

Application of the Good Manufacture Practice standards for production of food products for assuring microbiological cleanness and control of the residues of disinfectants

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Introduction

A major limitation in the use of disinfectants in the food industry is the fact that food is intended for human or animal consumption. Although disinfectants have the same role as in other industries (i.e. reducing of spoilage and pathogenic microorganisms to safe levels) here they are used in an environment that produces food products. Therefore it is necessary disinfectants to be suitable for their use and they must be non-toxic.

Disinfectants in pharmaceutical industry

According to the requirements of GMP and cGMP the pharmaceutical industry is very strict regarding this issue. One of the more difficult issues which pharmaceutical manufacturers are faced with, especially in terms of the chosen disinfectant is if it is appropriate to its purpose and if its effectiveness is evaluated periodically. The use of resources and procedures for implementation of disinfection, used in the pharmaceutical industry, are defined under applicable ISO standard for sterile operations (ISO 13408-11) where disinfectants are defined as chemical or physical agents that inactivate vegetative forms of microorganisms, but not necessary and highly resistant spores.

Regulations

This is respected in terms of continuing antimicrobial activity and may also lead to the emergence of residual adhesive surfaces which will cause deactivation of the other, the following used disinfectant. Different disinfectants are not compatible with all surfaces depending on the material they are made of. Disinfectants acting aggressively and progressively destroy microorganisms and contribute continuously residues of disinfectants used to be accumulated at these sites, which can be an additional problem.

Disinfectants in food industry

In the food industry, cleaning and disinfection are designed to remove all impurities and destroy microorganisms present in the production equipment and packages of final products. These activities must be conducted on products that are contaminated with dirt, germs or residues of disinfectant.

The obtained results of the cleaning procedures cannot be separated into individual results due to the fact that if with the cleaning procedure some quantity of impurities is removed, it means that some of microorganisms are eliminated to certain level, too. This elimination is often not sufficient and therefore proper use and implementation of precise and specified procedures for disinfection is necessary.

Conclusion:

Regulation in the Republic of Macedonia is set by Law on food safety. Setting limits in terms of residues of chemical substances in food, residues of used disinfectant, means achieving a safe and secure food for end users according to European requirements. Law on food safety in the country still does not set normative on production in terms of food production, the maximum residue limits for residues in food and the limits for allowable daily intake of them.