

## Instructions for Water Pollution (WP) Standards

### SCOPE AND APPLICATION

Wibby Environmental's WP Proficiency Testing (PT) 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).

### SAMPLE PREPARATION AND ANALYSIS

As summarized in the following steps, WP PT standards are supplied as ready to use standards or as concentrates that require dilution prior to use. For best results, all WP 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.

<b>WP Minerals</b>	<b>WP Specific Conductance</b>
<b>WP Solids</b>	<b>WP pH</b>
<b>WP PCBs in Oil</b>	<b>WP VSS</b>
<b>WP Acidity</b>	

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

#### WP Color

1. Add approximately 60 mL of ASTM Type 1 water to a 100 mL class A volumetric flask.
2. Transfer exactly 20.0 mL of the PT standard concentrate to the flask using a class A volumetric pipette.
3. Bring the flask to volume with ASTM Type 1 water.
4. Mix the solution by inverting the volumetric flask a minimum of three times.

<b>WP Trace Metals*</b>	<b>WP Mercury*</b>
<b>WP Tin &amp; Titanium*</b>	<b>WP Cr6+</b>
<b>WP Demand</b>	<b>WP Cyanide**</b>
<b>WP Sulfide</b>	<b>WP MBAS</b>
<b>WP Turbidity</b>	<b>WP Volatile Solids</b>
<b>WP Nutrients (#1 and #2)</b>	<b>WP Silica/WP Silicon</b>
<b>WP Mercury – Low Level</b>	

1. Add approximately 900 mL of ASTM Type 1 water to a 1000 mL class A volumetric flask.
2. \*For the WP Trace Metals carefully add 10.0 mL of nitric acid. For the WP Mercury standards carefully

add 10.0 mL of the acid your lab normally uses to preserve samples for mercury determination (either nitric or hydrochloric). For the WP Tin & Titanium standard carefully add 20.0 mL of hydrochloric acid. \*\* For Cyanide add sufficient NaOH as a preservative to bring the pH of the standard to a pH >12.

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.

<b>WP Nutrients (#3)</b>	<b>WP Residual Chlorine</b>
<b>WP Phenolics</b>	<b>WP TOX</b>
<b>WP Base Neutrals</b>	<b>WP Sulfide</b>
<b>WP Pesticides</b>	<b>WP Chlordane</b>
<b>WP Toxaphene</b>	<b>WP PCBs in Water</b>
<b>WP Herbicides</b>	<b>WP PAHs – Low Level</b>
<b>WP Explosives</b>	<b>WP OPPs</b>
<b>WP DRO</b>	<b>WP PCB Congeners</b>
<b>WP Nitrogen Pesticides</b>	<b>WP Carbamates</b>
<b>WP NDMA</b>	<b>WP PAH – GC</b>
<b>WP Perfluorinated Compounds</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.
5. Mix the solution by inverting the volumetric flask a minimum of three times.

<b>WP VOAs</b>	<b>WP Crossover Volatiles</b>
<b>WP VOAs – GC</b>	<b>WP GRO</b>

1. Bring a 100 mL class A volumetric flask to volume with volatile free deionized water.
2. Carefully open the ampule by snapping off the top at the narrow part of the neck.

3. Transfer exactly 50.0  $\mu\text{L}$  (micro liters) of the PT concentrate to the flask using a gas tight syringe and delivering the aliquot below the surface of the water.
4. Mix the solution by inverting the volumetric flask a minimum of three times.

#### **WP Oil and Grease**

#### **WP TPH**

1. Add approximately 900 mL of ASTM Type 1 water to a 1000 mL class A volumetric flask.
2. Mix the WP Oil and Grease or WP Total Petroleum Hydrocarbons (TPH) standards concentrate thoroughly prior to transfer by shaking vigorously.
3. Immediately open the supplied vial and quantitatively transfer the entire contents into to the flask. Rinse the vial into the flask a minimum of three times.
4. Bring the flask to volume with ASTM Type 1 water.
5. Mix the solution by shaking and inverting the flask.

NOTE: Oil and grease and TPH have a tendency to adhere to the vial walls and cap. After transferring the concentrate as described in these instructions, rinse the standard vial and cap with the solvent used for extraction of the standard. Combine the solvent used for rinsing with that used to extract the standard.

#### **WP Settleable Solids**

1. Add approximately 900 mL of ASTM Type 1 water to a 1000 mL class A volumetric flask.
2. Open the vial and quantitatively transfer the entire contents of the vial to the flask. Rinse the vial into the flask a minimum of three times.
3. Bring the flask to volume with ASTM Type 1 water.
4. Mix the solution by shaking and inverting the flask and immediately transfer to your Imhoff Cone. If any solids adhere to the flask, rinse them into the Imhoff Cone.

#### **REPORTING RESULTS**

1. Report results to three significant figures.
2. Report your results on line at [www.wibby.com](http://www.wibby.com). Click on the "Online Data Entry" link or the "PT Manage" link.
3. You may also report your results using the Data Reporting Sheets enclosed with your standards

by faxing your results to Wibby Environmental at 1-866-283-0269.

4. 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**

The **WP Nutrients** standard is provided in two vials and one ampule. Vial 1 contains ammonia as N, Nitrate as N, Nitrate + Nitrite as N, and ortho-phosphate as P. Vial 2 contains TKN and Total P. Ampule 3 contains Nitrite as N only. The standards must be prepared, analyzed and reported as separate standards. Be sure to report the results specific to the individual standard, as they are not interchangeable.

Shake the **WP Solids**, the **WP Turbidity**, **WP Oil and Grease**, **WP TPH** and the **WP Sulfide** standards vigorously prior to removing an aliquot for analysis. The **WP Sulfide** standard is preserved with NaOH and zinc acetate. The zinc acetate combines with the sulfide present to form zinc sulfide, which is a precipitate.

**Residual chlorine** reacts immediately with organic compounds. Care should be exercised to ensure that all glassware used in the dilution of the **WP 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.