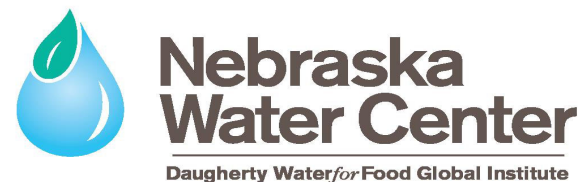


# Water Sciences Laboratory

## Analyte/Protocol Price List

### 2019



## Environmental :: Water

Nebraska Water Center, a part of the  
[Robert B. Daugherty Water for Food Global Institute at the University of Nebraska](http://www.nebraska.edu)  
 e:[dsnow1.unl.edu](mailto:dsnow1.unl.edu) | p: 1 402.472.7539 | f: 1 402.472.9599 | c: 1 402.304.3748

Protocol	Analyte	Reporting Level	Protocol Cost	NU Cost (20% discount)
<b>Agricultural herbicides in water</b> Protocol ID: 06_01_01  <b>Reference:</b> Cassada, D. A.; Spalding, R. F.; Cai, Z.; Gross, M. L. (1994), "Determination of Atrazine, Deethylatrazine and Deisopropylatrazine in Water and Sediment by Isotope Dilution Gas Chromatography-Mass Spectrometry", <i>Anal. Chim. Acta</i> <b>287</b> , 7-15.  <b>Sample Container:</b> 1 liter amber bottle <b>Sample Size:</b> 900 mL <b>Preservation:</b> Cool, < 6°C <b>Holding Time:</b> 30 Days <b>Estimated Turnaround Time:</b> 6-8 Weeks	Acetochlor Alachlor Atrazine Butylate Chlorothalonil Cyanazine DEA DIA Dimethenamid EPTC Metolachlor Metribuzin Norflurazon Pendamethalin Permethrin Prometon Propachlor Propazine Simazine Tefluthrin Trifluralin	0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.1 µg/L 0.05 µg/L 0.1 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L	<b>\$110.00</b>	\$88.00
<b>Chlorinated pesticides in water</b> Protocol ID: 06_02_01  <b>Reference:</b> (2011), "EPA 8270 Analysis of Semivolatile Organic Compounds by Combined Gas Chromatography/Mass Spectrometry (GC/MS)".  <b>Sample Container:</b> 1 liter amber bottle <b>Sample Size:</b> 900 mL	4,4-DDE 4,4-DDT α-BHC Aldrin β-BHC δ-BHC Dieldrin γ-BHC (Lindane)	0.06 µg/L 0.05 µg/L 0.04 µg/L 0.06 µg/L 0.04 µg/L 0.04 µg/L 0.05 µg/L 0.04 µg/L	<b>\$110.00</b>	\$88.00

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Protocol	Analyte	Reporting Level	Protocol Cost	NU Cost (20% discount)
<p><b>Estimated Turnaround Time:</b> 6-8 Weeks</p>	<p><b>Benzene</b>  <b>Bromobenzene</b>  <b>Butylbenzene</b>  <b>Chlorobenzene</b>  <b>Chloroform</b>  <b>cis-1,3-Dichloropropene</b>  <b>Ethylbenzene</b>  <b>Hexachloro-1,3-butadiene</b>  <b>Isopropylbenzene</b>  <b>m-Xylene + p-Xylene</b>  <b>Naphthalene</b>  <b>o-Xylene</b>  <b>p-Isopropyltoluene</b>  <b>Propylbenzene</b>  <b>sec-Butylbenzene</b>  <b>Styrene</b>  <b>Toluene</b>  <b>trans-1,3-Dichloropropene</b></p>	<p>0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.2 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L</p>		
<p><b>Insecticides and fungicides in water</b>  <b>Protocol ID:</b> 06_05_01</p> <p><b>Reference:</b>  Hladik, M. L.; Kuivila, K. M. (2009), "Assessing the Occurrence and Distribution of Pyrethroids in Water and Suspended Sediments", <i>J. Agric. Food Chem.</i> <b>57</b> (19), 9079-9085.</p> <p>(1992), "EPA 614 The Determination of Organophosphorus Pesticides in Municipal and Industrial Wastewater The Determination of Organophosphorus Pesticides in Municipal and Industrial Wastewater".</p> <p><b>Sample Container:</b> 1 liter amber bottle  <b>Sample Size:</b> 900 mL  <b>Preservation:</b> Cool, &lt; 6°C  <b>Holding Time:</b> 30 Days  <b>Estimated Turnaround Time:</b> 6-8 Weeks</p>	<p><b>Acetochlor</b>  <b>Atrazine</b>  <b>Bifenthrin</b>  <b>Boscalid</b>  <b>Carbofuran</b>  <b>Chlorpyrifos</b>  <b>Cyhalothrin lambda</b>  <b>Cypermethrin</b>  <b>Cyprodinil</b>  <b>DEA</b>  <b>Deltamethrin</b>  <b>DIA</b>  <b>Diazinon</b>  <b>Fludioxonil</b>  <b>Malathion</b>  <b>Methidathion</b>  <b>Methomyl</b>  <b>Metolachlor</b>  <b>Metribuzin</b>  <b>Parathion ethyl</b></p>	<p>0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.3 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L  0.05 µg/L</p>	<p><b>\$110.00</b></p>	<p><b>\$88.00</b></p>

