Frequently Asked Questions

1. **What do you mean by sanitizers?**

   Sanitizers are a type of antimicrobial that (according to EPA specifications) kill or irreversibly inactivate at least 99.9 percent of all bacteria, fungi, and viruses (called microbials, microbiologicals, and microorganisms) present on a surface. Most sanitizers are based on toxic chemicals such as chlorine, iodine, phenol, or quaternary ammonium compounds, and which (unlike some antiseptics) may never be taken internally.

2. **How does disinfection differ from sanitization?**

   Disinfection uses antimicrobial agents on non-living objects or surfaces to destroy or inactivate microorganisms. Disinfectants may not kill all bacteria, viruses, fungi and spores. Most disinfectants are weakened or inactivated by organic matter such as dirt and faeces. Sanitation uses an antimicrobial agent on objects, surfaces or living tissue to reduce the number of disease-causing organisms to non-threatening levels. Sanitizing does not affect some spores and viruses.

3. **What are antibiotics?**

   Antibiotics are medicines created to fight infection caused by bacteria. The word *antibiotic* literally means ‹against life.› The goal is to kill or stop growth of infection-causing organisms, known as pathogens.

4. **How are antibiotics used in food industry?**

   Antibiotics are widely used in food animal production for therapy and prevention of bacterial infections and for growth promotion. These are also used in the process by food preservation, decreasing spoilage by killing micro-organisms that cause deterioration of food.

5. **What are the various types of sanitizers currently being employed in food industry?**

   Four basic types of chemical sanitizers are in use in the food industry.

   - quaternary ammonium compounds (quats)
   - iodophors
   - chlorine-based surfactants
   - acid-ionic surfactants

6. **Enlist the important properties of an ideal sanitizer.**

   An ideal chemical sanitizer should have following characteristics:

   - approved for food contact surface application
   - inexpensive
   - low in toxicity and corrosiveness
   - readily solubilized and possess some detergency
   - stable under all types of conditions
   - tolerant of a broad range of environmental conditions
   - destroy microorganisms rapidly
   - have a wide range or scope of activity.

7. **What do you mean by 'iodophore'?**

   An Iodophor is a preparation containing iodine complexed with a solubilizing agent,

such as a surfactant or povidone (forming povidone-iodine). The result is a water-soluble material that releases free iodine when in solution. Iodophors are prepared by mixing iodine with the solubilizing agent; heat can be used to speed up the reaction.

8. **What are quats?**

Quaternary Ammonium Chlorides or "quats" as they are commonly known are based upon the active ingredient benzalkonium chloride.Quats are effective in destroying a broad spectrum of harmful microorganisms. They are effective in killing many pathogenic microorganisms while cleaning the surfaces upon which they reside.

9. **What are the various classes into which antibiotics have been classified?**

Antibiotics are classified into the following four classes:

Class I includes the lantibiotics such as nisin

Class II are small heat-stable peptides such as lactacin F

Class III are large heatlabile proteins such as helveticin J

Class IV are proteins that form a complex with other factors.

10. **Enlist the properties of antibiotics which are permitted for use in food industry.**

Following are some of the desirable properties of antibiotics which are permitted for use in the food industry:

a) It should be nontoxic.

b) It should be produced naturally.

c) It should be heat stable and should have excellent storage stability.

d) It should be destroyed by digestive enzymes.

e) It should not contribute to off-flavours or off-odours.

f) It should have a narrow spectrum of antimicrobial activity.