Water Sciences Laboratory Analyte/Protocol Price List 2022

Nebraska Water Center
Daugherty Water *for* Food Global Institute

Environmental :: Solids

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Protocol	Analyte	Reporting Limit	Protocol Cost	NU Cost (20% discount)
Agricultural herbicides in solids **Protocol ID: 06_01_02** **Sample Container:** 125 mL wide mouth amber glass bottle **Sample Size:** 50 gm **Preservation:** Frozen **Holding Time:** 60 Days **Estimated Turnaround Time:** 6-8 Weeks **Reference:** Huang, L. Q. (1989), "Simultaneous determination of alachlor, metolachlor, atrazine, and simazine in water and soil by isotope dilution gas chromatography/mass spectrometry", *J. Assoc. Off. Anal. Chem* **72**(2), 349-354.	**Acetochlor**	0.5 ng/g	**$138.60**	$110.88
	Alachlor	0.5 ng/g		
	Atrazine	0.5 ng/g		
	Butylate	0.5 ng/g		
	Chlorothalonil	0.5 ng/g		
	Cyanazine	0.5 ng/g		
	DEA	0.5 ng/g		
	DIA	0.5 ng/g		
	Dimethenamid	0.5 ng/g		
	EPTC	0.5 ng/g		
	Gravametric Moisture (g/g)	Pending		
	Metolachlor	0.5 ng/g		
	Metribuzin	0.5 ng/g		
	Norflurazon	0.5 ng/g		
	Pendamethalin	0.5 ng/g		
	Permethrin	0.5 ng/g		
	Prometon	0.5 ng/g		
	Propachlor	0.5 ng/g		
	Propazine	0.5 ng/g		
	Simazine	0.5 ng/g		
	Tefluthrin	0.5 ng/g		
	Trifluralin	0.5 ng/g		
Chlorinated pesticides in solids **Protocol ID: 06_02_02** **Sample Container:** 125 mL wide mouth amber glass bottle **Sample Size:** 50 gm **Preservation:** Frozen **Holding Time:** 60 Days	**4,4-DDE**	5 ng/g	**$138.60**	$110.88
	4,4-DDT	5 ng/g		
	α-BHC	5 ng/g		
	Aldrin	5 ng/g		
	ß-BHC	5 ng/g		
	δ-BHC	5 ng/g		
	Dieldrin	5 ng/g		

Protocol	Analyte	Reporting Limit	Protocol Cost	NU Cost (20% discount)
Estimated Turnaround Time: 6-8 Weeks **References:** Lopez-Avila, V.; Young, R.; Beckert, W. F. (1994), "Microwave-Assisted Extraction of Organic Compounds from Standard Reference Soils and Sediments", *Anal. Chem.* **66**, 1097-1106. (2011), "EPA 8270 Analysis of Semivolatile Organic Compounds by Combined Gas Chromatography/Mass Spectrometry (GC/MS)".	**γ-BHC (Lindane)** **Heptachlor** **Trifluralin**	5 ng/g 5 ng/g 5 ng/g		
Semi-volatile organic compounds in solids **Protocol ID: 06_03_02** **Sample Container:** 125 mL wide mouth amber glass bottle **Sample Size:** 50 gm **Preservation:** Frozen **Holding Time:** 60 Days **Estimated Turnaround Time:** 6-8 Weeks **Reference:** Martinez, E.; Gros, M.; Lacorte, S; Barcelo, D. (2004), "Simplified procedures for the analysis of polycyclic aromatic hydrocarbons in water, sediments, and mussels", *J. Chromatogr. A* **1047**, 181-188.	**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**	0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g 0.05 ng/g	**$138.60**	$110.88
Insecticides and Fungicides in solids **Protocol ID: 06_05_02** **Sample Container:** 125 mL wide mouth amber glass bottle **Sample Size:** 50 gm **Preservation:** Frozen **Holding Time:** 60 Days **Estimated Turnaround Time:** 6-8 Weeks **References:**	**Acetochlor** **Atrazine** **Bifenthrin** **Boscalid** **Carbofuran** **Chlorpyrifos** **Cyhalothrin lambda** **Cypermethrin** **Cyprodinil**	0.5 ng/g 0.5 ng/g 0.5 ng/g 0.5 ng/g 0.5 ng/g 0.5 ng/g 0.5 ng/g 0.5 ng/g 0.5 ng/g	**$138.60**	$110.88

