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# Oxygen 15-labeled Oxygen

National Cancer Institute

## Source

National Cancer Institute. *Oxygen 15-labeled Oxygen*. NCI Thesaurus. Code C119710.

A radiopharmaceutical comprised of oxygen-15 labeled oxygen ( $^{15}\text{O}-\text{O}_2$ ) used as a tracer molecule during positron emission tomography (PET). Upon inhalation,  $^{15}\text{O}-\text{O}_2$  binds to hemoglobin in the blood and the labeled red blood cells distribute throughout the vasculature in the body. Upon PET imaging,  $^{15}\text{O}-\text{O}_2$  can be used to determine both the oxygen extraction fraction (OEF) and the metabolic rate of oxygen.