

^{18}O for Medical Applications



Oxygen-18 is used to create tailored organo-chemical compounds labelled with the radio isotope ^{18}F (for example, 2-fluoro-2-deoxy glucose [^{18}F FDG]). These are used for Positron Emission Tomography (PET), the latest cancer diagnostic technique.

cGMP approval in preparation

Specification

- Material ^{18}O - Oxygen 18
in form of water
- Isotopic content ^{18}O > 98.0 at%
 ^{17}O < 2 at%
 ^{16}O < 2 at%
- Purity > 99.9 wt%
- TOC < 5 $\mu\text{g/g}$
- pH 6 - 8
- Conductivity < 2 $\mu\text{S/cm}$
- Pyrogen < 0.25 EU/ml

Impurities in $\mu\text{g/g}$

Cations

Al	< 0.1
Ca	< 1
Cu	< 1
Fe	< 0.1
K	< 1
Mg	< 0.1
Na	< 1
Si	< 1
Zn	< 1

Anions

Br	< 1
Cl	< 1
F	< 1
NO_2	< 1
NO_3	< 1
PO_4	< 1
SO_4	< 1

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