

## Erratum to: Radiotoxicity risks of radium-226 ( $^{226}\text{Ra}$ ) on groundwater-based drinking at Dawaki, Kuje, Giri and Sabon-Lugbe area of Abuja, North Central Nigeria

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Authors would like to correct the errors in Tables 1 and 2 of the original publication. The correct version of Tables 1 and 2 is given below:

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**Table 1** Results of activity concentrations, annual effective dose, lifetime cancer mortality and morbidity risk, and the lifetime average daily dose (LADD) of  $^{226}\text{Ra}$  in water samples from the study area, comparing with various countries and international standard

Location	Activity concentration $^{226}\text{Ra}$ ( $\mu\text{Bq L}^{-1}$ )	Annual effective dose ( $\text{mSv year}^{-1}$ )	Cancer mortality risk	Cancer morbidity risk	LADD ( $\mu\text{g kg}^{-1} \text{ day}^{-1}$ )	References
Dawaki	2698	$8.9 \times 10^{-5}$	$1.01 \times 10^{-7}$	$1.55 \times 10^{-7}$	$6 \times 10^{-3}$	Present study
Kuje	849	$2.8 \times 10^{-5}$	$3.19 \times 10^{-8}$	$4.88 \times 10^{-9}$	$2 \times 10^{-3}$	Present study
Giri	443	$1.5 \times 10^{-5}$	$1.67 \times 10^{-8}$	$2.55 \times 10^{-8}$	$1 \times 10^{-3}$	Present study
Sabon-Lugbe	2736	$9.0 \times 10^{-5}$	$1.03 \times 10^{-7}$	$1.57 \times 10^{-7}$	$6 \times 10^{-3}$	Present study
Water Board	1824	$6.0 \times 10^{-5}$	$6.85 \times 10^{-8}$	$1.05 \times 10^{-7}$	$4 \times 10^{-3}$	present study
Hand-dug well	2430	$8.0 \times 10^{-5}$	$9.12 \times 10^{-8}$	$1.40 \times 10^{-7}$	$5 \times 10^{-3}$	Present study
Slovenia	6333	–	–	–	–	Kobal et al. (1990)
Brazil	1013	–	–	–	–	Almeida et al. (2014)
Germany	14,567	–	–	–	–	Gans et al. (1978)
China	17,733	–	–	–	–	Zhuo et al. (2001)
Finland	20,267	–	–	–	–	Salonen et al. (2002)
USEPA, Council Directive 98/83/EY/	19,000	$1.0 \times 10^{-1}$	–	–	–	USEPA (2000)
Odeda, Ogun state, Nigeria	–	–	$2.54 \times 10^{-4}$	$3.39 \times 10^{-4}$	–	Amakom and Jibril (2010)
RFD (reference dose)	–	–	–	–	$6 \times 10^{-1}$	Ye-shin et al. (2004)

**Table 2** Results of elemental concentrations of water analysis in Dei–Dei, Kubwa, Gosa, Lugbe boreholes, water board and hand-dug well, comparing with Pereira-Barbosa et al. (2013) and Gbadebo (2011)

Sample location	Carcinogenic toxic elements ( $\text{mg L}^{-1}$ )			Non-carcinogenic toxic elements ( $\text{mg L}^{-1}$ )				
	As	Cr	Cd	Pb	Ni	Zn	Mg	K
Dawaki borehole	0.003	0.004	0.0001	0.006	0.003	0.02	Nil	Nil
Kuje borehole	0.0002	0.004	0.00002	0.0002	0.002	0.04	2.11	1.41
Giri borehole	0.0006	0.0003	0.0005	0.003	0.001	0.032	1.334	1.339
Sabon-Lugbe	0.002	0.004	0.0001	0.014	0.021	0.277	0.037	0.0006
Water Board	0.001	0.01	0.0002	0.012	0.008	0.04	Nil	Nil
Hand-dug well	0.003	0.001	0.00006	0.002	0.005	0.03	Nil	Nil
Pereira-Barbosa et al. (2013)	0.05	0.1	0.005	0.010	0.07	0.07	0.05	–
Gbadebo (2011)	–	–	–	–	–	–	–	8.0