

### 1 SAFETY PRECAUTIONS



- Whenever radioactive substances are handled, the determinations of the particularly valid version of the Radioactive Protection Regulations, as well as the legal or administrative regulations for radiation protection in schools of the particular country, are to be observed.
- When not in use, store the preparation in the box provided for it.
- Protect the preparation against access to it of unauthorized persons.  
The PHYWE steel cabinet (art. no.: 97320.00) is suitable for the storage of radioactive preparations.

### 2 PURPOSE

The radioactive source Radium-226 with an activity of 4 kBq is especially developed as a mixed emitter for experiments with  $\alpha$ -,  $\beta$ - and  $\gamma$ -rays.

### 3 FUNCTION AND HANDLING

The radium-226 is in the form of sulfate imbedded in gold and additionally covered with a 2  $\mu\text{m}$  thick gold-palladium alloy. For this reason, the energy of the emerging  $\alpha$ -particles is reduced to about 4.5 MeV. To prevent a contact the source is mounted in a 7 mm deep bore hole.

The source has to be replaced in the storage-box after use.

### 4 TECHNICAL SPECIFICATIONS

Nuclide	Ra-226
Half life	1600 a
Radiation	$\alpha$ , $\beta$ , $\gamma$
Activity	4 kBq
$\alpha$ -energy	approx. 4.5 MeV
$\gamma$ -energies	(82/186/242/293/352/609) keV
Dimensions	$d = 12 \text{ mm}$ , $l = 85 \text{ mm}$
Weight	approx. 0.38 kg

### 5 GUARANTEE

We guarantee the instrument supplied by us for a period of 24 months within the EU, or for 12 months outside of the EU. This guarantee does not cover natural wear nor damage resulting from improper handling.

The manufacturer can only be held responsible for the function and technical safety characteristics of the instrument, when maintenance, repairs and changes to the instrument are only carried out by the manufacturer or by personnel who have been explicitly authorized by him to do so.