

# Wet Chemistry Standards

## For Water Analysis

### Standard Tests for Waters

Analyte	Concentration	Matrix	Size	Product No.	
Biochemical Oxygen Demand (BOD)*	200mg/L	H <sub>2</sub> O, tr. HCl	100mL	BOD200-100	
Biochemical Oxygen Demand (BOD) Seeds	N/A	N/A	50 Capsules, 100mg each	BODSEED-50	
Boron Titration Standard	1000mg/L	H <sub>2</sub> O	500mL	B1K-500	
Chemical Oxygen Demand (COD)	1000mg/L	H <sub>2</sub> O, 0.5% H <sub>2</sub> SO <sub>4</sub>	100mL	COD1K-100	
Conductivity (from NaCl)	100µmho/cm	H <sub>2</sub> O	1 Liter	CONDNA100-1L	
	1000µmho/cm			CONDNA1K-1L	
	10,000µmho/cm			CONDNA10K-1L	
Cyanide, CN <sup>-</sup> (from KCN)	1000mg/L	0.1% NaOH	100mL	CN-100	
			500mL	CN-500	
Hydrazine, N <sub>2</sub> H <sub>4</sub> (from N <sub>2</sub> H <sub>4</sub> ·2HCl)	100mg/L	1% Acetic Acid	100mL	IHYD100-100	
			500mL	IHYD100-500	
	1000mg/L		100mL	IHYD1K-100	
			500mL	IHYD1K-500	
Methylene Blue Active Substance (MBAS)	1000mg/L	H <sub>2</sub> O, tr.H <sub>2</sub> SO <sub>4</sub>	100mL	MBAS-100	
Silica, SiO <sub>2</sub> (from Na <sub>2</sub> SiO <sub>3</sub> )	100mg/L	H <sub>2</sub> O	500mL	ISIO2100-500	
	1000mg/L		100mL	ISIO21K-100	
			500mL	ISIO21K-500	
Total Kjeldahl Nitrogen - TKN (from glycine)	1000mg/L	1% HCl	100mL	TOTKJN1K-100	
			500mL	TOTKJN1K-500	
Total Organic Carbon - TOC (from KHC <sub>8</sub> H <sub>4</sub> O <sub>4</sub> )	100mg/L	H <sub>2</sub> O	500mL	TOC100-500	
			1000mg/L	100mL	TOC1K-100
				500mL	TOC1K-500

\* CBOD value is also included on the Certificate of Analysis for BOD200-100



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► Wet Chemistry

## QC Check Samples for Water Supply

- ◆ Designed for analyses of drinking water, ground water, and clean surface water
- ◆ Tested in compliance with appropriate US EPA, NIST, NELAC, and ISO protocols
- ◆ Certificate of Analysis includes two sets of acceptance limits to evaluate your performance
- ◆ Traceable to NIST SRMs (whenever available)
- ◆ For use in analyzing alongside US EPA, NELAC or state accreditation PT samples or as part of your own internal quality control program

### VHG Tips

VHG Labs QC Check Samples are NIST-traceable and verified by an interlaboratory program. Laboratories using these products as part of their internal quality program can monitor their performance against both EPA acceptance criteria and results from other well-respected laboratories.

QC Reference Standards are useful as controls and/or to represent your real-world samples for method development.

WS and WP certified reference standards offer great values too! Many ship as concentrates in screw-topped vials, which can then be diluted to yield a liter or more. Exact directions are included on the Certificate of Analysis.

