

## Instructions for Water Supply (WS) Standards – NELAC Accreditation Set

### SCOPE AND APPLICATION

Wibby Environmental's WS Proficiency Testing Standards are designed to be used with promulgated EPA methods as well as applicable methods from consensus organizations such as AWWA and ASTM. If you have any questions about the use of these standards, please contact Wibby Environmental Customer Service at 1-866-WibbyPT (866-942-2978).

### INDIVIDUAL INSTRUCTION SHEETS ALSO AVAILABLE

**NOTE:** This sheet contains instructions for all WS standards included in Wibby Environmental's WS NELAC Accreditation Set. Individual instruction sheets for these standards are also available on line at [www.wibby.com](http://www.wibby.com) (click on the "PT" link in the blue bar that runs horizontally across the home page) or upon request. If your laboratory would prefer to receive individual instruction sheets with future orders instead of this sheet, please call customer service at 1-866-WibbyPT (866-942-2978).

### SAMPLE PREPARATION AND ANALYSIS

As summarized in the following steps, WS PT standards are supplied as ready to use standards or as concentrates that require dilution prior to use. For best results, all WS PT standards should be stored at the temperature listed on the label. PT standards stored at 4°C should be brought to room temperature (near 20°C) prior to use.

#### Whole Volume Ready to Use Standards

<b>WS pH</b>	<b>WS Specific Conductance</b>
<b>WS Minerals</b>	<b>WS Silica</b>
<b>WS Corrosivity (Langelier Index) Please see additional information below.</b>	

1. These standards are ready for preparation and analysis as received. No dilutions are required prior to use.

#### Standards diluted 10.0 mL to 1 L

<b>WS Trace Metals*</b>	<b>WS Mercury*</b>
<b>WS Anions (#1)</b>	<b>WS Cyanide</b>
<b>WS TOC &amp; DOC</b>	<b>WS Turbidity</b>
<b>WS IDBP (#1 and #2)</b>	<b>WS Cr6+</b>
<b>WS MBAS</b>	<b>WS UV254</b>

1. Add approximately 900 mL of ASTM Type 1 water to a 1000 mL class A volumetric flask.
2. \*For the WS Trace Metals carefully add 10.0 mL of nitric acid. For the WS Mercury standards carefully add 10.0 mL of the acid your lab normally uses to preserve samples for mercury determination (either nitric or hydrochloric).
3. Transfer exactly 10.0 mL of the PT standard concentrate to the flask using a class A volumetric pipette.
4. Bring the flask to volume with ASTM Type 1 water.
5. Mix the solution by inverting the volumetric flask a minimum of three times.
6. The standard is now ready for preparation and analysis per the selected method(s).

#### Standards diluted 1.00 mL to 1 L

<b>WS Anions (#2, Nitrite)</b>	<b>WS Chlorine</b>
<b>WS Pesticides</b>	<b>WS Chlordane</b>
<b>WS Toxaphene</b>	<b>WS PCBs as Deca</b>
<b>WS Herbicides</b>	<b>WS Carbamates</b>
<b>WS Chloral Hydrate</b>	<b>WS Perchlorate</b>
<b>WS Semivolatiles I - PAHs</b>	
<b>WS Semivolatiles II – Phthalates/Adipates</b>	
<b>WS Semivolatiles III (Vial 1, Vial 2 and Vial 3)</b>	

1. Add approximately 990 mL of organic free deionized water to a 1000 mL class A volumetric flask.
2. Carefully open the ampule by snapping off the top at the narrow part of the neck.
3. Transfer exactly 1.00 mL of the PT standard concentrate to the flask using a gas tight syringe and delivering the aliquot below the surface of the water.
4. Bring the volumetric flask to volume with organic free deionized water.

- Mix the solution by inverting the volumetric flask a minimum of three times.
- The standard is now ready for preparation and analysis per the selected method(s). We recommend the standard be analyzed as soon as possible after dilution. If this is not possible, store the diluted standard at 4° C until analysis.

**Standards diluted 50µL to 100 mL**

<b>WS Regulated Volatiles</b>	<b>WS THMs</b>
<b>WS Unregulated Volatiles</b>	<b>WS EDB/DBCP/TCP</b>
<b>WS ODBP</b>	<b>WS Gas Additives</b>

- Bring a 100 mL class A volumetric flask to volume with volatile free deionized water.
- Carefully open the ampule by snapping off the top at the narrow part of the neck.
- Transfer exactly 50.0 µL (micro liters) of the PT concentrate to the flask using a gas tight syringe and delivering the aliquot below the surface of the water.
- Mix the solution by inverting the volumetric flask a minimum of three times.
- The standard is now ready for preparation and analysis per the selected method(s). The standard should be analyzed as soon as possible after dilution. If this is not possible, store the diluted standard at 4° C until analysis.

**REPORTING RESULTS**

- Report results to three significant figures.
- Report your results on line at [www.wibby.com](http://www.wibby.com). Click on either the "Online Data Entry" or "PT Manage" link.
- You may also report your results using the Data Reporting Sheets enclosed with your standards. FAX your results to Wibby Environmental at 1-866-283-0269 or mail the results to Wibby Environmental, 6390 Joyce Drive, #100, Golden, CO, 80403.
- Wibby Environmental must receive all results prior to the study closing date shown on the Data Reporting Sheets.

**SAFETY**

These standards are designed for use by laboratory professionals who are familiar with handling environmental reference materials as well as hazardous materials. If you have any questions

about the safe handling of these standards or require a Material Safety Data Sheet (MSDS) please contact Wibby Environmental at 1-866-WibbyPT (866-942-2978).

**QUESTIONS?**

If you have any questions regarding these standards or reporting requirements, please call Wibby Environmental at 1-866-WibbyPT (866-942-2978).

**ADDITIONAL INFORMATION**

**Corrosivity (Langelier Index)** is determined using the WS Minerals standard. Determine all Corrosivity analytes (alkalinity, calcium, and total dissolved solids) in the WS Minerals standard. Do not use any other WS sample when determining Corrosivity. Calculate and report Corrosivity at 25°C using a pH of 7.89.

Shake the **WS Turbidity** standard vigorously prior to removing an aliquot for analysis.

**Residual chlorine** reacts immediately with organic compounds. Care should be exercised to ensure that all glassware used in the dilution of the **WS Residual Chlorine** standard is free of organic residue. Due to the nature of residual chlorine, the sample must be analyzed as soon as possible after dilution.

Most states and the NELAC PT program now require that you report both a quantitative result for the **WS PCBs as Decachlorobiphenyl** standard as well as the Aroclor identification (i.e. 1016 for PCB Aroclor 1016, etc...).

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