

Aerobic & Anaerobic Biological Wastewater Treatment



Many wastewaters are purified of soluble organic contamination by utilizing the metabolic functions of microorganisms.

Special machines maintain precise conditions so that specific cultures thrive. These cultures feed on the wastes and purify the water. Two basic processes are employed.

The Aerobic process grows microbes requiring the presence of dissolved air (oxygen) in the water. This is normally accomplished with open chambers and air blowers. The Anaerobic process grows microbes that cannot exist with dissolved air in the water. So, the reactors are closed to the atmosphere. The plants can be large or small.

Treatment Plants are custom designed for each specific application. The nature and quantity of the wastewater are the largest factors influencing design configuration. A small size system is shown on the right.



Clarification

Treatment plants are composed of multiple unit operations, arranged in a coordinated manner to ensure performance and to minimize costs. A complete instrumentation and control system is required in modern day facilities.



Digestion

With attention to design detail and with proper training of personnel, the facilities can be easy to operate and to maintain.



Aeration

To protect the environment and to achieve regulatory compliance for wastewater discharge, many tools and considerable experience are available.