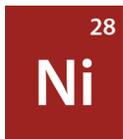


## Nickel-64 ( $^{64}\text{Ni}$ )



ISOFLEX offers the highest-enriched Nickel-64 (Ni-64) in the world at >99.10%. High isotopic purity allows for maximum-yield production of Copper-64 (Cu-64) for your PET needs. Inventories are maintained in San Francisco for immediate delivery.

Due to its half-life and beta emission capabilities ( $T_{1/2} = 12.7$  hours;  $\beta^+$ , 0.653 MeV [17.8%];  $\beta^-$ , 0.579 MeV [38.4%]), Cu-64 is a promising radioisotope for both imaging and radiotherapy of cancer. In addition, copper chemistry is well defined, resulting in abundant options for linking (chelating) Cu-64 to proteins, antibodies, peptides and nanoparticles that target particular cell types and organs.

Cu-64 has a well-established carrier-free production route,  $^{64}\text{Ni}(p,n)^{64}\text{Cu}$ , that can achieve high yields of 3-10 mCi/ $\mu\text{Ah}$  and is effectively produced with cyclotrons ranging from 11MeV to 19MeV. Production of this radioisotope expanded globally in the last decade to include North America, Europe, Japan and other markets.

ISOFLEX offers Ni-64 as metal powder, allowing easy dissolution for electroplating on gold or rhodium platforms for mounting on targets.

There is an optimistic outlook for Ni-64/Cu-64 as a widespread PET agent offering high image quality and numerous superior chelation routes and processes. Cu-64 is currently included in clinical studies that predict prognosis and determine the behavior of invasive cancers in squamous cells.

$^{64}\text{Cu}$ -ATSM has been granted Investigational New Drug status by the U. S. Food and Drug Administration and is currently used in clinical studies of imaging hypoxia in cervical cancer. These and other studies have demonstrated that PET imaging with  $^{64}\text{Cu}$ -ATSM provides clinically relevant information about tumor oxygenation (chronic vs. acute) and is predictive of the likelihood of disease-free, post-treatment survival in patients with cervical cancer.

The future of Cu-64 is bright, and ISOFLEX is proud to support this PET advancement with the highest quality Ni-64 on the market.