

Oxygen-18 (^{18}O)

Oxygen-18 (O-18) is natural, stable isotope of oxygen, and it is supplied in the form of $\text{O-18 Water (H}_2^{18}\text{O)}$. O-18 is an important precursor for the production of fluorodeoxyglucose (FDG) used in positron emission tomography (PET). Positron emission tomography (PET) is a nuclear medicine imaging technique which produces a three-dimensional image or map of functional processes in the body. The system detects pairs of gamma rays emitted indirectly by a positron-emitting radionuclide (tracer), which is introduced into the body on a biologically active molecule. Images of tracer concentration in 3-dimensional space within the body are then reconstructed by computer analysis. In modern scanners, this reconstruction is often accomplished with the aid of a CT X-ray scan performed on the patient during the same session, in the same machine.

Generally, in the radiopharmaceutical industry, enriched water (H_2^{18}O) is bombarded with hydrogen ions in either a cyclotron or a linear accelerator, creating Fluorine-18. This is then synthesized into FDG and injected into a patient.

ISOFLEX offers >97% enriched O-18 Water in 50-cc glass vials. Smaller vial quantities are available under special order.



1-415-440-4433 | USA & Canada Toll Free 1-888-399-4433 | Fax 1-415-563-4433
PO Box 29475 | San Francisco, CA 94129 USA | isoflex.com