

Lab Accreditation Program News

AccuStandard No Longer Approved as Proficiency Testing (PT) Provider

Posted 9/12/2005. AccuStandard of New Haven, Connecticut has discontinued preparation and distribution of PT samples as part of the nationwide WP or WS PT studies. AccuStandard is removed from the list of PT providers approved for Ecology's Environmental Laboratory Accreditation Program. AccuStandard still prepares quality control standards and can furnish them as "blinds" (i.e., without accompanying true values) to interested labs.

New DOH Microbiology Reporting Form has Field for Method Code

Posted 6/16/2005. The Washington Department of Health (WDOH) has revised its lab reporting form for coliform testing. It now has a field to enter the method used. The method is to be provided by entering the appropriate Ecology "parameter code" in the box entitled "Method Code" shown on the form. The Ecology parameter codes are identified in the table below. The "Parameter Name," "Method," and "Reference" should be exactly as they are on the lab's Scope of Accreditation since the scope is generated using information from the table below.

Microbiology Parameters Accredited by Ecology as of 6/14/2005

Sorted alphabetically by Parameter

Code	Parameter Name	Method	Reference
MICR1040	Enterococcus	Enterolert	IDEXX
MICR1050	Enterococcus/Fecal Strep	9230 B	SM
MICR1060	Enterococcus/Fecal Strep	9230 C2ab,3,4,5	SM
MICR1070	Enterococcus/Fecal Strep	9230 C2c,3,4,5,6	SM
MICR1080	Enterococcus/Fecal Strep	1600	EPA
MICR1100	Fecal Coliform - count	9221 E2	SM
MICR1120	Fecal Coliform - count	9221 B1,2,C&E1	SM
MICR1140	Fecal Coliform - count	9222 D	SM
MICR1160	Fecal Coliform/E. coli - count	9222 D&G1c1	SM 20
MICR1340	Heterotrophic Plate Count	9215 B	SM
MICR1350	Heterotrophic Plate Count	9215 C	SM
MICR1360	Heterotrophic Plate Count	9215 D	SM
MICR1370	Heterotrophic Plate Count	SimPlate	IDEXX
MICR2800	Total & Fecal Coli - count	9221 B1,2,C&E1	SM
MICR2810	Total & Fecal Coli - count	9222 B2,5,6 &9221 E1	SM
MICR2820	Total & Fecal Coli - detect	9221 B1,2&E1	SM
MICR2830	Total & Fecal Coli - detect	9221 D1,2&E1	SM
MICR2840	Total & Fecal Coli - detect	9222 B2,5 & 9221 E1	SM
MICR2520	Total Coli/Ecoli - count Colilert	9223 B	SM 20
MICR2600	Total Coli/Ecoli - detect	9221 B1,2&F	SM 20
MICR2610	Total Coli/Ecoli - detect	9221 D1,2&F	SM 20

MICR2620	Total Coli/Ecoli - detect	9222 B2,5 & 9221 F	SM 20
MICR2630	Total Coli/Ecoli - detect	9222 B2,5&G1c1	SM 20
MICR2640	Total Coli/Ecoli - detect	9222 B2,5&G1c2	SM 20
MICR2650	Total Coli/Ecoli - detect	1604	EPA
MICR2700	Total Coli/Ecoli - detect ColiBlue	m-ColiBlue	Hach
MICR2720	Total Coli/Ecoli - detect Colilert	9223 B	SM 20
MICR2730	Total Coli/Ecoli - detect Colisure	9223 B	SM
MICR2760	Total Coli/Ecoli - detect Colitag	Colitag	CPI
MICR2740	Total Coli/Ecoli - detect EColite	EColite	Hach
MICR2750	Total Coli/Ecoli - detect Readycult	Readycult	EM Sci
MICR2710	Total Coli/Ecoli - detect Chromocult	Chromocult	EM Sci
MICR3193	Total Coli/Ecoli - count Colitag	Colitag	CPI

Clarification of cBOD Objective for GGA Solution

Posted 4/13/2005. Until the 20th edition, *Standard Methods* 5210 B has been silent on what the objective should be for carbonaceous BOD (cBOD) of the 150/150 mg/L solution of glucose/glutamic acid (GGA). The 20th Edition states that the goal should be 198 mg/L, just as it is for BOD. Furthermore, it says the analyst should "overseed" (add more seed than normal) to achieve the 198 mg/L. The Lab Accreditation Program staff believe this objective is incorrect and advise labs that the objective should be 171 mg/L.

