

ASE 150 Accelerated Solvent Extractor



The ASE[®] 150 Accelerated Solvent Extractor with pH-hardened pathway featuring Dionium[™] components performs extractions using less solvent and less time than traditional techniques.

Accelerated Solvent Extraction (ASE)

Accelerated solvent extraction is a method for extracting organic compounds from solid and semisolid samples with liquid solvents. 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.

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). Accelerated solvent extraction replaces Soxhlet, sonication, wrist shaking, and other extraction techniques and uses less solvent and less time.



Passion. Power. Productivity.

ASE 150 SPECIFICATIONS

Oven:

Accepts 1, 5, 10, 22, 34, 66, and 100 mL cell sizes. 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. Cells feature finger-tight cell caps with compression seal for high-pressure closure

Extraction Cell Tray:

Single cell with two rinse positions.

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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 finger-tight 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.

KEY SPECIFICATIONS

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 x w x d):

56.1 x 35.6 x 50.8 cm
(22.1 x 14.0 x 20.0 in.)

Weight:

34 kg (75 lb.)

Power Requirements:

Consumption: 500 VA max.

Voltage:

100–120 or 220–240 V ac

Frequency:

50/60 Hz

Pneumatic Requirements:

N₂ at 1034–1340 kPa (150–200 psi)

ORDERING INFORMATION

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

Description	Part Number
ASE 150	P/N 066400

The ASE 150 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.

ASE 150 Installation Requirements

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

1. Nitrogen tank, 99.99% standard grade (or house nitrogen with minimum of 150 psi).
2. Nitrogen regulator, capable of 200 psi minimum delivery output.
3. Optional: Air tank, 99.99% standard grade (or house air with minimum of 100 psi).
4. Optional: Air regulator, capable of 200 psi (pressure fitting included in the ship kit).
5. 500 mL HPLC grade acetone.
6. 1 kg Ottawa Sand Standard (equivalent to Fisher catalog # 23-3; 20-30 mesh).
7. Lab bench capable of supporting the ASE 150 (See dimensions above)
8. Electrical: 90 to 260 Vac, 50/60 Hz: Less than 5 amps at 120 Vac.

ASE 150 INSTALLATION

At the time of your installation, the Dionex Field Service Representative will:

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

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

ASE is a registered trademark and Dionium is a trademark of Dionex Corporation.

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