Protocol	Analyte	Reporting Limit	Protocol Cost	NU Cost (20% discount)
Hladik, M. L.; Kuivila, K. M. (2009), "Assessing the Occurrence and Distribution of Pyrethroids in Water and Suspended Sediments", *J. Agric. Food Chem.* **57** (19), 9079-9085. (1992), "EPA 614 The Determination of Organophosphorus Pesticides in Municipal and Industrial Wastewater The Determination of Organophosphorus Pesticides in Municipal and Industrial Wastewater".	**DEA**	0.5 ng/g		
	Deltamethrin	0.5 ng/g		
	DIA	0.5 ng/g		
	Diazinon	0.5 ng/g		
	Fludioxonil	0.5 ng/g		
	Malathion	0.5 ng/g		
	Methidathion	0.5 ng/g		
	Methomyl	0.5 ng/g		
	Metolachlor	0.5 ng/g		
	Metribuzin	0.5 ng/g		
	Parathion ethyl	0.5 ng/g		
	Parathion methyl	0.5 ng/g		
	Pendimethalin	0.5 ng/g		
	Permethrin	0.5 ng/g		
	Propazine	0.5 ng/g		
	Pyrimethanil	0.5 ng/g		
	Quinoxyfen	0.5 ng/g		
	Tebuconazole	0.5 ng/g		
	Tefluthrin	0.5 ng/g		
	Triadimefon	0.5 ng/g		
	Gravametric Moisture (g/g)	Pending		
Pharmaceutical and personal care products (PPCPS) in soil **Protocol ID: 15_03_02** **Sample Container:** 125 mL wide mouth amber glass bottle **Sample Size:** 50 gm **Preservation:** Frozen **Holding Time:** 60 Days **Estimated Turnaround Time:** 6-8 Weeks **Reference:** (2007), "EPA 1694 Pharmaceuticals and Personal Care Products in Water, Soil, Sediment, and Biosolids by HPLC/MS/MS".	**2,4-D (2,4-Dichlorophenoxyacetic acid)**	Pending	**$288.80**	$231.04
	6-Chloropicolinic acid	0.5 ng/g		
	Aminopyralid	Pending		
	Dicamba	Pending		

Protocol	Analyte	Reporting Limit	Protocol Cost	NU Cost (20% discount)
Sulfas, TCs, macrolides in soils **Protocol ID: 15_10_02** **Sample Container:** 125 mL wide mouth amber glass bottle **Sample Size:** 50 gm **Preservation:** Frozen **Holding Time:** 60 Days **Estimated Turnaround Time:** 6-8 Weeks **Reference:** Jacobsen, A. M.; Halling-Sorensen, B.; Ingerslev, F.; Honore Hansen, S. (2004), "Simultaneous extraction of tetracycline, macrolide and sulfonamide antibiotics from agricultural soils using pressurised liquid extraction, followed by solid-phase extraction and liquid chromatography–tandem mass spectrometry", *J. Chromatogr. A* **1038**(1-2), 157-170.	**Chlortetracycline**	0.05 ng/g	**$288.80**	$231.04
	Doxycycline	Pending		
	Erythromycin	0.05 ng/g		
	Erythromycin Anhydro-	0.05 ng/g		
	Lincomycin	0.05 ng/g		
	Monensin	0.05 ng/g		
	Oxytetracycline	0.05 ng/g		
	Ractopamine	0.05 ng/g		
	Sulfachloropyridazine	0.05 ng/g		
	Sulfadimethoxine	0.05 ng/g		
	Sulfamerazine	0.05 ng/g		
	Sulfamethazine	0.05 ng/g		
	Sulfamethizole	0.05 ng/g		
	Sulfamethoxazole	0.05 ng/g		
	Sulfathiazole	0.05 ng/g		
	Tetracycline	0.05 ng/g		
	Tiamulin	0.05 ng/g		
	Tylosin	0.05 ng/g		
	Virginiamycin	0.05 ng/g		
Illicit Compounds in solids **Protocol ID: 20_01_02** **Sample Container:** 125 mL wide mouth amber glass bottle **Sample Size:** 50 gm **Preservation:** Frozen **Holding Time:** 60 Days **Estimated Turnaround Time:** 6-8 Weeks **References:** 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", *J. Chromatogr. A* **1161**(1-2), 132-145. Berset, J.; Brenneisen, R.; Mathieu, C. (2010), "Analysis of llicit 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)", *Chemosphere* **81**(7), 859-866.	**1,7-Dimethylxanthine**	0.05 ng/g	**$288.80**	$231.04
	Acetaminophen	0.05 ng/g		
	Amphetamine	0.05 ng/g		
	Azithromycin	0.05 ng/g		
	Carbamazepine	0.05 ng/g		
	Cotinine	0.05 ng/g		
	Diphenhydramine	0.05 ng/g		
	Hydrocodone	0.05 ng/g		
	MDA	0.05 ng/g		
	MDA	0.05 ng/g		
	Metaxalone	0.05 ng/g		
	Methadone	0.05 ng/g		
	Methamphetamine	0.05 ng/g		
	Morphine	0.05 ng/g		
	Oxycodone	0.05 ng/g		
	Phenazone	0.05 ng/g		
	Sulfachloropyridazine	0.05 ng/g		
	Sulfamethazine	0.05 ng/g		
	Sulfamethoxazole	0.05 ng/g		