Glutamic acid contains nitrogen, as does the dilution water used in the BOD/cBOD test. There is not much nitrification (conversion of nitrogen to nitrite/nitrate) during the 5-day incubation. But there is some nitrification, and therefore some depletion of oxygen because of the nitrification. When nitrifiers are inhibited in the cBOD test, this nitrification does not occur, and one would therefore expect the cBOD value to be lower than the BOD value for the same sample. How much lower? Comparing cBOD results to BOD results for the same samples in EPA's historical Water Pollution (WP) studies clearly shows that the ratio of BOD to cBOD is a steady 1.16. Dividing 198 mg/L by the 1.16 results in the **171 mg/L goal for cBOD of GGA**. How is the objective for the standard deviation of repeated cBOD results for the GGA standard affected? *Standard Methods 20th Edition* says the standard deviation goal for BOD is 10 mg/L or lower. The Lab Accreditation Program staff thinks this is too optimistic (it is not backed by any scientific study) and advises labs to shoot for a standard deviation in the mid-teens or lower for BOD. For cBOD, the goal is essentially the same; although one could argue that it should be a little lower than for BOD...perhaps low-teens or lower.

List of Accreditable Drinking Water Analytes

Posted 7/26/2004. The Washington Department of Health, as a user of the Department of Ecology's Environmental Laboratory Accreditation Program, has requested Ecology to accredit only for specified drinking water analytes. For example, since cobalt is not a federally regulated analyte, a specified unregulated analyte, or an analyte of special interest to Washington, Ecology is not allowed to accredit for the trace metal. A list of allowed analytes is posted here.

Accreditation for Analysis of Methamphetamine

Posted 7/21/2004. Since 2002, Department of Ecology has been accrediting labs to analyze methamphetamine as part of Department of Health's *Clandestine Laboratory Cleanup Program*. Possibly because of increased interest at the national level on health and social problems caused by the contamination left behind in illegal meth labs, several states have recently shown an

interest in our accreditation strategy. The strategy and point of contact for additional information are posted here.

Holding Times for Microbiology Samples

Posted 4/5/2004. *Standard Methods 20th Edition* gives program-specific holding time requirements and guidance in section 9060 B, "Preservation and Storage." In general, all water microbiology analysis is recommended as soon as possible after collection, with samples iced during transport to the lab and refrigerated storage once in the lab.

Drinking water compliance

Total Coliform Rule	30-hour maximum holding time
Surface Water Treatment Rule	8-hour maximum holding time
Heterotrophic Plate Count	8-hours maximum holding time

Non-potable water compliance

6-hour maximum transport time at <10 degrees C and 2-hours maximum refrigerated lab storage time for a total of 8-hour maximum holding time

Other water types for non-compliance purposes

24-hour maximum holding time with samples held below 10 degrees C until analysis

If samples being tested fall into the last category, the lab should first check with the sample submitter to determine if there are specific holding time requirements. If there are no specific holding time requirements, the sample submitter should be advised of the potential for unpredictable changes in the microbial populations of samples exceeding recommended holding times.

Any samples tested beyond required or recommended hold times must be labeled as such in lab testing documentation with reported results qualified. Lacking regulatory requirements, it is the sample submitter who must decide data acceptability.

Beyond the above, the coliform die-off studies performed and used by EPA to establish the compliance holding time limitations show increased unpredictability in microbial population changes after those holding times. Those observed lack of predictability is influenced in part by non-target background organism populations present in the sampling environment.

Accreditation for Anions by EPA Methods 300.0 and 300.1

Posted 2/17/04. The primary difference between the ion chromatography methods EPA 300.0 and EPA 300.1 is that EPA 300.1 specifies the analytical column and eluent to be used. Because EPA 300.0 allows choice of column and eluent, as long as quality control (QC) objectives in the method are met, a lab can be accredited for most anions by **either** EPA 300.0 or EPA 300.1 if the lab is using the column and eluent specified in EPA 300.1.

This could have a bearing on the accreditation fee paid by the lab which is the reason for mentioning it here. However, the Lab Accreditation Unit has on file a letter from the EPA Office of Ground Water and Drinking Water stating that of the two methods, **only EPA 300.1 can be used for drinking water compliance testing of bromate**. Hence, accreditation for bromate, if done by an EPA ion chromatography method, **must** be by EPA 300.1. The EPA letter, a copy of which

is available from the Lab Accreditation Unit, does not address *Standard Methods* 4110B which is also an approved method for anions by IC.

Microbiology Proficiency Testing (PT) Requirements

Posted 12/11/2003. On page 15 of Ecology's *Procedural Manual for the Environmental Laboratory Accreditation Program*, it says that two PT studies are required each year "except for drinking water microbiology parameters where only one per year is required." It could be interpreted as saying that two microbiology PT studies are required for microbiology in matrices other than drinking water. This is not the case. Microbiology PT studies are not required for any matrix other than drinking water.

EPA Approves Plastic BOD Bottles

Posted October 28, 2003. In its October 28, 2003 letter, the EPA Engineering and Analysis Division approved use of plastic (carbon-coated polyethylene terephthalate) BOD bottles manufactured by Environmental Express. This approval pertains to bottles manufactured only by Environmental Express. To obtain a copy of the letter contact the Laboratory Accreditation Unit. The Port Townsend Wastewater Treatment Plant Laboratory did a [study](#) showing the plastic bottles improved precision and resulted in lower blanks when compared to glass bottles.