$^{188}W/^{188}Re$ Generator

Production of high-energy beta emitting rhenium-188

Produced by OncoBeta® GmbH

OncoBeta® GmbH is a medical device and radiochemical company, specializing in the development and commercialization of state-of-the-art, innovative radioisotope therapies and products utilizing rhenium-188. OncoBeta® offers an innovative Skin Cancer Therapy targeting non-melanoma skin cancers and produces tungsten (wolfram)-188/rhenium-188 ($^{188}W/^{188}Re$) Generators for commercial use.

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$^{188}W/^{188}Re$ Generator

Not for Human Use.

The OncoBeta® $^{188}W/^{188}Re$ Generator is based on an alumina column. The longer-lived mother radionuclide ^{188}W is adsorbed on the column material while the daughter radionuclide ^{188}Re is selectively eluted from the generator with sterile isotonic solution as sodium perrhenate ($Na^{188}ReO_4$).

USAGE

The $^{188}W/^{188}Re$ Generator can be used for radiolabelling reactions or directly as a high dose liquid radioactive source.

MAIN FEATURES

- Available in different sizes upon request.
  Up to 150 GBq (4 Ci) ^{188}W
- High activity concentration.
  Up to 9 GBq/ml ^{188}Re

SPECIFICATIONS

Column material	Aluminium oxide (Al_2O_3) packed in quartz glass column
Eluent	Sterile 0.9 % saline solution
Chemical form	Sodium perrhenate ($Na^{188}ReO_4$)
Appearance	Clear and colorless solution
Elution volume	5 - 14 ml (with small volumes not completed elution)
Elution yield	75 - 85 %
Radiochemical purity	> 98 % Re(VII)
Tungsten breakthrough	^{188}W < 0.01 % in relation to ^{188}Re at calibration time
Total gamma impurities	< 0.01 % in relation to ^{188}Re at calibration time
Shelf-life	10 months
Specific activity	Product is carrier free
Generator size (nominal ^{188}W activity)	3.7- 150 GBq
Generator dimensions	Diameter 145 mm, height 210 mm
Generator weight	16 kg
Interface	Standard: Stainless steel needles for elution with evacuated vials. On request: Tubings with Luer-Lock connectors (inlet female, outlet male)

**This product is for laboratory research purposes only*

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Not for Human Use.

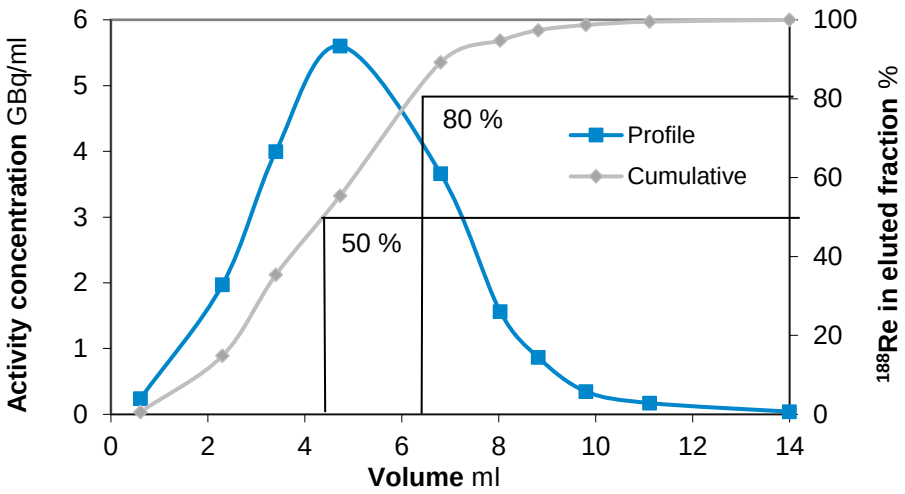
ELUTION

The elution yield of rhenium-188 is 75-85 %, and it remains stable throughout the shelf-life of the generator.

Set up

- The $^{188}W/^{188}Re$ generator must be eluted with sterile 0,9 % saline solution *only*.
- The maximum time for the $^{188}W/^{188}Re$ generator to be left uneluted is three (3) weeks.

Typical $^{188}W/^{188}Re$ generator elution profile



Elution:
Vials

The inlet/outlet cover of the OncoBeta® $^{188}W/^{188}Re$ Generator offers two holes. The smaller IN hole with two needles for **saline vial** and the larger OUT hole with one needle for **evacuated vial**.

In the elution process, vacuum moves the saline solution through the column into the evacuated vial.

Elution:
Syringe, pump, dispenser system

On request, the OncoBeta® $^{188}W/^{188}Re$ Generator is delivered with tubing attached on the inlet and outlet needles that have **Luer Lock connectors**. By these means, the generator can be connected to a syringe, a peristaltic pump or a dispenser.

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