



HeineBio

BASIC DEFINITIONS

BIOTECHNOLOGY :

The science of the selection and the application of living microorganisms for purposes useful for mankind and the environment.

BACTERIA :

Any of a group of diverse and ubiquitous prokaryotic, single-celled microorganisms.

SPORE :

The dormant or inactive stage that some bacteria can temporarily assume.

ENZYME : (a/k/a non-living chemical catalyst)

A protein produced by living organisms (i.e. bacteria) that function as catalysts in assisting chemical processes such as digestion or degradation of organic waste.

NOTE : While bacteria metabolize a wide variety of organic material, enzymes are substrate specific. For example :

Protease enzymes catabolizes (“breaks down”) protein
Amylase enzyme breaks down starch and carbohydrate
Lipase enzyme breaks down fat and grease
Cellulase enzyme breaks down cellulose
Urease enzyme breaks down urea

AEROBIC BACTERIA :

Bacteria that require the presence of oxygen to live and function.

ANAEROBIC BACTERIA :

Bacteria that do not require the presence of oxygen to survive – they are capable of living and functioning in the absence of oxygen.

FACULTATIVE BACTERIA :

Bacteria that are capable of living and functioning **either** in the presence of oxygen, **or** in the absence of oxygen.