

Environmental Conditions and Microbial Characteristics of Sewage Water

Dee Boer*

Department of Environment & Health, Vrije University, Amsterdam, Netherlands

An Overview

Water is an essential for an efficient and economical waste management programme. It helps within the choice of treatment methods deciding the extent of treatment, assessing the beneficial uses of wastes and utilizing the waste purification capacity of natural bodies of water in an exceedingly planned and controlled manner. While analysis of waste in each particular case is advisable and therefore the data from other cities could also be utilized during initial stage of designing. Domestic sewage comprises spent water from kitchen, bathroom, lavatory, etc.

The factors which contribute to variations in characteristics of the domestic sewage are daily per capita use of water, quality of facility and therefore the type, condition and extent of sewerage system, and habits of the people. Municipal sewage, which contains both domestic and industrial wastewater, may differ from place to place depending upon the kind of industries and industrial establishment. Wastewaters from industries can form important component of sewage in both volume and composition. It's therefore necessary that details about nature of industries, the number and characteristics of the wastewater and their variations, which can affect the sewerage system and sewage treatment process.

wastewaters high in suspended solids and BOD are to be accepted, provision should be made within the design of the treatment plant to handle such wastes. In certain instances, it's more economical to tackle the commercial waste at the source itself. Where, the wastewater has high or low pH corrective measures are necessary before admitting them to the sewers or the treatment plant. Toxic metals and chemicals having adverse effects on biological treatment processes, or upon fish life in a very natural water course, or render the receiving water stream unfit as a source of installation, should be brought right down to acceptable limits at the source itself. Oil and grease in excessive amounts not only add considerably to the price of treatment, but also pose a disposal problem.

The sewage after treatment is also disposed either into a water body like lake, stream, river, estuary, and ocean or on to land. It's going to even be utilized for several purposes like (a) Industrial reuse or reclaimed sewage effluent cooling system, boiler feed, process water, etc., (b) Reuse in agriculture and horticulture, watering of lawns, golf courses and similar purpose, and (c) well water recharge for augmenting spring water resources for downstream users or for preventing saline water intrusion in coastal areas.

The sewage contains nutrients, which if not optimally reused may cause eutrophication in receiving water bodies, thus causing their premature ageing. Hence, rather than directly discharging the effluents in to water bodies it is used for irrigation or fodder cultivation. The amount of sewage is often assessed supported its nutrient value. Biological stabilization of organic matter in batch reactor could be a typical example of a pseudo-first-order reaction. The speed of reaction is proportional to the concentration of one item, organic matter during this case, provided the opposite parameters controlling reactions are favourable.

References

1. Tapas K (2001) "Ultraviolet disinfection application to a wastewater treatment plant". *Clean Technologies and Environmental Policy*. 3 : 69-80.
2. Galvão A, Matos J, Rodrigues J, (2005) "Sustainable sewage solutions for small agglomerations". *Water Science & Technology*. 52 : 25-32.
3. Derek CW (1985) "The control of septicity and odours in sewerage systems and at sewage treatment works operated by Anglian Water Services Limited". *Water Science & Technology*. 31: 283-92.

*Corresponding author: Dee Boer, Department of Environment & Health, Vrije University, Amsterdam, Netherlands.

Received April 07, 2021; Accepted April 21, 2021; Published April 28, 2021

Citation: Boer D (2021) Environmental Conditions and Microbial Characteristics of Sewage Water 5: 216.

Copyright: © 2021 Boer D. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.