### Water Supply (WS) Check Samples

Product & Range	Vial Size	Yields	Product No.
<b>WS Cyanide</b> Total Cyanide: 0.1-0.5 mg/L	15mL	2 L	QWSCN-15
<b>WS Inorganics</b> Alkalinity as CaCO <sub>3</sub> : 25-200mg/L Chloride: 5-100mg/L Fluoride: 1-8mg/L Nitrate as N: 3-10mg/L Nitrate + Nitrite, as N: 3.5-9mg/L Potassium: 10-40mg/L Specific Conductance at 25°C: 250-2500µmhos/cm Sulfate: 5-500mg/L Total Filterable Residue (TDS) at 180°C: 200-450mg/L	500mL	N/A	QWSIN-500
<b>WS Hardness</b> Calcium: 30-90mg/L Calcium Hardness as CaCO <sub>3</sub> : 75-375mg/L Total Hardness as CaCO <sub>3</sub> : 83-307mg/L Magnesium: 2-20mg/L Sodium: 12-24mg/L	250mL	N/A	QWSHRD-250
<b>WS o-Phosphate Nutrients</b> ortho-Phosphate as P: 0.5-5.5mg/L	15mL	2 L	QWSONUT-15
<b>WS Nitrite</b> Nitrite as N: 0.4-2mg/L	15mL	2 L	QWSNO2-15
<b>WS pH</b> pH: 5-10 units	250mL	N/A	QCPH-250
<b>WS Residual Chlorine</b> Total Residual Chlorine: 0.5-3mg/L Free Residual Chlorine: 0.5-3mg/L	2mL	2 L	QWSRCL-2
<b>WS Solids</b> Total Filterable Residue (TDS) at 180°C: 200-450mg/L Total Solids: 223-550mg/L Non-Filterable Residue (TSS) at 105°C: 23-100mg/L	23mL	1 L	QWSSOL-23
<b>WS Organic Carbon</b> Total Organic Carbon (TOC): 1.2-4.9mg/L Dissolved Organic Carbon (DOC): 1.2-4.9mg/L	15mL	1 L	QWSOC-15
<b>WS Turbidity</b> Turbidity: 0.5-8 NTU	15mL	1 L	QWSTURB-15

# QC Check Samples for Water Pollution

- ◆ Designed for analyses of waste water, surface water, and contaminated ground water
- ◆ Tested in compliance with appropriate US EPA, NIST, NELAC, and ISO protocols
- ◆ Certificate of Analysis includes two sets of acceptance limits to evaluate your performance
- ◆ Traceable to NIST SRMs (whenever available)
- ◆ For use in analyzing alongside US EPA, NELAC or state accreditation PT samples or as part of your own internal quality control program

Water Pollution (WP) Check Samples			
Product & Range	Vial Size	Yields	Product No.
<b>WP Cyanide</b> Total Cyanide: 0.1-1mg/L	15mL	2 L	QWPCN-15
<b>WP Demand</b> 5-day BOD: 15-250mg/L Carbonaceous BOD: 15-250mg/L COD: 30-250mg/L TOC: 6-100mg/L	15mL	2 L	QWPDEM-15
<b>WP Hexavalent Chromium</b> Cr <sup>+6</sup> : 45-880µg/L	15mL	2 L	QWPCR6-15
<b>WP Minerals</b> Total Alkalinity as CaCO <sub>3</sub> : 10-120mg/L Chloride: 35-275mg/L Fluoride: 0.3-4mg/L Potassium: 4-40mg/L Sodium: 6-100mg/L Specific Conductance at 25°C: 200-930µmhos/cm Sulfate: 5-125mg/L Total Dissolved Solids at 180°C: 140-650mg/L Total Solids at 105°C: 140-675mg/L	500mL	N/A	QWPMIN-500
<b>WP Hardness</b> Calcium: 3.5-110mg/L Calcium Hardness as CaCO <sub>3</sub> : 8.7-275mg/L Total Hardness as CaCO <sub>3</sub> : 17-440mg/L Magnesium: 2-40mg/L Non-Filterable Residue (TSS): 23-100mg/L	500mL	N/A	QWPHRD-500
<b>WP Simple Nutrients</b> Ammonia as N: 0.65-19mg/L Nitrate as N: 0.25-40mg/L Nitrate + Nitrite, as N: 0.25-40mg/L ortho-Phosphate as P: 0.5-5.5mg/L	15mL	2 L	QWPSNUT-15
<b>WP Complex Nutrients</b> Total Kjeldahl Nitrogen as N: 1.5-35mg/L Total Phosphorus as P: 0.5-10mg/L	15mL	2 L	QWPCNUT-15
<b>WP Oil and Grease Concentrate</b> Oil and Grease: 20-100 mg/L	23mL	2 L	QWPOG-23
<b>WP pH</b> pH: 5-10 units	250mL	N/A	QCPH-250
<b>WP Total Phenolics</b> Total Phenolics by 4-AAP: 0.06-5mg/L	2mL	2 L	QWPPHEN-2
<b>WP Total Residual Chlorine</b> Total Residual Chlorine: 0.5-3mg/L	2mL	2 L	QWPRCL-2
<b>WP Solids Concentrate</b> Total Solids at 105°C: 140-675mg/L Total Dissolved Solids at 180°C: 140-650mg/L Non-Filterable Residue (TSS): 23-100mg/L	23mL	1 L	QWPSOL-23

► QC Checks for Water