

THE EFFECT OF AEROSOL AND ELECTRO AEROSOL QUATERNARY AMMONIUM SALINE SOLUTIONS ON BACTERIA ON HORIZONTAL AND VERTICAL SURFACES

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Summary. To disinfect horizontal and vertical room surfaces electro aerosols of quaternary ammonium saline solutions with positive and negative electric charge and aerosol without electric charge in form of polydispersive 9 – 150 µm particles were used. Before disinfection the surfaces were infected with *E. coli* or *Staphylococcus aureus* bacteria. Samples from surfaces were taken 1 h before infection, 1 h before disinfection and 2 h after disinfection. The efficiency of disinfection was estimated by comparison of bacteria development in Petri dish. It was estimated that solution of Dezinfektas IV with positive electric charge have shown highest antibacterial efficiency (78,2-99,3%). In addition, electric particles have shown faster and more equal distribution on surfaces. Gr- bacteria (*E. coli*) were more resistant compared to Gr+ (*S. aureus*). For disinfection of *E. coli* significantly higher electro aerosol and aerosol concentrations (1,5:1) of Dezinfektas IV solution were used compared to *S. aureus* (1:4).

Keywords: electro aerosols of quaternary ammonium saline, *E. coli*, *S. aureus*, disinfection.