

AutoTrace 280: Solid-Phase Extraction Instrument



The AutoTrace® 280 instrument handles large volume Solid-Phase Extraction (SPE) of liquid samples from 20 mL to 4 liters. The instrument can be configured with 1, 3, or 6 mL SPE cartridges or 47 mm solid-phase disks. The instrument automatically loads liquid matrices on the SPE material then automatically elutes the analytes of interests using up to five different solvents.

System Features

- Automatically conditions, rinses, and elutes SPE cartridges with a choice of five solvents or reagents
- Simultaneously loads up to six samples
- Loads sample volumes from 20 mL to 4000 mL
- Offers choice of four different collection vial racks
- Segregates aqueous and solvent waste using separate waste lines
- Processes ground, surface, and wastewater samples – even those containing suspended solids
- Easy-to-use SPE specific software
- Supports SPE cartridges or discs
- Documented EPA methods for water testing
- Integrated venting of solvent vapors

Applications

The AutoTrace instrument is perfect for laboratories looking to automate large volume water extractions. AutoTrace applications include many of the U.S. EPA methods and a variety of other SPE sample preparation cleanup methods.

Methods

- U.S. EPA Method 525
- U.S. EPA Method 549.2
- U.S. EPA Method 508 & 608
- U.S. EPA Method 625
- U.S. EPA Method 1664
- Extraction of total petroleum hydrocarbons
- Extraction of acid herbicides
- Extraction of triclosan
- Extraction of nitrosamines (EPA Method 521)
- Extraction of steroids and phytoestrogens
- Extraction of endocrine disruptors (EPA Method 1694)
- Extraction of personal care products



Passion. Power. Productivity.

TABLE 1. PERFORMANCE				
Pesticide Recovery Study N = 6	AutoTrace SPE		Vacuum Manifold SPE	
	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 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 reagents.

KEY SPECIFICATIONS	
<p>Gas Regulator and Gas Gauge Range: Output: 0–30 psi (0–1.4 bars), Input: 100 psi (6.9 bars) maximum</p> <p>Net Weight: 150 lbs. (68.1 kg)</p> <p>Dimensions (h × w × d): 23 × 25 × 27 in (57 × 63.5 × 69 cm) Sample Rack: 8 × 16.5 × 13 in)</p> <p>500 & 600 Series EPA Methods: 24 methods stored in the AutoTrace instrument, unlimited number of methods stored in PC</p> <p>Electrical: Voltage: 100, 120, 220, or 240 V ± 10% Frequency: 47–63 Hz Power: 150 Volt AC</p> <p>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® Nozzles: Stainless steel Tubing: TFE, 1/16" ID, (6 total supplied)</p>	<p>Sample Pumps: Displacement: Positive Accuracy: ± 2.5% Tube Fitting: Kynar® Piston and Liner: Ceramic Non Use: Not for use with acetic acid and acetone</p> <p>Solid Phase Extraction Configurations: 1 mL Syringe: Compatible cartridge 3 mL Syringe: Compatible cartridge 6 mL Syringe: Compatible cartridge 47 mm SPE disk</p>

ORDERING INFORMATION	
To order, use the following part numbers and contact your local Dionex office or distributor nearest you. In the U.S., call (800) 346-6390. In other regions, refer to the phone numbers below.	
Description	
AutoTrace 280 Automated Large Volume SPE for Disks	071386
AutoTrace 280 Automated Large Volume SPE for 6 mL Cartridges	071385
AutoTrace 280 Automated Large Volume SPE for 3 mL Cartridges	072605
AutoTrace 280 Automated Large Volume SPE for 1 mL Cartridges	072604
AutoTrace 280 Automated Large Volume SPE for 6 mL Glass Cartridge	072606

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Kynar is a registered trademark of Arkema Inc.



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