

# Wet Chemistry: Biochemical Oxygen Demand (BOD) Dilution Water



## SimpleWater™ BOD Buffer Solution Vials

BOD dilution water is composed of a variety of nutrients that provide an optimal growth media for bacteria in the BOD test. SimpleWater BOD nutrient buffer solutions are concentrates of the four required nutrient solutions combined in one vial. The contents of the SimpleWater vial are then diluted to the appropriate volume to make up your BOD dilution water.

SimpleWater BOD Nutrient Buffer Dilution Vials are available in five standard concentrations. Vials are borosilicate glass with lined, leakproof screw caps. Glass vials are easy-to-rinse with no residue trapping. Vials come in boxes of 36. Foam liners protect vials during shipping.

To bring to volume: Pour contents of vial into carboy or other container and bring up to the specified volume with water. An MSDS for each component is available on our website.

## SimpleWater Vials

Concentration	Catalog #	Quantity
300mL	D4300ML	36/Box
3 Liter	D4003L	36/Box
4 Liter	D4004L	36/Box
6 Liter	D4006L	36/Box
19 Liter	D40019L	36/Box

## SimpleWater Test Data

### BOD Solution Water Testing Procedure

The testing procedure consisted of a comparison with Environmental Express BOD Dilution Water reagents and Hach® nutrient buffer pillows. The test consisted of a series of blanks and GGA standards analyzed in both disposable and glass bottles following SM 5210B.

For the blank bottles using the Hach nutrient buffer pillows, three replicates were set up in glass and disposable bottles. For the Environmental Express BOD Dilution Water reagents, 5 bottles each of glass and disposable bottles were used. Additionally 4 different batches were analyzed. The average blank depletions are shown in the table, right.

Dilution Water Nutrient Source	Average Blank Depletion (mg/L)
Hach	0.05
Environmental Express Batch 1	0.01
Environmental Express Batch 2	0.04
Environmental Express Batch 3	0.06
Environmental Express Batch 4	0.03

### GGA Standard

For the GGA standard two sets of three bottles were analyzed. One set was analyzed in glass bottles and one set was analyzed in disposable bottles. Three bottles were used to comply with SM 5210B (2011). The average value of the each set is shown in the following table. None of the results for any of the dilution water sources were outside the acceptance range of  $198 \pm 30.5$  mg/L.

Dilution Water Nutrient Source	Average GGA Results (BOD mg/L)	
	Disposable Bottles	Glass Bottles
Hach	177.90	176.56
Environmental Express Batch 1	179.56	176.56
Environmental Express Batch 2	184.06	184.56
Environmental Express Batch 3	184.73	175.40
Environmental Express Batch 4	196.73	191.56

Additional products for BOD Analysis are available from Environmental Express. Visit the BOD section of our website for details.

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