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Protocol	Analyte	Reporting Level	Protocol Cost	NU Cost (20% discount)
	<b>Parathion methyl</b> <b>Pendimethalin</b> <b>Permethrin</b> <b>Propazine</b> <b>Pyrimethanil</b> <b>Quinoxifen</b> <b>Tebuconazole</b> <b>Tefluthrin</b> <b>Triadimefon</b>	0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L 0.05 µg/L		
<b>Volatile organic compounds in water</b> <b>Protocol ID:</b> 06_09_11  <b>Reference:</b> (1996), "EPA 8260B Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)".  <b>Sample Container:</b> 40 mL septum vial <b>Sample Size:</b> 40 mL <b>Preservation:</b> Cool, < 6°C <b>Holding Time:</b> 30 Days <b>Estimated Turnaround Time:</b> 6-8 Weeks	<b>1,1-DCA</b> <b>1,1-DCE</b> <b>1,2-DCA</b> <b>cis-1,2-DCE</b> <b>TCE</b> <b>trans-1,2-DCE</b> <b>Vinyl Chloride</b>	Pending Pending Pending Pending Pending Pending Pending	<b>\$82.50</b>	\$66.00
<b>Chlorophyll A</b> <b>Protocol ID:</b> 09_01_01  <b>Reference:</b> (1997), "EPA 447.0 Determination of Chlorophylls a and b and Identification of Other Pigments of Interest in Marine and Freshwater Algae Using High Performance Liquid Chromatography with Visible Wavelength Detection".  <b>Sample Container:</b> Unfiltered: 125 mL polyethylene bottle Filtered: 0.70 µm GF/F glass fiber filter (47 mm) wrapped in Al foil <b>Sample Size:</b> 50 mL <b>Preservation:</b> Unfiltered: Dark, < 6°C Filtered: Dark, -20°C <b>Holding Time:</b> Unfiltered: 2 Days Filtered: 60 Days <b>Estimated Turnaround Time:</b> 6-8 Weeks	<b>Chlorophyll A</b>	0.5 µg/L	<b>\$16.50</b>	\$13.20

