

# Cleaning or sanitizing

## Teacher notes for deck

### Slide 2:

#### What is Microbiology?

Free living: capable of independent existence. Don't form tissue but have all functions of human body

Ubiquitous: everywhere. Normal flora (E.coli in colon)

Dominant Orgs: in terms of numbers and range of distribution

Diverse: In form and function

### Slide 3:

#### So Why Micro...?

1. W/ regards to their role as normal flora and being causative agents of non-infectious and infectious diseases

- **Have students name some important microbes (strep, staph, e coli)**

2. W/ respect to infections, diseases, emerging and reemerging microbes.

- less than 1% cause disease

3. More beneficial than detrimental to human life and environment

4. Used as model organisms (studying of life processes),

- microbes have short generation time

- simple structure

- large numbers (offspring)

### Slide 4:

#### Micro and Biotech

Why would each of these be important in relation to biotechnology?

1. Preservation, fermentation

2. Medications/drugs (antibodies)

3. Insecticides

4. Decomposition, Biogeochemical cycling, Composting

5. Bioremediation: clean up of wastes/pollutants

### Slide 6:

#### Food Microbiology

1. Most commonly found and important to food quality and safety

- **Have the students describe food micro,**

3. Other factors of growth, and

4. How food may be contaminated

[http://books.google.com/books?id=1HzwMTjzFigC&pg=PT625&lpg=PT625&dq=U.S.+Food+and+Drug+Administration's+Bacteriological+Analytical+Manual&source=bl&ots=8VtNmzAMFD&sig=dBobu7iRtxliea3pZeRqw43OIMs&hl=en&sa=X&oi=book\\_result&resnum=4&ct=result#PPT778,M1](http://books.google.com/books?id=1HzwMTjzFigC&pg=PT625&lpg=PT625&dq=U.S.+Food+and+Drug+Administration's+Bacteriological+Analytical+Manual&source=bl&ots=8VtNmzAMFD&sig=dBobu7iRtxliea3pZeRqw43OIMs&hl=en&sa=X&oi=book_result&resnum=4&ct=result#PPT778,M1)

### Slide 7:

#### Silliker Food Science Center

<https://www.merieuxnutrisciences.com/silliker-food-science-center/>

1. Rapid methodologies: Enzyme Linked Fluorescent Antibodies (ELFA) much like ELISA but automated and polymerase chain reaction (PCR)

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**Slide 8:**

**Food Protection and Quality**

Four absolutes:

1. Give them what they want
2. Details, details, details
3. No mistakes. First time is the right way
4. QA114s (investigations)

**Slide 9:**

**Clean or Sanitize?**

**Students can go online to find the definition of a biofilm**

[http://books.google.com/books?id=jOZSJNuxNOIC&dq=biofilm&printsec=frontcover&source=in&hl=en&sa=X&oi=book\\_result&resnum=12&ct=result#PPA1,M1](http://books.google.com/books?id=jOZSJNuxNOIC&dq=biofilm&printsec=frontcover&source=in&hl=en&sa=X&oi=book_result&resnum=12&ct=result#PPA1,M1)