

**EVALUATION OF KINETIC PARAMETERS ESTIMATION METHODS IN
ACTIVATED SLUDGE SYSTEMS**

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ABSTRACT

Parallel batch experiments were conducted under various initial substrate to biomass ratios (S_0/X_0), to determine the kinetic parameters of heterotrophic bacteria. Bacterial kinetic constants were determined simultaneously according to measurements of oxygen consumption and volatile suspended solids (MLVSS) increase in batch assays. The OUR-based estimate of the maximum specific growth rate (μ_{\max}) was significantly higher than the one determined according to MLVSS. Under high S_0/X_0 ratios (>10) fast grown bacteria appeared to gain a competitive advantage resulting in higher μ_{\max} values compared to the ones obtained under low S_0/X_0 ratios (<2).