

Dionex AutoTrace 280 Solid-Phase Extraction Instruments

The Thermo Scientific™ Dionex™ AutoTrace™ 280 Solid-Phase Extraction instrument and the Thermo Scientific™ Dionex™ AutoTrace™ 280 PFAS Solid-Phase Extraction instrument handle large volume Solid-Phase Extraction (SPE) of liquid samples from 20 mL to 4 L. The instruments can be configured with 1, 3, or 6 mL SPE cartridges or 47 mm solid phase extraction disks. The instruments automatically load liquid samples on the SPE sorbent then automatically extract the analytes of interest using up to five different solvents.



Dionex AutoTrace 280 SPE Instrument



Dionex AutoTrace 280 PFAS SPE Instrument

System features

- Automatically conditions, rinses, and elutes SPE cartridges with a choice of five solvents
- Simultaneously loads up to six samples
- Loads sample volumes from 20 mL to 4 L
- Offers choice of six different collection vial racks
- Segregates aqueous and solvent waste using separate waste lines
- Processes ground, surface, and wastewater samples
- Easy-to-use SPE software
- Supports SPE cartridges
- Documented U.S. EPA methods for drinking, surface, and waste water
- Integrated venting of solvent vapors
- Greatly reduces background contamination with non-fluoropolymer-based tubing, valves, and filters

Applications

The Dionex AutoTrace 280 SPE instruments are perfect for laboratories looking to automate large volume water extractions. The Dionex AutoTrace 280 instruments applications include many of the U.S. EPA Methods and a variety of other SPE sample cleanup methods.

Methods

- U.S. EPA Method 533 and 537.1*
- U.S. EPA Method 508 and 608
- U.S. EPA Method 525

*Recommended for PFAS extractions

- U.S. EPA Method 539
- U.S. EPA Method 549.2
- U.S. EPA Method 625
- Extraction of organochlorine pesticides
- Extraction of endocrine disruptors
- Extraction of dioxins and furans
- Extraction of triclosan

Table 1.

Pesticide recovery study (n = 6)			Dionex AutoTrace 280 SPE		Vacuum manifold SPE	
Compound	Recovery%	RSD	Recovery%	RSD	Recovery%	RSD
Atrazine	88	1.8	54	12.2		
Propazine	91	1.5	80	7.3		
Alachor	99	3.4	96	4.1		
Metachor	99	4.3	96	2.9		

Table 1 shows a pesticide recovery study comparing the AutoTrace 280 SPE technique and a vacuum manifold technique. The improvements in recovery and reproducibility are attributed to the microprocessor control of all the liquid flow rates—both sample and SPE solvents.

Specifications	
Gas regulator and gas gauge range	Output: 0–30 psi (0–1.4 bars), Input: 100 psi (6.9 bars) maximum
Net weight	150 lbs. (68.1 kg)
Dimensions (h × w × d)	Instrument: 23 x 25 x 27 in. (57 x 63.5 x 69 cm) Sample Rack: 8 x 16.5 x 12 in. (20.3 x 41.9 x 33 cm)
U.S. EPA Methods 500 and 600 Series	24 methods stored in the Dionex AutoTrace 280 SPE instruments
Electrical	Voltage: 100, 120, 220, or 240 V ± 10% Frequency: 47–63 Hz Power: 100 W
Liquid management	Air syringe: One 10 mL air syringe LH syringe: One 10 mL liquid handling syringe 12-port valve: Rotary, sliding Rulon seal Valves: 3-way, Teflon or PEEK with AutoTrace 280 PFAS SPE instrument for U.S. EPA Method 533 and 537.1 Nozzles: Stainless steel Tubing: TFE, 1/16" ID, (6 total supplied) or PEEK with AutoTrace 280 PFAS SPE instrument for U.S. EPA Method 533 and 537.1
Sample pumps	Displacement: Positive Accuracy: ± 2.5% Tube fitting: Kynar Piston and liner: Ceramic Non use: Not for use with acetic acid and acetone
Solid phase extraction configurations	1 mL syringe: Compatible cartridge 3 mL syringe: Compatible cartridge 6 mL syringe: Compatible cartridge 47 mm SPE disk

Ordering information

In the U.S., call (800) 346-6390 or contact the Thermo Fisher Scientific Regional Office nearest you. Outside the U.S., order through your local Thermo Fisher Scientific office or distributor. Refer to the following part numbers.

Description	Part number
Dionex AutoTrace 280 Automated Large Volume SPE for disks	071386
Dionex AutoTrace 280 Automated Large Volume SPE for 6 mL cartridges	071385
Dionex AutoTrace 280 Automated Large Volume SPE for 3 mL cartridges	072605
Dionex AutoTrace 280 Automated Large Volume SPE for 1 mL cartridges	072604
Dionex AutoTrace 280 Automated Large Volume SPE for 6 mL glass cartridges	072606
Dionex AutoTrace 280 PFAS Automated Large Volume SPE for U.S. EPA Method 533 and 537.1	22136-60101

Find out more at thermofisher.com/autotrace

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