

## **Advancement in Waste Water Treatment by recovery method in Dairy Industry**

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### **ABSTRACT**

Dairy industry is such kind of industry where high amount of water is required to process the milk, from raw milk receiving up to dispatch of final product and ultimately results into discharge of large amount of waste water. This waste water generally called effluent comprises of fats, lactose, nutrients, whey protein etc. due to which the biological oxygen demand (BOD) of water increases, along with this due to cleaning of equipments, tank, containers and pipes through various chemicals the waste water also contains detergents and sanitizing agent which leads to increase in chemical oxygen demand (COD). Due to increased BOD & COD, proper treatment of waste water is required before its discharge to prevent environmental losses.

With the advancement in technology, different advanced biological methods are used for treatment of dairy waste water. In this regard aerobic treatment technology like Activated sludge process, trickling filter, Sequencing Batch Reactor (SBR), Aerated lagoons etc. are used in case of high BOD, whereas anaerobic treatment technologies like anaerobic sludge blanket, Anaerobic sequencing batch reactor, up flow sludge blanket etc. are latest and cost saving technologies used for effluent treatment.

Membrane technology like Nano -filtration, ultra-filtration, and electro dialysis is also used as alternative of above mentioned traditional technology and are best suited in product recovery and also delivers good quality effluent, which is also cost effective in nature. Here we will discuss recovery methods of treatment which is best possible in cost reduction for treatment of waste water.

**Keywords:** - Aerobic and Anaerobic treatment, Dairy industry, Effluent, Membrane technology, Waste water

