Erratum to: A novel technique for simultaneous diagnosis and radioprotection by radioactive cerium oxide nanoparticles: study of cyclotron production of $^{137\text{m}}\text{Ce}$

Mohamadreza K. Bakht · Mahdi Sadeghi ·
Claudio Tenreiro

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Unfortunately in the original publication of the article, the presented data about decay scheme of $^{137\text{m}}\text{Ce}$ was incomplete. Figure 1 illustrates the decay scheme of $^{137\text{m}}\text{Ce}$.

Consequently, the corrected version of Table 1 is given here. Lastly, it should be confessed that the 1.22 MeV γ -emission of ^{137}Ce could interfere with medical applications.

Fig. 1 The decay scheme of $^{137\text{m}}\text{Ce}$ (the data were taken from Ref. [1] and illustrated using JANIS 3.4 software [2])

References

1. Chadwick MB, Herman M, Obložinský P, Dunn ME, Danon Y, Kahler AC, Smith DL et al (2011) Nucl Data Sheets 112:2887
2. JANIS 3.4 user's guide (2012) http://www.oecd-nea.org/janis/janis-3.4/documentation/janis-3.4_manual.pdf. Accessed May 2012

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M. K. Bakht
Department of Medical Radiation Engineering, Science
and Research Branch, Islamic Azad University, Tehran, Iran

M. Sadeghi (✉)
Agricultural, Medical and Industrial Research School,
Nuclear Science and Technology Research Institute,
P.O. Box 31485/498, Karaj, Tehran, Iran
e-mail: msadeghi@nrcam.org

C. Tenreiro
Department of Energy Science, Sungkyunkwan University,
300 Cheongcheon-dong, Suwon, Korea

Table 1 Nuclear characteristics of the cyclotron produced radionuclides that use in SPECT

Choice	Radionuclide	Reaction	Target abundance (%)	Half-life	Daughter isotope	Significant isotopic impurities	Principal γ energies, keV (intensity, %)
Conventional	^{123}I	^{124}Xe (p,2n)	0.095	13.2 h	^{123}Te	No carrier added	159 (83 %)
		^{124}Xe (p,pn)	0.095				
		^{124}Te (p,2n) ^{123}I	4.816				
Conventional	^{67}Ga	^{68}Zn (p,2n)	18.8	73.3 h	^{67}Zn	^{66}Ga	93 (37 %), 185 (20 %), 300 (17 %), 395 (5%)
Conventional	^{201}Tl	^{203}Tl (p,3n)	29.524	73.1 h	^{201}Hg	^{200}Tl , ^{202}Tl	69–83 (Hg X-rays), 135 (2.5 %), 167 (10 %)
Conventional	^{111}In	^{112}Cd (p,2n)	24.13	2.8 days	^{111}Cd	$^{114\text{m}}\text{In}$	171 (90 %), 245 (94 %)
Alternative	$^{137\text{m}}\text{Ce}$	^{139}La (p,3n)	99.91	34.4 h	^{137}Ba	^{136}Ce , ^{138}Ce , ^{137}La	254.29 (100 %), 1222.10 (100 %)