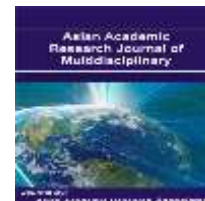




A Peer Reviewed International Journal of Asian
Academic Research Associates

AARJMD

**ASIAN ACADEMIC RESEARCH
JOURNAL OF MULTIDISCIPLINARY**



**REGRESSION ANALYSIS OF BOD₅ AND COD WITH TOC FOR
DOMESTIC WASTEWATER**
RAJESH GOPINATH^{*};HEMALATHA D. S. ^{};H. S. DAYANANDA ^{***}**

^{*}Asistant Professor, Department of Civil Engineering,
A.I.T., Bangalore, India.

^{**}Research Scholar, Department of Environmental Engineering,
V.V.C.E., Mysore, India.

^{***}Professor & Head, Department of Environmental Engineering,
V.V.C.E., Mysore, India.

Abstract

Presently, the available means for ascertaining the true potential of organic matter in the form of bio-chemical oxygen demand (BOD₅) and chemical oxygen demand (COD) is time consuming and imprecise. To overcome these time based difficulties, an attempt is being made to use a faster mode of assessment by establishing a relationship between BOD and COD with total organic carbon (TOC). To accomplish the same, the domestic wastewater collected from sewage farm, Mysore, sampled over a period of 2 months was analyzed for three parameters, BOD₅, COD and TOC. The best fit regression line for BOD₅ with COD was obtained as $BOD_5 = +0.631 \text{ COD mg/L}$. While the best fit regression line for BOD₅ with TOC took the form, $BOD_5 = +0.373 \text{ TOC mg/L}$, for COD with TOC, it was $COD = +0.565 \text{ TOC mg/L}$. The regression lines so developed, on comparison with practical & graphical values resulted in 99% efficiency.

Keywords- BOD₅, COD, TOC, Regression, Domestic.
