International Scholars Journals

Advanced Journal of Environmental Science and Technology ISSN 7675-1686 Vol. 13 (1), pp. 001-002, March, 2022.
Available online at www.internationalscholarsjournals.com © International Scholars Journals

Commentary

Brief note on biodegradation and its types

Wes Kevin*

Department of Environmental Science, Cornell University, Ithaca, New York, USA.

Received: 02-Mar-2022, Manuscript No. AJES-22-56741; Editor assigned: 04-Mar-2022, PreQC No. AJES-22-56741 (PQ); Reviewed: 18-Mar-2022, QC No. AJES-22-56741; Revised: 23-Mar-2022, Manuscript No. AJES-22-56741 (R); Published: 30-Mar-2022.

DESCRIPTION

Biodegradation

Biodegradable material can be defined as a substance that can be decomposed by bacteria or other organic matter and does not add to the pollution. Biodegradable waste is waste that is present and can be damaged by organic matter such as bacteria (e.g. bacteria, fungi and a few others), abiotic elements such as temperature, UV, oxygen, etc. Other examples of this contamination of food items, kitchen waste and other natural waste. Microorganisms and other abiotic elements together divide complex organisms into living organisms that eventually hang in the soil. The whole process is natural which may be faster or slower. Therefore, environmental problems and the dangers caused by biodegradable wastes are low.

There are 3 types biodegradation,

Bio-deterioration: Biodeterioration is sometimes described as high-level degradation that changes the mechanical, physical and chemical properties of a material. This stage occurs when the material is exposed to abiotic factors in the external environment and allows further deterioration by weakening the structure of the material. Other abiotic factors influencing these initial changes are pressure (equipment), light, temperature and chemicals in the environment. Although biodeterioration usually occurs as an early stage of environmental degradation, in some cases it may be accompanied by biofragmentation. Hueck, however, described Biodeterioration as an unwanted biological action on the human element, which included elements such as the degeneration of frontal structures, the corrosion of metals by microorganisms or simply aesthetic changes caused by man-made structures.

Bio-fragmentation: Biofragmentation of polymer is a lytic process in which bonds within a polymer are separated, producing oligomers and monomers in their place. The steps taken to separate these resources also vary based on the presence of oxygen in the system. Separation of micro-organisms in which oxygen is present in aerobic digestion, and degradation of substances in which oxygen is absent in anaerobic digestion. The main difference between these processes is that the anaerobic reaction produces methane, while the aerobic reaction does not (however, both reactions produce carbon dioxide, water, a type of fossil and new biomass). Additionally, aerobic digestion usually occurs much faster than anaerobic digestion, while anaerobic digestion does a better job of reducing the volume and weight of the substance. Due to the ability to digest anaerobic volume reduction and bulk of waste and to produce natural gas, anaerobic digestion technology is widely used in waste management systems and as a source of renewable, renewable energy.

Assimilation: In the simulation phase, the resulting products from biofragmentation are then synthesized into smaller cells. Some of the products from the separation are easily transported inside the cell by membrane carriers. However, some still have to make biotransformation changes to produce products that can be transported within a cell. Once inside the cell, the products enter the catabolic pathways that can lead to the production of adenosine triphosphate (ATP) or its cellular structure.

Biodegradable technology

Biodegradable technologies are developed technologies that use other systems for product packaging, manufacturing, and medicine. A major barrier to widespread use is the trade-off between biodegradability and performance. For example, lactide-based plastics are inferior packaging materials compared to traditional materials. Clean Technology Group exploits the use

*Corresponding author. Wes Kevin, kevinwes494@gmail.com.

of highly harmful carbon dioxide, where under high pressure at room temperature the solvent can use biodegradable plastics to form polymer drug holes. The polymer is used to synthesize the drug before injecting into the body and is based on lactic acid, a compound that is commonly produced in the body, and thus can be released naturally. Coating is designed for controlled release over time, reducing the number of injections needed and increasing therapeutic benefits. Professor Steve Howdle argues that decaying polymers are particularly attractive for use in drug delivery, as once they are absorbed into the body they do not need to be retrieved or used continuously and are made into soluble, non-toxic products. Different polymers fall at different levels in the body so the choice of polymer can be made in the right way to achieve the desired release levels.