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## Determination of alpha radiation dose to skin due to the application of different radiopharmaceuticals

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Artificial alpha-emitting radionuclides are significantly utilized in nuclear medicine. So, the skin of practitioners as well as patients in nuclear medicine and workers in the industry of radiopharmaceuticals may be accidentally contaminated even for a very short time by these radionuclides. Natural radionuclides such as those belonging to the uranium and thorium series are deposited on the human skin from the application of various material samples. The basic concepts of a Monte Carlo computer code for evaluating the mean absorbed dose in skin due alpha particles emitted by these radioisotopes were described and discussed. Committed equivalent dose to skin from the deposition of different material samples were evaluated. The influence of the application time, alpha disintegration ratio, half-life of the radionuclide and contaminated skin surface on committed equivalent dose was investigated.

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