

COMPARATIVE CHARACTERISTICS OF SOLUTIONS FOR THE DISINFECTION OF MEDICAL INSTRUMENTS

Mayboroda O., Roy I. D.

National University of Pharmacy, Kharkiv, Ukraine

neorganic@nuph.edu.ua

Introduction. For the disinfection of medical instrument are used different techniques, including chemical methods. The advantage lies in its simplicity, reliability and availability, and is the main disadvantage of solutions aggressive towards metal medical materials.

Aim. The purpose of research - a comparative evaluation of corrosiveness of modern disinfectants to metal tools.

Widespread disinfection agents containing chlorine. These substances have a broad spectrum of antimicrobial action. Disadvantages: chlorine compounds are toxic, have a pungent smell, stable solutions in wastewater does not decompose, are corrosive materials.

Iodine has a broad spectrum of antimicrobial activity, but has no effect on bacterial spores. Preparations based on iodine are corrosive to metals, rubber and degrade the quality of some plastics.

Alcohol - the most common component of antiseptics. The ethyl and isopropyl alcohols are used in medicine. All alcohols have a broad antimicrobial spectrum (except spores), evaporate quickly, and after evaporation leaves no residue. Isopropyl alcohol has no effect on some small lipophilic viruses. Alcohols are used as part of antiseptics, agents for the treatment of external surfaces of some equipment (eg, for stethoscopes).

The most promising are drugs which contains peroxide group. They have a broad-spectrum activity, including contra of spore forms of bacteria, to allow the use of this group of tools for sterilization. Solutions have a low toxicity; decompose rapidly, without a specific smell.

Conclusions. Further studies will be used to optimize the quantitative and qualitative characteristics of the composition of the solution containing the active peroxide groups. As a result of this work we define the criteria according to which optimization will be performed compositions of disinfectant solutions based on peroxides.

The optimal composition must be different maximum rates sporicidal activity, reagent stability ability, the minimum processing time and minimal corrosive effect on tool materials. The solution to this problem requires the use of mathematical methods of statistical processing.