



Made differently. To make a difference.

Ilumira uses a proprietary process that offers a variety of advantages. These include not only higher purity, but also a longer shelf life⁴ and an eco-friendly outcome.

**Ilumira is a radiopharmaceutical precursor, not a finished drug.
It is solely intended for radiolabeling of carrier molecules and is not for direct patient use.
† Prostate-Specific Membrane Antigen*



References

1. Data on file at SHINE
2. Niu T, Fan M, Lin B, et al. Current clinical application of lutetium-177 in solid tumors (Review). *Exp Ther Med*. 2024;27(5):225. doi:10.3892/etm.2024.12514. PMID: 38596660; PMCID: PMC11002837. Accessed April 30, 2026. <https://pmc.ncbi.nlm.nih.gov/articles/PMC11002837/>
3. Dash A, Pillai MRA, Knapp FF Jr. Production of ¹⁷⁷Lu for Targeted Radionuclide Therapy: Available Options. *Nucl Med Mol Imaging*. 2015;49(2):85-107. Available from: [PubMed Central](https://pubmed.ncbi.nlm.nih.gov/26111111/). Accessed April 10, 2026.
4. ITM Therapeutics. EndolucinBeta Summary of Product Characteristics (SmPC) - EMA; July 6, 2016. Accessed April 30, 2026. https://ec.europa.eu/health/documents/community-register/2017/20170921138647/anx_138647_en.pdf

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Product Specifications.¹



Packaging Options	10 mL flat bottom glass vial 2 mL conical glass vial
Chemical Form	n.c.a. ¹⁷⁷ LuCl ₃ in 0.04M HCl solution
Specific Activity	≥3,000 GBq/mg at SHINE calibration time
Radiochemical Purity	≥99% as ¹⁷⁷ LuCl ₃
Radionuclidic Purity	≥99.9% ¹⁷⁷ Lu
Radioactivity Concentration at SHINE Calibration	~1.0 Ci/mL (37 GBq/mL)
Expiry	10 days from the end of synthesis
Standard Calibration	Tuesdays 1200 Central Time (U.S.) at 1.0 Ci/mL
Radiolabeling Yield	 ≥ 99%
Chemical Purity	Fe ≤ 0.25 µg/GBq Cu ≤ 0.5 µg/GBq Zn ≤ 0.5 µg/GBq Pb ≤ 0.5 µg/GBq ¹⁷⁶ Yb ≤ 0.1 µg/GBq
Production	Every week under cGMP with fresh material
Shipping	 Weekend shipment for arrival at customer locations on Monday
Radioactivity Concentration	1.0 Ci/mL
Lead Time for Delivery	7-14 days; the cutoff is Wednesday at 1400 CT
Minimum Dispense	50mCi (1.85 GBq)

Meets ICH Q7 and applicable provisions of FDA 21 CFR Parts 210 and 211

SHINE

Meet Ilumira, our n.c.a. Lu-177.



SHINE



shinefusion.com/isotope-sales
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Higher Purity.¹ Worldwide Shipping.



When it comes to supporting the world's need for nuclear medicine, one product shines bright. Ilumira n.c.a. Lu-177 offers outstanding radionuclidic purity and immediate worldwide shipping within reach like never before.



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High purity and efficacy for high specific activity n.c.a. Lu-177
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Meets European Pharmacopeia standards
- 

Efficient weekly global distribution
- 

Streamlined customs processing to minimize the risk of study delays or cancellations

Supporting the creation of hundreds of thousands of cancer-fighting doses.

Our purpose-built Wisconsin, USA facility provides commercial-scale n.c.a. Lu-177 supply for the global radiopharmaceutical market, with the ability to adjust capacity to the market demand for approved Lu-177 therapies. We plan to add a second facility in Europe that will match our US-based production. SHINE is one of the few Lutetium producers that also recycles Ytterbium (Yb-176) thus reducing waste, improving efficiency, and de-risking supply.

Hope shines.

Ilumira (n.c.a. Lu-177 chloride), when paired with a targeting ligand, can deliver potent radiation to tumor cells while sparing healthy tissue, helping meet global demand for Lu-177 based radioligand cancer therapies. Global demand for Lu-177 is soaring, but supply has been unstable -- most Lu-177 is carrier-added with lower radionuclidic purity.^{2,3} Cassiopeia, one of North America's largest Lu-177 facilities, produces Ilumira at $\geq 99.9\%$ radionuclidic purity for a reliable U.S. supply with global reach.

- Reliable supply and fast shipping to customers helping them stay on track with research and clinical trials.
- Helps customers bring innovative cancer therapies to market faster.
- Rigorous testing of each lot ensures optimal radiolabeling yield and performance.



Routine pairing with PSMA 617 at $\geq 99\%*$



The largest U.S. production capacity to meet growing worldwide demand



Optimization of internal irradiation capabilities with an eye toward 100% vertical integration



Eliminates dependence on Russian sources and aging nuclear reactors



Operates to cGMP as defined by ICH Q7 and FDA 21CFR to ensure regulatory compliance



Drug Master File (DMF) is filed with the U.S. FDA



Lighting the way.

SHINE is on track to become the world's first vertically integrated Lu-177 manufacturer. We're continuing to increase capacity and are developing new therapeutic isotopes. We're committed to helping save lives, reducing radioactive waste, and empowering a future in which commercial fusion energy is feasible. We're helping light the way to a brighter future for us all.