

Aerosol transport and deposition in human airways – numerical and experimental approach

Miroslav Jicha, Matej Forman, Jan Jedelsky, Frantisek Lizal

Presentation contains results of CFD modeling of the flow field, and particles transport and deposition in a model of the upper respiratory tract and tracheobronchial tree up to 6th generation. Both, steady and full breathing cycle modeling results will be shown and their comparison.

Experimental part contains a brief description of the transparent lung model made by Rapid Prototyping and test rig enabling simulation of steady and unsteady breathing, controlled by over and under pressure. Results of PDA measurements will be shown as well deposition studies by microPET.