

**Answer on Question #61986-Physics-Other**

What is the effective dose for an external source in a case where the absorbed dose is 760 J/Kg for an external source in a case where the radiation is in the form of beta particles assuming a RBE value of 1.8?

**Solution**

$$effective\ dose = absorbed\ dose \cdot RBE.$$

$$absorbed\ dose = 760 \frac{J}{Kg} = 0.76\ Gy$$

$$effective\ dose = 0.76\ Gy \cdot 1.8 = 1.368\ Sv.$$

**Answer: 1.368 Sv.**

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