

# **The Control of Microbial Growth**

## **Chapter 7**

### **Student required vocabulary**

Nosocomial

Sterilization

Disinfection & antiseptic

Degerming

Sanitization

-cide

-stat or -stasis

Sepsis

Asepsis

### **Lecture outline**

#### **I. Rate of Death**

##### **A. Factors**

#### **II. Physical Methods of Control**

##### **A. Heat**

###### **1. moist heat**

a. boiling

b. autoclave

c. pasteurization

1) Milk standards

a) Classic, HTST, UHT

###### **2. dry heat**

##### **B. Filtration**

##### **C. Low Temp**

##### **D. Dessication**

##### **E. Osmotic Pressure**

##### **F. Radiation**

### III. Chemical Methods of Control

#### A. Evaluation

1. use-dilution test
2. disk-diffusion method
  - a. zone of inhibition

#### B. Types

1. phenol and phenolics
2. bisphenols
3. biguanides
4. halogens
  - a. tincture
  - b. iodophor
  - c. chlorine
5. alcohols
6. Heavy metals
  - a. oligodynamic action
7. Surfactants
  - a. soaps and detergents
  - b. acid-anionic sanitizers -
  - c. Quats
8. organic acids
9. aldehydes
10. gaseous sterilants
11. oxidizing agents
  - a. peroxygens