

Water Sciences Laboratory
Analyte/Protocol Price List
2022



**Nebraska
Water Center**
 Daugherty Water for Food Global Institute

Environmental :: Water

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Protocol	Analyte	Reporting Limit	Protocol Cost	NU Cost (20% discount)
<p>Hydrogen sulfide analysis Protocol ID: 04_04_01</p> <p>Sample Container: Pending Sample Size: 250 mL Preservation: Pending Holding Time: 30 Days Estimated Turnaround Time: 6-8 Weeks</p>	Sulfide (S ²⁻)	Pending	\$17.30	\$13.84
<p>Carotenoid pigments in water by UV spectroscopy Protocol ID: 04_05_01</p> <p>Sample Container: 1 liter amber bottle Sample Size: 50 mL Preservation: Pending Holding Time: 30 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference: Allen, P. C.; Danforth, H. D.; Vinyard, B. L. (2004), "Development of a Protective Index to Rank Effectiveness of Multiple Treatments Within an Experiment: Application to a Cross-Protection Study of Several Strains of Eimeria maxima and a Live Vaccine", <i>Avian Diseases</i> 48(2), 370-375.</p>	Total pigment as Lutein	0.01 µg/mL	\$23.10	\$18.48

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<p>Agricultural herbicides in water Protocol ID: 06_01_01</p> <p>Sample Container: 1 liter amber bottle Sample Size: 1000 mL Preservation: Cool, < 6°C Holding Time: 30 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference: 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> 287, 7-15.</p>	<p>Acetochlor Alachlor Atrazine Butylate Chlorothalonil Cyanazine DEA DIA Dimethenamid EPTC Metolachlor Metribuzin Norflurazon Pendamethalin Permethrin Prometon Propachlor Propazine Simazine Tefluthrin Trifluralin</p>	<p>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</p>	<p>\$115.50</p>	<p>\$92.40</p>
<p>Chlorinated pesticides in water Protocol ID: 06_02_01</p> <p>Sample Container: 1 liter amber bottle Sample Size: 1000 mL Preservation: Cool, < 6°C Holding Time: 28 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference: (2011), "EPA 8270 Analysis of Semivolatile Organic Compounds by Combined Gas Chromatography/Mass Spectrometry (GC/MS)".</p>	<p>4,4-DDE 4,4-DDT α-BHC Aldrin β-BHC δ-BHC Dieldrin γ-BHC (Lindane) Heptachlor Trifluralin</p>	<p>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 0.04 µg/L 0.05 µg/L</p>	<p>\$115.50</p>	<p>\$92.40</p>

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<p>Semi-volatile organic compounds in water Protocol ID: 06_03_01</p> <p>Sample Container: 1 liter amber bottle Sample Size: 1000 mL Preservation: Cool, < 6°C Holding Time: 30 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>References: (2011), "EPA 8270 Analysis of Semivolatile Organic Compounds by Combined Gas Chromatography/Mass Spectrometry (GC/MS)". (2012), "EPA 525.3 Determination of Semivolatile Organic Chemicals in Drinking Water by Solid Phase Extraction and Capillary Column SPECTROMETRY (GC/MS) Gas Chromatography/Mass Spectrometry (GC/MS)",</p>	<p>2-Chloronaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benz[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[ghi]perylene Benzo[k]fluoranthene Carbazole Chrysene Dibenz[a,h]anthracene Dibenzofuran Fluoranthene Fluorene Indeno[1,2,3-cd]pyrene Naphthalene Phenanthrene Pyrene</p>	<p>0.1 µg/L 0.1 µg/L 0.1 µg/L 0.1 µg/L 0.1 µg/L 0.1 µg/L 0.1 µg/L 0.1 µg/L 0.1 µg/L 0.1 µg/L 0.4 µg/L 0.1 µg/L 0.1 µg/L 0.1 µg/L 0.1 µg/L 0.1 µg/L 0.1 µg/L 0.1 µg/L 0.1 µg/L</p>	<p>\$115.50</p>	<p>\$92.40</p>
<p>Volatile organics in water Protocol ID: 06_04_11</p> <p>Sample Container: 40 mL septum vial Sample Size: 40 mL Preservation: Add sulfuric acid to pH < 2, Cool, < 6°C Holding Time: 28 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference: (1999), "EPA 8260 Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)".</p>	<p>1,1,1,2-Tetrachloroethane 1,2,3-Trichlorobenzene 1,2,3-Trichloropropane 1,2,4-Trichlorobenzene 1,2,4-Trimethylbenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Chlorotoluene 4-Chlorotoluene Benzene Bromobenzene Butylbenzene Chlorobenzene Chloroform cis-1,3-Dichloropropene Ethylbenzene Hexachloro-1,3-butadiene</p>	<p>0.05 µg/L 0.05 µg/L</p>	<p>\$115.50</p>	<p>\$92.40</p>