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Protocol	Analyte	Reporting Level	Protocol Cost	NU Cost (20% discount)
<b>Sample Size:</b> 250 mL <b>Preservation:</b> Cool, < 6°C <b>Holding Time:</b> 30 Days <b>Estimated Turnaround Time:</b> 6-8 Weeks	<b>Thiacloprid</b> <b>Thiamethoxam</b> <b>Trifloxystrobin</b>	0.01 µg/L 0.01 µg/L 0.01 µg/L		
<b>Pharmaceutical and personal care products (PPCPS) in water</b> <b>Protocol ID:</b> 15_03_01  <b>Reference:</b> (2007), "EPA 1694 Pharmaceuticals and Personal Care Products in Water, Soil, Sediment, and Biosolids by HPLC/MS/MS".  <b>Sample Container:</b> 250 mL glass bottle <b>Sample Size:</b> 250 mL <b>Preservation:</b> Cool, < 6°C <b>Holding Time:</b> 60 Days <b>Estimated Turnaround Time:</b> 6-8 Weeks	<b>Gemfibrozil</b> <b>Ibuprofen</b> <b>Naproxen</b> <b>Triclosan</b> <b>Warfarin</b>	0.5 µg/L 0.5 µg/L 0.5 µg/L 0.5 µg/L 0.5 µg/L	<b>\$220.00</b>	\$176.00
<b>Veterinarian pharmaceuticals in water</b> <b>Protocol ID:</b> 15_04_01  <b>Reference:</b> Yang, S.; Cha, J.; Carlson, K. (2004), "Quantitative determination of trace concentrations of tetracycline and sulfonamide antibiotics in surface water using solid-phase extraction and liquid chromatography/ion trap tandem mass spectrometry", <i>Rapid Commun. Mass Sp.</i> <b>18</b> , 2131-2145.  <b>Sample Container:</b> 250 mL glass bottle <b>Sample Size:</b> 250 mL <b>Preservation:</b> Cool, < 6°C <b>Holding Time:</b> 30 Days <b>Estimated Turnaround Time:</b> 6-8 Weeks	<b>Chlortetracycline</b> <b>Lincomycin</b> <b>Neotame</b> <b>Penicillic Acid</b> <b>Penicillin G</b> <b>Tiamulin</b>	Pending Pending Pending Pending Pending Pending	<b>\$220.00</b>	\$176.00
<b>Macrolides/Penicillin Pharmaceuticals in water</b> <b>Protocol ID:</b> 15_05_01  <b>Sample Container:</b> 250 mL glass bottle <b>Sample Size:</b> 250 mL <b>Preservation:</b> Cool, < 6°C <b>Holding Time:</b> 30 Days <b>Estimated Turnaround Time:</b> 6-8 Weeks	<b>Ampicillin</b> <b>Ceftiofur</b> <b>Erythromycin</b> <b>Erythromycin Anhydro-Monensin</b> <b>Novobiocin</b> <b>Penicillin G</b> <b>Penillic acid</b> <b>Tiamulin</b>	Pending Pending Pending Pending Pending Pending Pending Pending	<b>\$220.00</b>	\$176.00

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Protocol	Analyte	Reporting Level	Protocol Cost	NU Cost (20% discount)
	Tylosin Virginiamycin M1	Pending Pending		
<b>Perchlorate in water</b> Protocol ID: 15_08_01  <b>Reference:</b> Wilkin, Richard T. Fine, Dennis D. Burnett, Nicole G. (2007), "Perchlorate Behavior in a Municipal Lake Following Fireworks Displays", 3966-3971.  <b>Sample Container:</b> 250 mL glass bottle <b>Sample Size:</b> 250 mL <b>Preservation:</b> Cool, < 6°C <b>Holding Time:</b> 30 Days <b>Estimated Turnaround Time:</b> 6-8 Weeks	Chlorate Perchlorate	0.5 µg/L 0.5 µg/L	<b>\$110.00</b>	\$88.00
<b>Microcystins in water</b> Protocol ID: 15_09_01  <b>Sample Container:</b> 250 mL glass bottle <b>Sample Size:</b> 250 mL <b>Preservation:</b> Cool, < 6°C <b>Holding Time:</b> 30 Days <b>Estimated Turnaround Time:</b> 6-8 Weeks	Microcystin LR Microcystin LW Microcystin RR Microcystin YR	Pending Pending Pending Pending	<b>\$220.00</b>	\$176.00
<b>Sulfas, TCs, macrolides in water/wastewater</b> Protocol ID: 15_10_01  <b>Reference:</b> Yang, S.; Cha, J.; Carlson, K. (2004), "Quantitative determination of trace concentrations of tetracycline and sulfonamide antibiotics in surface water using solid-phase extraction and liquid chromatography/ion trap tandem mass spectrometry", <i>Rapid Commun. Mass Sp.</i> <b>18</b> , 2131-2145.  <b>Sample Container:</b> 250 mL glass bottle <b>Sample Size:</b> 250 mL <b>Preservation:</b> Cool, < 6°C <b>Holding Time:</b> 30 Days <b>Estimated Turnaround Time:</b> 6-8 Weeks	Azithromycin Chlortetracycline Erythromycin Erythromycin Anhydro- Lincomycin Monensin Oxytetracycline Ractopamine Sulfachloropyridazine Sulfadimethoxine Sulfamerazine Sulfamethazine Sulfamethizole Sulfamethoxazole Sulfathiazole Tetracycline	Pending 0.02 µg/L 0.02 µg/L 0.02 µg/L 0.02 µg/L 0.02 µg/L 0.02 µg/L 0.02 µg/L 0.02 µg/L 0.02 µg/L 0.02 µg/L 0.02 µg/L 0.02 µg/L 0.02 µg/L 0.02 µg/L	<b>\$220.00</b>	\$176.00