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	Temazepam	0.05 ng/g		
	Thiabendazole	0.05 ng/g		
	Trimethoprim	0.05 ng/g		
Neonicotinoid/strobularin pesticides in soil **Protocol ID: 20_02_02** **Sample Container:** 125 mL wide mouth amber glass bottle **Sample Size:** 50 gm **Preservation:** Frozen **Holding Time:** 60 Days **Estimated Turnaround Time:** 6-8 Weeks **Reference:** Magalhaes, L. C.; Hunt, T. E.; Siegfried, B. D. (2009), "Efficacy of Neonicotinoid Seed Treatments to Reduce Soybean Aphid Populations Under Field and Controlled Conditions in Nebraska", *J. Econ. Entomol.* **10**2(1), 187-195.	**6-chloronicotinic acid**	Pending	**$288.80**	$231.04
	6-chloronicotinic aldehyde	0.05 ng/g		
	6-chloro-N-methylnicotinamide	0.02 ng/g		
	Acetamiprid	0.05 ng/g		
	Azoxystrobin	0.2 ng/g		
	Clothianidin	0.05 ng/g		
	Dimethoate	0.05 ng/g		
	Dinotefuran	0.05 ng/g		
	Imidacloprid	0.05 ng/g		
	Imidacloprid desnitro	Pending		
	Imidacloprid Olefin	Pending		
	Imidacloprid urea	Pending		
	Indoxacarb	0.1 ng/g		
	Metalaxyl	0.05 ng/g		
	Picoxystrobin	0.05 ng/g		
	Pyraclostrobin	0.05 ng/g		
	Sulfoxaflor	0.5 ng/g		
	Thiacloprid	0.05 ng/g		
	Thiamethoxam	0.05 ng/g		
	Thiamethoxam urea	0.5 ng/g		
	Trifloxystrobin	0.1 ng/g		
Perfluoronated acids (PFAS) in solids **Protocol ID: 20_08_02** **Sample Container:** Passive sampler (POCIS) **Sample Size:** Pending **Preservation:** Cool, < 6ºC **Holding Time:** 60 Days **Estimated Turnaround Time:** 6-8 Weeks	**11Cl-PF3OUdS**	Pending	**$288.80**	$231.04
	9Cl-PF3ONS	Pending		
	ADONA	Pending		
	HFPO-DA	Pending		
	NEtFOSAA	Pending		
	NMeFOSAA	Pending		
	PFBS	Pending		
	PFDA	Pending		
	PFDoA	Pending		
	PFHpA	Pending		
	PFHxA	Pending		
	PFHxS	Pending		
	PFNA	Pending		
	PFOA	Pending		

