

Thermo Scientific Dionex ASE 150 Accelerated Solvent Extractor System

The Thermo Scientific™ Dionex™ ASE™ 150 Accelerated Solvent Extractor system with pH-hardened pathway featuring Thermo Scientific™ Dionium™ ASE™ 150 Extraction Cells performs extractions using less solvent and less time than traditional techniques.

Accelerated Solvent Extraction

Accelerated solvent extraction is a method for extracting organic compounds from solid and semisolid samples with liquid solvents. Dionex ASE systems use conventional liquid solvents at elevated temperatures and pressures to increase the efficiency of the extraction process. Increased temperature accelerates the extraction kinetics, and elevated pressure keeps the solvent below its boiling point, enabling safe, rapid extractions. In addition, the pH-hardened pathway allows the extraction of pretreated matrices.

Dionex ASE systems meet the requirements for extraction under U.S. EPA SW-846 Method 3545A for Pressurized Fluid Extraction of base/neutrals and acids, (BNA), organophosphorous pesticides (OPP), chlorinated pesticides and herbicides, polychlorinated biphenyls (PCB), polychlorinated dibenzo dioxins (PCDD) polychlorinated dibenzofurans (PCDF), and diesel range organics (DRO). The accelerated solvent extraction method replaces Soxhlet, sonication, wrist shaking, and other extraction techniques and uses less solvent and less time.



Dionex ASE 150 System Product Highlights

- Reduces extraction time and solvent consumption by use of elevated temperature and pressure during extraction
- Requires less than 50 mL solvent to extract a 20 g sample; reducing total solvent usage
- Extracts are automatically filtered and ready for direct injection or final cleanup
- Single cell operation
- Easy-to-fill sample cells (1, 5, 10, 22, 34, 66, and 100 mL) with fingertight fittings
- Easy-to-use collection bottles or vials (vials require vial tray insert)
- Convenient multiple-method storage for automatic operation
- Convenient front panel operation runs methods automatically
- Sensors for temperature, pressure, and solvent and liquid leaks alert the operator to a problem, sound an audible alarm, and shut down the system if necessary

Dionex ASE 150 System Installation Requirements

Prior to scheduling your Dionex ASE system installation, the following items must be at your site:

1. Nitrogen tank, 99.99% standard grade (or house nitrogen with minimum of 140 psi)
2. Nitrogen regulator, capable of 200 psi minimum delivery output
3. 500 mL HPLC grade acetone (Fisher Scientific catalog number A949SK-1)
4. 3 kg Ottawa Sand Standard (Fisher Scientific catalog number S23-3)
5. Lab bench capable of supporting the Dionex ASE 150 system (See dimensions on back)
6. Electrical: 90 to 260 Vac, 50/60 Hz: Less than 5 amps at 120 Vac

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Dionex ASE 150 System Installation

At the time of your installation, the Thermo Fisher Scientific Field Service Representative will:

1. Make all hardware connections between the Dionex ASE 150 system and gas cylinders
2. Operationally test the Dionex ASE 150 system for solvent recovery
3. Provide training for up to two end users, on routine operations of the Dionex ASE 150 system

Your warranty period will begin upon completion of the installation or the 61st day after the system shipment.

SPECIFICATIONS

Dionex ASE 150 System	
Oven:	Accepts sample cell sizes of 1, 5, 10, 22, 34, 66, and 100 mL Auto-seal actuator places cell into oven and returns cell to tray after extraction Temperature control: Up to 200 °C Vertical cell orientation with flow from top to bottom
Pump:	Fluid delivery pressure: 10 MPa (1500 psi) Pump flow: 70 mL/minute Automatic pressure sensor and pressure relief during heat-up
Fluid Sensors:	IR sensors detect fluid level during collection of extract
Display and Keyboard:	Menu operated LCD, 8 × 45 character display method and schedule editor and storage
Extraction Cells:	Seven capacities: 1, 5, 10, 22, 34, 66, and 100 mL cells Finger-tight cell caps feature compression seal for high-pressure closure
Extraction Cell Tray:	Single cell with two rinse positions
Collection Vials:	60 mL or 250 mL; vial lids have solvent-resistant septa (TFE-coated on solvent side)
Collection Vial Tray:	Single 250 mL bottle or 60 mL vial (60 mL vial requires insert)
Extraction Fluids:	Compatible with a wide range of organic and aqueous solvents
Dimensions (h × w × d):	56.1 × 35.6 × 50.8 cm (22.1 × 14.0 × 20.0 in.)
Weight:	34 kg (75 lb)
Power Requirements:	Consumption: 500 VA max Voltage: 100–120 or 220–240 Vac Frequency: 50/60 Hz
Pneumatic Requirements:	0.97–1.38 MPa (140–200 psi)

Ordering Information

To order in the U.S., call (800) 346-6390 or contact the Thermo Fisher Scientific office nearest you. Outside the U.S., order through your local Thermo Fisher Scientific office or distributor. Refer to the following part numbers. (Extraction cells and starter kits must be ordered separately)

Description	Part Number
Dionex ASE 150 system (120 V)	083095
Dionex ASE 150 system (240 V)	083097

The Dionex ASE 150 system provides operation for a single sample at a time. The system includes one solvent bottle with cap assembly, snap-ring pliers, power cords, tubing and gas line fittings.

www.thermoscientific.com/samplepreparation

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