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Soy Fresh, Soy Clean

- Cleaning vs. Sanitizing

What is Microbiology?

- Study of microorganisms/microbes - minute single cell life forms invisible to the naked eye
  - free living
  - ubiquitous
  - dominant
  - diverse
  - unicellular/multicellular

So Why Micro…

- Microbial relationship w/ humans
  - mutualistic yet opportunistic 😐
- Microbial relationships to life processes
- Beneficial aspects played by microbes
- Microbes and research

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Micro & Biotech...

- Food & beverage production
- Pharmaceutical productions
- Agriculture
- Environment
- Sewage Treatment

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World of Testing Food

- Microbes play an integral role in food safety & quality
  - Several regulatory agencies, scientific groups, & industries provide standardized testing to ensure the safety & quality of food production
    - FAD (Food Adulteration & its Detection) - 1st text
    - FDA (Food & Drug Administration)
    - USDA (US Dept of Agriculture)
    - BAM (Bacterial Analytical Manual)

Food Microbiology

- Bacteria, molds, & yeast
  - Factors affecting the growth of microbes in foods
    - pH
    - temperature
    - O_2
    - biological structures
  - Factors causing microbial presence in foods
    - Personal hygiene
    - Food processing & preparation
    - Holding temps

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SILLIKER®
FOOD SCIENCE CENTER

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

- Dr. John H. Silliker, Ph.D. in 1967
- a preeminent figure in food safety and the fight against Salmonella
  - Quality assurance, safety, & nutrition
    - Qual → food borne pathogens → PCR and ELFA
    - Quan → spoilage & indicator org's → plating, reading, serology

Food Protection & Quality

- Effective food protection for human life
  - safe, attractive, appetizing, nutritious, & free of disease/poisons

- 4 Absolutes of Quality
  - Conformance to customer requirements
  - Achieved through prevention
  - Zero defects
  - Quality improvement MUST be measured

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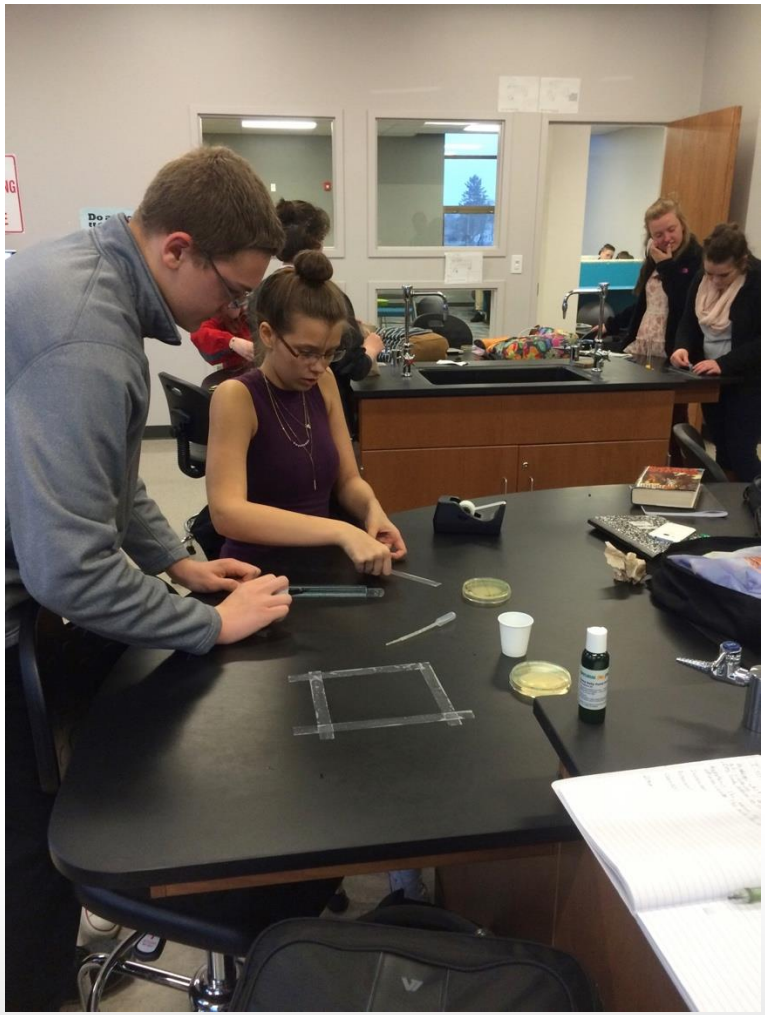
Clean or Sanitize?

- Cleaning
  - Removing the visible/non-visible products (biofilm) from a workstation surface
    - Buildup ↔ microbial resistance
- Sanitizing
  - Kills any residual microbes on the surface
  - Allowing to sit for 15 min. further breaks down biofilm & hinders other microbial growth



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