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POSITRON-EMITTING RADIONUCLIDES - PRESENT AND FUTURE STATUS

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ABSTRACT

A tabulation of 157 positron-emitting radionuclides which have the physical characteristics deemed appropriate for radiopharmaceutical use in conjunction with positron emission tomography is provided. The most promising radionuclides are within the production capabilities of a variable energy cyclotron accelerating protons to about 40 MeV and deuterons, helium-3, and helium-4 to compatable energies. To date only 27 positron emitting radionuclides have been subjected to radiopharmaceutical consideration, whereas only ^{11}C, ^{13}N, ^{15}O, ^{18}F, ^{38}K, and ^{68}Ga have proved to be especially promising.