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The Specific Absorption Rate of 10g and 1g methods comparison for a child and an adult in a shielded space of railway compartment

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This study compares two SAR techniques (10g method and 1g method) on a chest model of an adult and a child in the shielded area of a train car compartment to examine the impact of electromagnetic (EM) fields. This study made use of electromagnetic modeling based on the Finite Integration method. The simulations were done for a particular scenario in which each model was positioned as near to the EM radiation source as possible in a shaded area. The radio frequency source for the EM field was a PIFA antenna operating at 900 and 1800 MHz. By simulating the absorption of EM radiation on the chests of an adult and a child, the results were evaluated in terms of SAR values. The results showed that the SAR values for the child chest model were greater than for the adult chest model.

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