

¹⁷⁷Lu Lutetium-177 Chloride Radiochemical (n.c.a.)

Lutetium-177 (Lu-177) is a radioisotope used in targeted radionuclide therapy to treat certain neuroendocrine tumors and prostate cancer. Lu-177 can be combined with tumor-targeting vectors that guide the isotope to diseased cells within the body and attaches to them. As the isotope undergoes radioactive decay, it delivers a large dose of beta particles that can destroy the surrounding diseased cells.

Process Data

Target

¹⁷⁶Yb

Nuclear Reaction

¹⁷⁶Yb (n, γ) ¹⁷⁷Yb → β- ¹⁷⁷Lu

Product Specification

Half-Life

6.65 days

Chemical Form

Lutetium-177⁺³ in 0.04N hydrochloric acid

Specific Activity ⁽¹⁾

≥ 2900 GBq/mg

Activity Concentration ⁽¹⁾

≥ 137 GBq/mL

⁽¹⁾ Activity calibration is at 12:00 EST on day of manufacture

Radionuclidic Purity

@ Reference Date and Time

(12:00 EST on day of manufacture)

Lu-177 ≥ 99.9%

Lu-177m ≤ 0.07%

Yb-175 ≤ 0.1%

All other radionuclidic impurities ≤ 0.01%

Radiochemical purity

Lu-177⁺³ ≥ 99.9%

Chemical Purity

Cu ≤ 1.0 ug/GBq

Fe ≤ 0.5 ug/GBq

Pb ≤ 0.5 ug/GBq

Zn ≤ 1.0 ug/GBq

Yb ≤ 0.5 ug/GBq

Endotoxins

≤ 20 EU/mL

Sterility

Sterile

Shelf-Life

9 days from Production Date

Primary packaging

Glass Vial (10 mL)

Product Origin

Ottawa, Canada

BWXT Medical Advantage



- Robust, scalable supply chain leveraging multiple irradiation services providers and target irradiation capabilities on a commercial power reactor.
- Expertise, infrastructure, and distribution capabilities to support worldwide growth of these important therapies.
- World-class delivery service with over 40 years of experience delivering nuclear medicine products across the globe.

Other BWXT Medical Products:

- Indium (In-111) Oxyquinoline Solution (US only)
- Indium-111 Chloride Radiochemical
- Iodine-123 Sodium Iodide Radiochemical
- Iodine-123 Sodium Iodide Oral Solution (Canada only)
- Germanium-68 Chloride Radiochemical Solution
- Strontium-82 Chloride Radiochemical Solution
- Actinium-225 Chloride Radiochemical

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