

5 dayBOD, Comparison with the BOD-BART system



BOD stands for “biochemical oxygen demand” although some prefer to consider it as a “biological oxygen demand”. In discharging treated waste waters into the environment it is very important that these effluents do not trigger a sizeable oxygen demand in that environment. Such a demand could kill most of the animals including fish as the oxygen is consumed by the microbes in the effluent. Today the standard test remains a very widely recognized five day BOD test that has stood the test of time and is accepted to be functionally accurate. In the BOD-BART™ system oxygen demand is measured in the sample being tested by the time lag (in seconds) it takes for all of the oxygen to be removed to cause the blue color (oxidative) to disappear (reductive, oxygen is absent). This system can quantify the BOD in 3,000 to 60,000 seconds with precision and good correlations which have been obtained comparing the time lag to the five day BOD. This means that the test can be completed in less than 60,000 seconds compared to 432,000 seconds per test with the technologist time involved per test dropping the time spent actually working on the test to under five minutes for the BOD-BART system as compared to 30 to 90 minutes for the five day BOD depending upon the sample and the skill of the technologist. BOD-BART system is only recommended for the examination of sanitary municipal waste water treatment plants using either aerated lagoon or activated sludge treatment methods. BOD-BART system offers an 80% saving in testing time (at least) and an 80% saving in technician time as well as material costs. By using the BOD-BART system, the test is all over in less than 20 hours instead of 5 days with comparable precision.