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Protocol	Analyte	Reporting Limit	Protocol Cost	NU Cost (20% discount)
	Triadimefon	0.05 µg/L		
Volatile chloro-organic compounds in water Protocol ID: 06_09_11 Sample Container: 40 mL septum vial Sample Size: 40 mL Preservation: Cool, < 6°C Holding Time: 30 Days Estimated Turnaround Time: 6-8 Weeks Reference: (1996), "EPA 8260B Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)".	1,1-DCA 1,1-DCE 1,2-DCA cis-1,2-DCE TCE trans-1,2-DCE Vinyl Chloride	0.5 ppb 0.5 ppb 0.5 ppb 0.5 ppb 0.5 ppb 0.5 ppb 0.5 ppb	\$86.60	\$69.28
Bromomethanes in water Protocol ID: 06_11_11 Sample Container: 40 mL septum vial Sample Size: 40 mL Preservation: Cool, < 6°C Holding Time: 30 Days Estimated Turnaround Time: 6-8 Weeks	Bromoform Chloroform Dibromochloromethane Dichlorobromomethane	0.5 µg/L 0.5 µg/L 0.5 µg/L 0.5 µg/L	\$86.60	\$69.28
Nitrapyrin in water Protocol ID: 06_18_01 Sample Container: 1 liter amber bottle Sample Size: 1000 mL Preservation: Cool, < 6°C Holding Time: 30 Days Estimated Turnaround Time: 6-8 Weeks	Butylate EPTC Nitrapyrin	0.05 µg/L 0.05 µg/L 0.05 µg/L	\$115.50	\$92.40
Chlorophyll A Protocol ID: 09_01_01 Sample Container: Unfiltered: 125 mL polyethylene bottle Filtered: 0.70 µm GF/F glass fiber filter (47 mm) wrapped in Al foil Sample Size: 50 mL	Chlorophyll A	0.5 µg/L	\$17.30	\$13.84

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Protocol	Analyte	Reporting Limit	Protocol Cost	NU Cost (20% discount)
<p>Preservation: Unfiltered: Dark, < 6°C Filtered: Dark, -20°C</p> <p>Holding Time: Unfiltered: 2 Days Filtered: 60 Days</p> <p>Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference: (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".</p>				
<p>Pharmaceutical and personal care products (PPCPS) in water Protocol ID: 15_03_01</p> <p>Sample Container: 250 mL glass bottle Sample Size: 250 mL Preservation: Cool, < 6°C Holding Time: 60 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference: (2007), "EPA 1694 Pharmaceuticals and Personal Care Products in Water, Soil, Sediment, and Biosolids by HPLC/MS/MS".</p>	<p>2,4-D (2,4-Dichlorophenoxyacetic acid) 6-Chloropicolinic acid Dicamba</p>	<p>0.5 µg/L 0.5 µg/L 0.5 µg/L</p>	<p>\$231.00</p>	<p>\$184.80</p>
<p>Perchlorate in water Protocol ID: 15_08_01</p> <p>Sample Container: 250 mL glass bottle Sample Size: 250 mL Preservation: Cool, < 6°C Holding Time: 30 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference: Wilkin, Richard T. Fine, Dennis D. Burnett, Nicole G. (2007), "Perchlorate Behavior in a Municipal Lake Following Fireworks Displays", 3966-3971.</p>	<p>Chlorate Perchlorate</p>	<p>0.5 µg/L 0.5 µg/L</p>	<p>\$115.50</p>	<p>\$92.40</p>

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	Sulfoxaflor Thiacloprid Picoxystrobin Thiamethoxam urea Trifloxystrobin	0.009 µg/L 0.02 µg/L 0.01 µg/L 0.005 µg/L 0.009 µg/L		
<p>Oxanilic acids/ethanesulfonic acids (OAESA) in water</p> <p>Protocol ID: 20_06_01</p> <p>Sample Container: 250 mL amber glass bottle Sample Size: 250 mL Preservation: Cool, < 6°C Holding Time: 60 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>References: Ferrer, I.; Thurman, E. M.; Barcelo, D. (1997), "Identification of Ionic Chloroacetanilide-Herbicide Metabolites in Surface Water and Groundwater by HPLC/MS Using Negative Ion Spray", <i>Anal. Chem.</i> 69, 4547-4553.</p> <p>(2005), "EPA 535 Measurement of Chloroacetanilide and Other Acetamide Herbicide Degradates in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)".</p>	Hydroxychlorthalonil Acetochlor ESA Acetochlor OA Alachlor ESA Alachlor OA Metolachlor ESA Metolachlor OA Nitrosodimethylamine Propachlor ESA	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 0.5 µg/L 0.01 µg/L	\$288.80	\$231.04
<p>Perfluoronated acids (PFAS) in water</p> <p>Protocol ID: 20_08_01</p> <p>Sample Container: 250 mL plastic bottle Sample Size: 250 mL Preservation: Cool, < 6°C Holding Time: 60 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference: (2018), "EPA 537.1 Determination of Selected Per- and Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)".</p>	11Cl-PF3OUdS 9Cl-PF3ONS ADONA HFPO-DA NEtFOSAA NMeFOSAA PFBS PFDA PFDoA PFHpA PFHxA PFHxS PFNA PFOA	0.01 µg/L 0.01 µg/L 0.001 µg/L 0.005 µg/L 0.005 µg/L 0.005 µg/L 0.01 µg/L 0.001 µg/L 0.005 µg/L 0.001 µg/L 0.005 µg/L 0.01 µg/L 0.001 µg/L 0.001 µg/L	\$231.00	\$184.80

