



Biochemical Oxygen Demand

Biochemical oxygen demand or BOD is a chemical procedure for determining the uptake rate of dissolved oxygen by the biological organisms in a body of water. It is not a precise quantitative test, although it is widely used as an indication of the quality of water. BOD can be used as a gauge of the effectiveness of wastewater treatment plants. It is listed as a conventional pollutant in the U.S. Clean Water Act. Carbonaceous BOD or CBOD represents the Biological Oxygen Demand (BOD) from organic compounds and oxidation of inorganic compounds such as ferrous iron and sulfide. In recent years, the carbonaceous biochemical oxygen demand (CBOD) test has been employed to determine the carbonaceous fraction of the biochemical oxygen demand (BOD) of final effluents in nitrifying systems. However, CBOD is less specific, since it measures everything that can be chemically oxidized, rather than just levels of biologically active organic matter.

incubator temp in:	19.4	Meter CAL D.O. in:	9.45	at temp:	21				
incubator temp out:	19	Meter CAL D.O. out:	9.46	at temp:	22				
Seed Correction:	1.19								
pH	Initial DO mg/L	In Temp. C	Final DO mg/L	Final Temp. C	DO Depletion mg/L	Correction Factor Applied	Corrected for seed mg/L	BOD mg/L	Reported BOD mg/L
6.98	9.15	20.20	9.09	19.00	0.06				
6.98	9.15	20.20	4.56	19.00	4.59			137.70	
6.98	9.16	20.30	3.45	19.00	5.71			114.20	
6.98	9.16	20.30	2.14	19.00	7.02			105.30	119.07
N/A	9.14	20.30	3.99	19.00	5.15	1.19	3.96	198.00	198.00
7.48	9.15	20.20	5.64	19.00	3.51	1.19	2.32	46.40	
7.48	9.15	20.20	6.62	19.00	2.53	1.19	1.34	40.20	43.30
7.48	9.16	20.20	8.95	19.00	0.21	1.19	-0.98	0.00	
8.10	9.13	20.20	0.45	19.00	8.68	1.19	7.49	149.80	
8.10	9.15	20.20	2.47	19.00	6.68	1.19	5.49	164.70	
8.10	9.16	20.10	5.36	19.00	3.80	1.19	2.61	156.60	160.65

The ATL XL BOD Master™ is an Excel based software tool that will automatically calculate and report the BOD/CBOD results based upon standard methods criteria in seconds. The software will flag any data that is not within acceptable limits and will complete all required calculations. It is user friendly and can easily be used by laboratory personnel and operators with minimal training, and provides enhanced data integrity.

The ATL XL BOD Master™ Key Features

- Customized or template analysis sheet with breaks between samples for ease of tracking final results.
- User friendly drop-down menu for adding samples, dilutions, or replicates in building your analysis sheet.
- Results for samples are flagged in orange when not within the BOD/CBOD data criteria.
- All BOD/CBOD results used in calculating the reported BOD/CBOD are color coded in blue.
- All calculations are automated with the press of a button, improving productivity, increasing accuracy and saving time.

The ATL XL BOD Master™ is integrated into Sample Master® Pro LIMS for automated data management. It can also be purchased as a stand-alone solution. As an integrated solution, there are numerous benefits since all data is captured and stored electronically, complete with integrated calculations and error checking mechanisms to minimize transcription errors. Additionally, all data can be stored in a secure master database where data is available for automated reporting, e-mailing or viewing with others in the organization.

Technical Specifications:

The ATL XL BOD Master™ requires Microsoft Excel version 2003 or higher and is sold as a single user license. The software includes one hour of web-based training and a user tutorial that provides step by step instructions for using the application.

For more information about XL BOD Master™ or to schedule a demonstration, please contact an ATL sales representative at 1-800-565-LIMS (5467) or e-mail us at info@atlab.com or visit www.atlab.com.

