8th Annual Conference and Expo on
Biomaterials
May 10-11, 2023
Zurich, Switzerland

Computational study of tellurium based thallium and lead oxides systems based on the gamma ray shielding

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Exploration on emission protective factual is continuing to overawe the difficulty consequence of radioactivity. The interaction of energetic radiation such as γ-rays with matter is important in particle emission technologies, medical, nuclear engineering, agriculture, space technology, industries, and other caring claims. Therefore, it is compulsory to get devotion for the purpose of shielding, particularly for the people who work in radioactive environment. The effectiveness of the shielding be contingent to strength of the instance gamma-ray fallout and there physical, chemical compositions of absorbent constituents such as high density and high Z-number. Use of glass as a radiation shielding material is of great interest because of its transparency. The glass not only offer sufficient protection from radiations but also allows us to see through it. In the present study the gamma-rays particle emission protective assets of Tellurium, Thallium Oxide and Tellurium Lead oxide glass systems of composition 82 TeO2-18 Tl2O, 90 TeO2-10 Tl2O, 86.4 TeO2-13.6 PbO, and 78.2 TeO2-21.8 PbO studied. For the gamma-rays radiation shielding parameter like, half value layer (HVL), mass attenuation coefficient (MAC), linear attenuation coefficient (LAC), mean free path (MFP) and effective Z-number (Zeff). These parameters determine theoretically using Phy-x and WXCOM software. For simulation, MCNPx code was used. The above technique is the most suitable one to be used for this sort of study.

Biography

My name is Nadheem khan, I'm belongs from Pakistan. Recently I have completed my graduation in physics from Abdulwali Khan University Mardan, Pakistan.

Received: May 02, 2023; **Accepted**: May 03, 2023; **Published**: May 10, 2023