

RELATIONSHIPS BETWEEN BOD, COD, TOD, TOC

BOD (Biochemical Oxygen Demand)

This test is based on the amount of oxygen needed by microorganisms to biodegrade organic compounds. Organics that are not biodegradable will report the BOD value as "zero."

COD (Chemical Oxygen Demand)

This test uses a strong chemical to oxidize compounds, often in varying degrees, resulting in erroneous false COD reporting.

TOD (Total Oxygen Demand)

This analytical technique was developed to be equivalent to COD testing, in that oxygen uptake was measured as a result of combustion or other oxidation techniques. TOD analysis has similar interferences as COD analysis and has been generally disregarded as a favored analytical method for detection of organics in water.

TOC (Total Organic Carbon)

TOC test methods were initially developed in the late 1960's to rapidly determine the organic content of waters accurately, without the interferences of the above methods.

Correlation of **TOC** with **BOD** and **COD** can only be achieved by an initial baseline comparative characterization test, with representative samples of the stream to be analyzed.