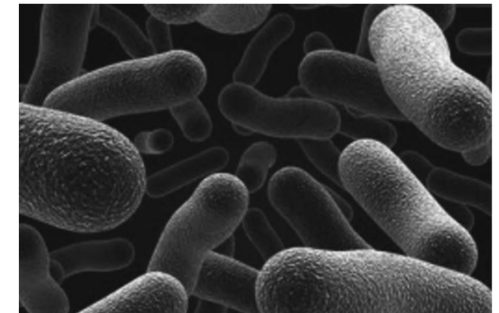


# Module 3 – Microbiology

## GENERAL CHARACTERISTICS OF MICRO-ORGANISMS

The word micro-organism is a general term used to describe a very small organism. Micro-organisms can be used to:

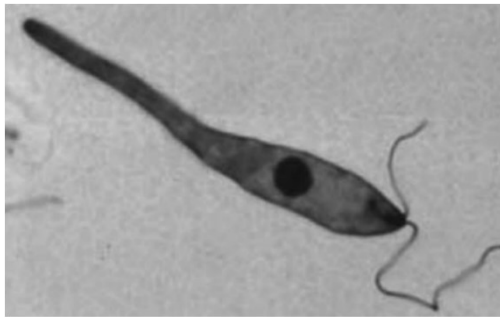
- Ferment useful chemicals;
- Produce certain food stuffs;
- Destroy wastes;
- Prevent disease; and
- Produce antibiotics used to treat disease.



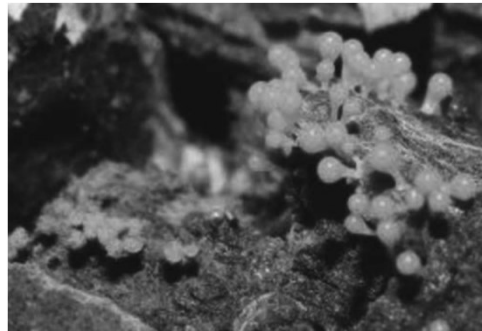
## Module 3 – Microbiology (continued)

### TYPES OF MICRO-ORGANISMS

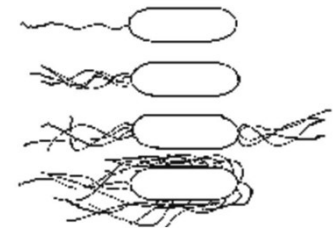
- Protozoa;



- Fungi, yeast and mould;



- Bacteria.



## Module 3 – Microbiology (continued)

### FACTORS THAT INFLUENCE THE GROWTH OF MICRO-ORGANISMS

- Time;
- Availability of food;
- Moisture;
- Temperature;
- Availability of oxygen;
- pH surrounding bacteria; and
- Competition.

## Module 3 – Microbiology (continued)

### DESTRUCTION OF MICRO-ORGANISMS

General factors that lead to the destruction of micro-organisms:

- Involves physical heat radiation or microwaves and/ or chemical agents. None of these can guarantee complete eradication.
- Susceptibility to the effects of physical and chemical agents depends upon the type of microorganism and at what stage in the micro-organism's life cycle they are exposed to the agent.

## Module 3 – Microbiology (continued)

### CAUSES OF FOOD POISONING AND DISEASES SPREAD BY FOOD

Food poisoning may be caused by a variety of sources including:

- Bacteria;
- Viruses;
- Chemicals;
- Metals; and
- Poisonous plants/animals.

## Module 3 – Microbiology (continued)

### MEDIUM FOR FOOD POISONING

The chain: To grow, bacteria need warmth, moisture, food and time; these four elements are known as the “food-poisoning chain”.

