

Assessment of  $\gamma$ -radiation levels X +

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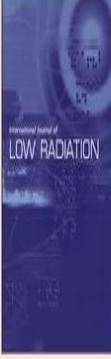
**Assessment of  $\gamma$ -radiation levels and associated dose rates from surface soils in the eastern part of Botswana**

Alfred Sello Likuku , Naregundi Karunakara , Gothamatang Patrick Nthoiwa 

**Abstract**

This paper reports the  $\gamma$ -radiation levels of the naturally occurring  $^{40}\text{K}$ ,  $^{210}\text{Pb}$ ,  $^{232}\text{Th}$  and  $^{226}\text{Ra}$  and the anthropogenic  $^{137}\text{Cs}$  in the eastern part of Botswana so as to assess their possible dose impact to the members of the public in the area. The radium equivalent activity was  $(175 \pm 24)$  Bq/kg, and thus below the allowed maximum value of 370 Bq/kg. The total absorbed rate ranged from 24.12 nGy/h to 215.44 nGy/h with

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