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Protocol	Analyte	Reporting Level	Protocol Cost	NU Cost (20% discount)
	Tiamulin Tylosin Virginiamycin	0.02 µg/L 0.02 µg/L 0.02 µg/L		
<b>Pharmaceutical and Illicit Compounds in wastewater</b> Protocol ID: 16_01_01  Reference: Kasprzyk-Hordern, B.; Dinsdal, R. M.; Guwy, A. J. (2007), "Multi-residue method for the determination of basic/neutral pharmaceuticals and illicit drugs in surface water by solid-phase extraction and ultra performance liquid chromatography–positive electrospray ionisation tandem mass spectrometry", <i>J. Chromatogr. A</i> <b>1161</b> (1-2), 132-145.  Berset, J.; Brenneisen, R.; Mathieu, C. (2010), "Analysis of illicit and illicit drugs in waste, surface and lake water samples using large volume direct injection high performance liquid chromatography – Electrospray tandem mass spectrometry (HPLC–MS/MS)", <i>Chemosphere</i> <b>81</b> (7), 859-866.  Sample Container: 250 mL glass bottle Sample Size: 250 mL Preservation: Cool, < 6°C Holding Time: 30 Days Estimated Turnaround Time: 6-8 Weeks	1,7-Dimethylxanthine Acetaminophen Amphetamine Azithromycin Caffeine Carbamazepine Cimetidine Cotinine Diphenhydramine Fluoxetine MDA MDMA Methamphetamine Morphine Phenazone Sulfachloropyridazine Sulfamethazine Sulfamethoxazole Thiabendazole Trimethoprim	0.01 µg/L 0.01 µg/L 0.01 µg/L Pending 0.01 µg/L 0.01 µg/L 0.01 µg/L 0.01 µg/L 0.01 µg/L 0.01 µg/L 0.01 µg/L 0.01 µg/L 0.01 µg/L 0.01 µg/L 0.01 µg/L 0.01 µg/L 0.01 µg/L 0.01 µg/L 0.01 µg/L 0.01 µg/L	\$220.00	\$176.00
<b>Vet pharmaceuticals in water</b> Protocol ID: 16_02_01  Sample Container: 250 mL glass bottle Sample Size: 250 mL Preservation: Cool, < 6°C Holding Time: 30 Days Estimated Turnaround Time: 6-8 Weeks	Chlortetracycline Enrofloxacin Florfenicol Lincomycin Monensin Oxytetracycline Ractopamine Sulfadiazine Sulfadimethoxine Sulfamerazine Sulfamethazine Sulfamethizole Sulfamethoxazole Sulfathiazole	0.005 µg/L Pending Pending 0.005 µg/L 0.005 µg/L 0.005 µg/L 0.005 µg/L 0.005 µg/L 0.005 µg/L 0.005 µg/L 0.005 µg/L 0.005 µg/L 0.005 µg/L 0.005 µg/L	\$220.00	\$176.00

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Protocol	Analyte	Reporting Level	Protocol Cost	NU Cost (20% discount)
	<b>Tetracycline</b> <b>Tildipirosin</b> <b>Trimethoprim</b> <b>Tulathromycin A</b>	0.005 µg/L Pending 0.005 µg/L Pending		
<b>NPB - Vet pharmaceuticals in water</b> <b>Protocol ID:</b> 16_03_01  <b>Sample Container:</b> 250 mL glass bottle <b>Sample Size:</b> 250 mL <b>Preservation:</b> Cool, < 6°C <b>Holding Time:</b> 30 Days <b>Estimated Turnaround Time:</b> 6-8 Weeks	<b>Chlortetracycline</b> <b>Lincomycin</b> <b>Neotame</b> <b>Penicillic Acid</b> <b>Penicillin G</b> <b>Penillic acid</b> <b>Tiamulin</b>	Pending Pending Pending Pending Pending Pending Pending	<b>\$220.00</b>	\$176.00

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