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	PFOS PFTA PFTTrDA PFUnA	0.001 µg/L 0.005 µg/L 0.005 µg/L 0.001 µg/L		
<p>EPA 1694 Group 1 in water (human usage) Protocol ID: 20_11_01</p> <p>Sample Container: 250 mL amber glass bottle Sample Size: 250 mL Preservation: Cool, < 6°C Holding Time: 30 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference: (2007), "EPA 1694 Pharmaceuticals and Personal Care Products in Water, Soil, Sediment, and Biosolids by HPLC/MS/MS".</p>	1,7-Dimethylxanthine Acetaminophen Ampicillin Azithromycin Caffeine Carbamazepine Cefotaxime Ciprofloxacin Clarithromycin Clinafloxacin Codeine Cotinine Danofloxacin Dehydronifedipine Digoxigenin Digoxin Diltiazem Diphenhydramine Enrofloxacin Erythromycin Flumequine Fluoxetine Lincomycin Lomefloxacin Miconazole Norfloxacin Norgestimate Ofloxacin Ormetoprim Oxacillin Penicillin G Penicillin V Penillic Acid Phenazone	0.5 µg/L 0.01 µg/L 0.10 µg/L 0.05 µg/L 0.2 µg/L 0.03 µg/L 1 µg/L 0.03 µg/L 0.1 µg/L 0.02 µg/L 0.05 µg/L 0.003 µg/L 0.09 µg/L 0.08 µg/L 0.09 µg/L 0.7 µg/L 0.7 µg/L 0.04 µg/L 0.1 µg/L 0.03 µg/L 0.07 µg/L 0.02 µg/L 0.05 µg/L 0.1 µg/L 0.06 µg/L 0.06 µg/L 0.05 µg/L 0.06 µg/L 0.02 µg/L 1 µg/L 0.7 µg/L 2 µg/L 0.7 µg/L 0.07 µg/L	\$231.00	\$184.80

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	Roxithromycin Sarafloxacin Sucralose Sulfachlorpyridazine Sulfadiazine Sulfadimethoxine Sulfamerazine Sulfamethazine Sulfamethiazole Sulfamethoxazole Sulfanilamide Sulfathiazole Thiabendazole Trimethoprim	0.1 µg/L 0.1 µg/L 0.3 µg/L 0.09 µg/L 0.2 µg/L 0.09 µg/L 0.2 µg/L 0.02 µg/L 0.06 µg/L 0.04 µg/L 1 µg/L 0.1 µg/L 0.02 µg/L 0.05 µg/L		
<p>EPA 1694 Group 1 in water (vet usage) Protocol ID: 20_21_01</p> <p>Sample Container: 250 mL amber glass bottle Sample Size: 250 mL Preservation: Cool, < 6°C Holding Time: 30 Days Estimated Turnaround Time: 6-8 Weeks</p> <p>Reference: (2007), "EPA 1694 Pharmaceuticals and Personal Care Products in Water, Soil, Sediment, and Biosolids by HPLC/MS/MS".</p>	Ampicillin Azithromycin Carbadox Cefotaxime Ceftiofur Ciprofloxacin Clarithromycin Danofloxacin DCCD Erythromycin Florfenicol Lincomycin Monensin Novobiocin Ormetoprim Oxacillin Oxolinic acid Penicillin G Penicillin V Penillic Acid Roxithromycin Sulfachlorpyridazine Sulfadiazine Sulfadimethoxine	0.05 ng/mL 0.06 ng/mL 0.05 ng/mL 0.9 ng/mL 0.4 ng/mL 0.1 ng/mL 0.1 ng/mL 0.2 ng/mL 0.2 ng/mL 0.009 ng/mL 1 ng/mL 0.1 ng/mL 0.4 ng/mL Pending 0.04 ng/mL 1 ng/mL 0.1 ng/mL 0.6 ng/mL 1 ng/mL 0.10 ng/mL 0.07 ng/mL 0.1 ng/mL 0.02 ng/mL 0.07 ng/mL	\$283.50	\$226.80

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	Sulfamerazine	0.03 ng/mL		
	Sulfamethazine	0.04 ng/mL		
	Sulfamethiazole	0.2 ng/mL		
	Sulfamethoxazole	0.05 ng/mL		
	Sulfanilamide	0.4 ng/mL		
	Sulfathiazole	0.6 ng/mL		
	Thiabendazole	0.02 ng/mL		
	Tiamulin	0.08 ng/mL		
	Trimethoprim	0.04 ng/mL		
	Tylosin	0.05 ng/mL		
	Virginiamycin	2 ng/mL		

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