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	PFOS	Pending		
	PFTA	Pending		
	PFTrDA	Pending		
	PFUnA	Pending		
EPA 1694 Group 1 in solids (human usage) **Protocol ID: 20_11_02** **Sample Container:** Pending **Sample Size:** Pending **Preservation:** Frozen **Holding Time:** 60 Days **Estimated Turnaround Time:** 6-8 Weeks **Reference:** (2007), "EPA 1694 Pharmaceuticals and Personal Care Products in Water, Soil, Sediment, and Biosolids by HPLC/MS/MS".	**1,7-Dimethylxanthine**	26 ng/g	**$288.80**	$231.04
	Acetaminophen	3 ng/g		
	Ampicillin	3 ng/g		
	Azithromycin	3 ng/g		
	Caffeine	53 ng/g		
	Carbamazepine	2 ng/g		
	Cefotaxime	76 ng/g		
	Ciprofloxacin	4 ng/g		
	Clarithromycin	1 ng/g		
	Clinafloxacin	8 ng/g		
	Codeine	8 ng/g		
	Cotinine	1 ng/g		
	Danofloxacin	2 ng/g		
	Dehydronifedipine	3 ng/g		
	Digoxigenin	2 ng/g		
	Digoxin	58 ng/g		
	Diltiazem	20 ng/g		
	Diphenhydramine	2 ng/g		
	Enrofloxacin	3 ng/g		
	Erythromycin	2 ng/g		
	Flumequine	3 ng/g		
	Fluoxetine	4 ng/g		
	Lincomycin	2 ng/g		
	Lomefloxacin	1 ng/g		
	Miconazole	1 ng/g		
	Norfloxacin	4 ng/g		
	Norgestimate	2 ng/g		
	Ofloxacin	2 ng/g		
	Ormetoprim	4 ng/g		
	Oxacillin	14 ng/g		
	Penicillin G	14 ng/g		
	Penicillin V	27 ng/g		
	Penillic Acid	7 ng/g		
	Phenazone	7 ng/g		

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	Roxithromycin	18 ng/g		
	Sarafloxacin	2 ng/g		
	Sucralose	17 ng/g		
	Sulfachlorpyridazine	5 ng/g		
	Sulfadiazine	8 ng/g		
	Sulfadimethoxine	6 ng/g		
	Sulfamerazine	8 ng/g		
	Sulfamethazine	3 ng/g		
	Sulfamethiazole	4 ng/g		
	Sulfamethoxazole	2 ng/g		
	Sulfanilamide	19 ng/g		
	Sulfathiazole	8 ng/g		
	Thiabendazole	2 ng/g		
	Trimethoprim	4 ng/g		
EPA 1694 Group 1 in solids (vet usage) **Protocol ID: 20_21_02** **Sample Container:** Pending **Sample Size:** Pending **Preservation:** Frozen **Holding Time:** 60 Days **Estimated Turnaround Time:** 6-8 Weeks **Reference:** (2007), "EPA 1694 Pharmaceuticals and Personal Care Products in Water, Soil, Sediment, and Biosolids by HPLC/MS/MS".	**Ampicillin**	Pending	**$283.50**	$226.80
	Azithromycin	Pending		
	Carbadox	Pending		
	Cefotaxime	Pending		
	Ceftiofur	Pending		
	Ciprofloxacin	Pending		
	Clarithromycin	Pending		
	Cloxcillin	Pending		
	Danofloxacin	Pending		
	DCCD	Pending		
	Erythromycin	Pending		
	Florfenicol	Pending		
	Lincomycin	Pending		
	Monensin	Pending		
	Novobiocin	Pending		
	Ormetoprim	Pending		
	Oxacillin	Pending		
	Oxolinic acid	Pending		
	Penicillin G	Pending		
	Penicillin V	Pending		
	Penillic Acid	Pending		
	Roxithromycin	Pending		
	Sulfachlorpyridazine	Pending		
	Sulfadiazine	Pending		

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	Sulfadimethoxine	Pending		
	Sulfamerazine	Pending		
	Sulfamethazine	Pending		
	Sulfamethiazole	Pending		
	Sulfamethoxazole	Pending		
	Sulfanilamide	Pending		
	Sulfathiazole	Pending		
	Thiabendazole	Pending		
	Tiamulin	Pending		
	Tildipirosin	Pending		
	Trimethoprim	Pending		
	Tulathromycin	Pending		
	Tylosin	Pending		
	Virginiamycin	Pending		