

Attenuation Properties of Fired Brick and Concrete Formed From Two Popular Brands of Cement in Nigeria

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(Received October 02, 2021; Revised October 20, 2021; Accepted October 31, 2021)

Abstract

The linear attenuation coefficients μ , of concrete formed from two popular brands of cement in Nigeria as well as fired bricks have been determined for a narrow, collimated beam of γ -rays at incident energies of 511, 609, 1120, 1460 keV, using a gamma spectroscopy set-up. The half-value layers and the tenth-value layers of the materials were also computed. Concrete demonstrated a slightly better attenuation ability than fired brick within the energy range of interest. The difference in the attenuation abilities of the concrete formed from the two cement brands was however negligible.

Keywords: *Linear Attenuation Coefficient, Photons, Concrete, Fired Bricks, Lafarge*