

## In-Sewer aerobic and anaerobic laboratory-scale degradation study of organic pollutants in sewage

### ABSTRACT

The course of the degradation of pollutants in terms of chemical oxygen demand (COD), soluble COD (SCOD), phenols, and anionic surfactants was examined both aerobically and anaerobically in sewer-like conditions. The rates of COD and SCOD degradation under aerobic condition were 0.051 and 0.052 mg/L/h, respectively. COD concentration remained unchanged during anaerobic process. However, SCOD was observed to increase with a production rate of 0.010 mg/L/h. The concentration of phenols was observed to decrease at a rate of 0.0211/h remained constant during the anaerobic process. The same profile was observed in the concentration of anionic surfactants, wherein the rate of degradation was 0.0454/h aerobically, and the concentration profile remained constant.

**Keyword:** In-sewer; COD; SCOD; Phenol; Anionic surfactants; Aerobic; Anaerobic; Degradation