

W-188/Re-188 generator for radionuclide therapy

The W-188/Re-188 generator is intended for the production of sterile pyrogen-free sodium perrhenate ($\text{Na}^{188}\text{ReO}_4$) in the isotonic solution of sodium chloride that is used in hospitals for synthesizing the radiopharmaceuticals applied for the therapy of malignant and non-malignant diseases, including bone metastases, lymph nodes, and rheumatoid arthritis.

Technical advantages:

- Short half-life period of Re-188 (17 hours) makes it safer for patients, staff, and the environment.
- The presence of mean energy β -emission provides the optimal therapeutic dose for affecting pathology focus (tumors and others).
- The presence of a γ -component with the energy of 155 keV in the emission spectrum makes it possible to monitor the behavior of the labeled pharmaceutical in a patient's body using SPECT.
- Produced in accordance with the requirements of the Radiation Safety Standards-2009/2010.
- The half-life period of parent W-188 radionuclide (69,4 days) makes it possible to use one generator during the period of 6-12 months (depending on rated activity of generator).



The generators are produced in accordance with the requirements of the Quality Assurance System - ISO-9001-2001 standards.

Technical Specification:

Activity	100 – 1000 mCi
Radiochemical purity, %	≥ 99.0
pH	4.0 - 8.0
The rated activity in ^{188}Re on the fixed delivery date, GBq (mCi), not more than	37.0 (1000)
Concentrations of radionuclide impurities (relative to ^{188}Re activity), %:	
^{188}W	$\leq 1 \times 10^{-3}$
other γ -emitting radionuclides, in total	$\leq 1 \times 10^{-3}$
Concentrations of inactive impurities, $\mu\text{g/ml}$	≤ 10.0
Dose rate on the generator surface, $\mu\text{Sv}/(\text{h} \times \text{GBq})$	80.0
Weight, kg	15.0
Life time (depending on the initial activity), days	40-200
Eluate	transparent, colorless, sterile, apyrogen