

**DISINFECTION ACTIVITY COEFFICIENT OF SOLUTION - DACS IN
RELATION TO MICROBIAL ACTIVITY OF DISINFECTANTS ON
STAPHYLOCOCCUS AUREUS**

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Knowing antiseptic activity of chemical disinfectant substances has great practical value. It is evidential that there is the need for defining parameter for comparing various chemical aqueous disinfectants. Phenol coefficient shows how many times bactericidal activity of examined disinfectant is greater or lower than bactericidal activity of standard phenol solution (5%). Suitability of phenol coefficient for evaluation of nonphenolic disinfectants is still opened question.

The aim of this study is to develop a new empirical coefficient which is capable to express the various physic-chemical properties of disinfectant solutions on bactericidal activity. The basic duty of this parameter (Disinfection Activity Coefficient of Solution - DACS) is to express capability for comparison and prediction of disinfectant activity. The DACS index, which is the sum of four terms (fluidity, surface tension, redox potential and osmolality), results in good correlation with the activity at different disinfectant aqueous solutions. The DACS index can be calculated using additive and statistical models. The usefulness of DACS is demonstrated for analyze of bactericidal activities on different disinfectant solutions containing boric acid, chlorhexidine, chlorhexidine with cetrimide, chloroxylenol, chlorophen, eosin, hydrogen peroxide, phenyl mercury borate, povidon-iodine, thiomersal, tosilchloramide and phenol.

Results for bactericidal activities obtained from microbiological tests on *Staphylococcus aureus* was compared with activities predicted with DACS.

As the conclusion, it is considered good correlation between experimental and calculated values for bactericidal activity.