



- ▶ Meets EPA guidelines
- ▶ Certified for 67 metals and 2 anions
- ▶ Low extractable materials
- ▶ High filtration capacity
- ▶ Ready-to-use

Groundwater Sampling Capsules

Disposable collection filters for dissolved metals analysis

Millipore's family of sampling capsules provides a disposable, EPA-accepted method for collecting groundwater prior to dissolved metals analysis.

EPA-accepted Method

The capsules meet the filtration requirements of the U.S. EPA for 0.45 μm filtration.

Certified for 67 Metals and 2 Anions

The capsules are made from low-extractable filter and housing materials that minimize background in sample analysis. A certificate comes with each capsule showing lowest detectable level (LDL) analyses for a broad range of metals (see data inside).

Choice of Pore Sizes

Silt and particulate levels in groundwater sources vary seasonally. Millipore's capsules are available with three different membrane pore sizes to suit the variety of water conditions: 0.45, 1.0, and 5.0 μm . Use the 5.0 μm pore size when particulate levels are very high; the 1.0 μm pore size for normal particulate loads; and the 0.45 μm pore size for sampling relatively clean water.

High-Throughput Means Fewer Filter Changeouts

Membranes in Millipore capsules feature a unique pore structure that enhances the filter's flow mechanics. The capsules' 600 cm^2 pleated membrane filter offers four times the effective filtration area of 142 mm disc filters. This combination of high-throughput membrane and large surface area ensures that Millipore capsules filter faster, more efficiently, and require fewer change-outs than competitive filters.

No Assembly or Cleanup

The capsules come ready to use with the membrane filter in-place. Simply attach to a hose and you're ready to begin sampling (see Specifications for inlet/outlet connections). There's nothing to assemble or cleanup.

Specifications

Materials of Construction

(all inert components)

<i>Membrane:</i>	Hydrophilic polyethersulfone (PES) membrane with non-woven support
<i>Housing:</i>	High density polyethylene

Dimensions

<i>Diameter:</i>	3.0 in. (7.6 cm)
<i>Effective filtration area:</i>	600 cm ²
<i>Length with fittings:</i>	4 in. (10.2 cm)

Connections

<i>Inlet/outlet:</i>	1/8 in. male NPT, external threaded connections; also includes a stepped-hose adapter with for use with up to 3/8 in. I.D. tubing
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Performance Properties

<i>Flow rate at 10 psi:</i>	1 gpm (3.8 lpm)
<i>Inlet pressure (maximum):</i>	60 psig (4.1 bar) at 25 °C
<i>Differential pressure (maximum):</i>	10 psig (0.7 bar) at 25 °C

Water Bubble Point

<i>0.45 μm:</i>	> 30.0 psig (2100 mbars)
<i>1.0 μm:</i>	> 10.0 psig (700 mbars)
<i>5.0 μm:</i>	> 5.0 psig (350 mbars)

Product Certification

Millipore Groundwater Sampling Capsules are certified to have extractable levels no greater than the quantities shown below. All testing was performed by an independent laboratory using EPA-approved methods.

Element or Compound	LDL* ppb (µg/L)	Element or Compound	LDL ppb (µg/L)
Chloride	50.00	Molybdenum	0.05
Sulfate	10.00	Neodymium	0.02
Aluminum	0.20	Nickel	0.50
Antimony	0.10	Niobium	0.02
Arsenic	0.20	Osmium	0.02
Barium	0.10	Palladium	0.03
Beryllium	0.04	Platinum	0.08
Bismuth	0.04	Potassium	25.00
Boron	5.00	Praseodymium	0.01
Cadmium	0.03	Rhenium	0.06
Calcium	25.00	Rhodium	0.02
Cerium	0.01	Rubidium	0.10
Cesium	0.02	Ruthenium	0.05
Chromium	0.03	Samarium	0.04
Cobalt	0.02	Scandium	0.20
Copper	0.50	Selenium	7.00
Dysprosium	0.04	Silver	0.03
Erbium	0.02	Sodium	25.00
Europium	0.02	Strontium	0.20
Gadolinium	0.04	Tantalum	0.02
Gallium	0.04	Tellurium	0.04
Germanium	0.05	Terbium	0.02
Gold	0.05	Thallium	0.05
Hafnium	0.03	Thorium	0.02
Holmium	0.01	Thulium	0.01
Indium	0.02	Tin	0.20
Iridium	0.06	Titanium	0.05
Iron	1.00	Tungsten	0.20
Lanthanum	0.01	Uranium	0.02
Lead	0.50	Vanadium	0.03
Lithium	0.30	Ytterbium	0.03
Lutetium	0.01	Yttrium	0.02
Magnesium	10.00	Zinc	1.00
Manganese	0.30	Zirconium	0.05
Mercury	0.05		

*LDL = Lowest Detectable Level

Ordering Information

Description	Pore Size (µm)	Qty/pk	Catalogue No.
Groundwater Sampling Capsules	0.45	1	GWSC 045 01
	0.45	10	GWSC 045 10
	0.45	50	GWSC 045 50
	1.0	1	GWSC 100 01
	1.0	10	GWSC 100 10
	5.0	1	GWSC 500 01

To Place an Order or Receive Technical Assistance

For additional information call your nearest Millipore office:

In the U.S. and Canada, call toll-free **1-800-MILLIPORE (1-800-645-5476)**

In the U.S., Canada and Puerto Rico, fax orders to **1-800-MILLIFX (1-800-645-5439)**

Outside of North America contact your local office. To find the office nearest you visit www.millipore.com/offices.

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