

**EVALUATION OF THE ACCURACY OF ACTIVATED SLUDGE
ACTIVITY PARAMETERS**

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ABSTRACT

Data from an aerobic plant, fed with artificial waste water, were used to: a) investigate the relationship two independent measures of sludge bacteria biomass, namely MLVSS and Total Direct Count of bacteria cells, b) estimate more accurately the Sludge Specific Oxygen Uptake Rate (SPOUR) and c) estimate the biokinetic constants U_{\max} and K_s of sludges of different age. The ratio $\log[(\text{cells/ml})/10^8]/\text{MLVSS}$ was found to be 0.7, but SPOUR is estimated more accurately when $\log[(\text{cells/ml})/10^8]$ is used instead of MLVSS as biomass measure. Young sludge had a higher maximum activity, while old sludge had higher affinity for the substrate.