

# Aerobic, anaerobic and facultative microbiological treatment

during wastewater treatment many hazardous substances are sorbed (if not degraded) to some extent on suspended solids and as a result, they are found in sludge through sedimentation occurring in primary and secondary clarifiers.

The main mechanism involves bacteria, which are presented in the activated sludge. During this process, bacteria consume hazardous substances and convert them into carbon dioxide.

## Application

Aerobic, anaerobic and facultative bioreactor based biological treatment process is used for the stabilization of excess sludge derived from activated sludge.



Source: RTU Water Research Laboratory, Latvia

Anaerobic digestion is one of the most widely used processes for sludge stabilization where treated sludge is often discharged on the soil or reused for agricultural purposes.

Sources:

1) Ahmed, M.B., et al., 2017. Progress in the biological and chemical treatment technologies for emerging contaminant removal from wastewater: A critical review. *J. Hazard. Mater.* 323, 274–298.