جامعة الانبار
كلية العلوم

قسم التقنيات الاحيائية
المادة: الاحياء المجهرية

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المرحلة : الثانية

Chemical Food Preservatives

26. S02, sorbic acid, benzoic acid, and propionic acid inhibit fungal metabolism and are used as food preservatives.

27. Nitrate and nitrite salts prevent germination of C. *botulinum* endospores in meats.

Antibiotics

28. Nisin and natamycin are anibiotics used to preserve foods, especially cheese.

Aldehydes

29. Aldehydes such as formaldehyde and glutaraldehyde exert their antimicrobial effect by inactivating proteins.
30. They are among the most effective chemical disinfectants.

Chemical Sterilization

31. Ethylene oxide is the gas most frequently used for sterilization.
32. It penetrates most materials and kills all microorganisms by protein denaturation.

Plasmas

33. Free radicals in plasma gases are used to sterilize plastic instruments.

Supercritical Fluids

34. Supercritical fluids, which have properties of liquid and gas, can sterilize at low temperatures.

Peroxygens and Other Forms of Oxygen

35. Hydrogen peroxide, peracetic acid, benzoyl peroxide, and ozone exert their antimicrobial effect by oxidizing molecules inside cells.

Microbial Characteristics and Microbial Control

I . Gram-negative bacteria are generally more resistant than gram-positive bacteria to disinfectants and antiseptics.
2. Mycobacteria, endospores, and protozoan cysts and oocysts are very resistant to disinfectants and antiseptics.
3. Nonenveloped viruses are generally more resistant than enveloped viruses to disinfectants and antiseptics.
4. Prions are resistant to disinfection and autoclaving.

References': 1- Microbiology an introduction TWELFTH EDITION. Gerard. Tortora.2016.

2- Microbiology an introduction TENTH EDITION. Gerard. Tortora.2010.