

ASE[®] 300 Accelerated Solvent Extractor

The ASE 300 Accelerated Solvent Extractor performs extractions using less solvent and less time than traditional techniques. Two additional modules are available to enhance the performance of the ASE 300: the Solvent Controller and AutoASE. The Solvent Controller is an easy-to-use module that allows automated solvent delivery from up to four solvents. AutoASE is a control and reporting application software package.

Now sold under the
Thermo Scientific brand

Thermo
SCIENTIFIC

Accelerated Solvent Extraction

ASE is a technique for extracting solid and semisolid samples with liquid solvents.

ASE uses 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, thus enabling safe and rapid extractions.

ASE meets the requirements for extraction under U.S. EPA SW-846 Method 3545A for Pressurized Fluid Extraction of base/neutrals and acids, (BNAs), organophosphorous pesticides (OPPs), chlorinated pesticides and herbicides, polychlorinated biphenyls (PCBs), polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs), and diesel range organics (DROs).

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



Passion. Power. Productivity.

ASE 300 Accelerated Solvent Extractor

Product Highlights

- Reduces extraction time and solvent consumption by the use of elevated temperature and pressure during extraction.
- Requires less than 45 mL of solvent for a 30-g sample to reduce total solvent usage.
- Extracts are automatically filtered and ready for direct injection or final clean-up.
- Twelve-position carousel for unattended operation.
- Easy-to-fill sample cells (34, 66, and 100-mL) with fingertight fittings.
- Easy-to-use collection bottles.
- Convenient multiple method and schedule storage for automatic operation.
- Convenient front panel operation runs methods automatically on 1 to 12 samples.
- The schedule editor screen lets the operator schedule the extraction conditions and allows the re-extraction of the same cell into separate vials.
- Sensors for temperature, pressure, and solvent leaks alert the operator to a problem, sound an audible alarm, and shut down the system if necessary.

ASE 300 SPECIFICATIONS

Oven:

Accepts 34-, 66-, and 100-mL cells.
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 at 10 MPa (1500 psi).
Automatic pressure sensor and pressure relief during heat-up.

Fluid Sensors:

IR sensors detect the arrival of fluid into the collection bottle and fluid levels during extract collection.

Display and Keyboard:

Menu operated.
LCD 7 x 40 character display
Method and schedule editor and storage

Extraction Cells:

Three capacities: 34, 66, and 100 mL
Internal cell diameter: 28.3 mm
Finger-tight cell caps with compression seal for high-pressure closure

Extraction Cell Tray:

Twelve cell positions.
Two rinse positions.
Automatic home position sensing
Multiple extractions per cell

Collection Vials:

250 mL; vial lids have solvent-resistant septa (TFE-coated on solvent side)

Collection Vial Tray:

Twelve bottle positions plus one bottle position for rinse/waste collection
Tray compatible with 250-mL vials

Extraction Fluids:

Compatible with a wide range of organic and aqueous solvents

Dimensions (h x w x d):

59.4 x 58.8 x 60.4 cm
(23.4 x 23.1 x 23.8 in.)

Weight:

75.2 kg (165 lb)

Power Requirements:

Consumption: 500 VA max.
Voltage: 100–120 or 220–240 V ac
Frequency: 50/60 Hz

Pneumatic Requirements:

Air at 400–827 kPa (60–120 psi)
N₂ at 1034–1340 kPa (150–200 psi)

Ordering Information

In the U.S., call 1-800-346-6390 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. The following systems include 6 of the designated sample extraction cells and 12 clear 250-mL collection bottles.

ASE 300 with 34-mL extraction cells
.....P/N 056756

ASE 300 with 66-mL extraction cells
_____P/N 056757

ASE 300 with 100-mL extraction cells
.....P/N 056758

The ASE 300 with the Solvent Controller, Bottles Package and AutoASE software can be ordered under one part number as follows.

ASE 300 with 34-mL extraction cells,
Solvent Controller, Bottles
Package, and AutoASE Software
.....P/N 056762

ASE 300 with 66-mL extraction cells,
Solvent Controller, Bottles
Package, and AutoASE Software
.....P/N 056763

ASE 300 with 100-mL extraction cells,
Solvent Controller, Bottles
Package, and AutoASE Software
.....P/N 056764

ASE Solvent Controller

Product Highlights

- Allows unattended, automatic switching between solvent systems.
- Solvent is delivered from one to four reservoirs with mixing from 5 to 95% of total volume.
- Most commonly used solvents are compatible with the Solvent Controller.
- Reduces operator's exposure to solvent by eliminating frequent solvent bottle changes between different sample types.
- Solvent caddy holds up to four 1-L or 2-L solvent bottles and has a reservoir to contain and direct spills to waste.
- The Solvent Controller is directly programmable from the ASE 300.
- Multiple extractions from any combination of solvent sources can be performed.
- When running in Schedule Mode, the user can specify any one solvent to perform the rinse step.



The Method Edit screen on the control panel display can be programmed to automatically mix up to four different solvents.

Ordering Information

In the U.S., call 1-800-346-6390 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 below.

Solvent Controller (includes connecting cables and fluid lines) P/N 051987

Bottles Package, 2 L, set of three (includes caps with tube assemblies)..... P/N 053848

Solvent Controller, AutoASE software, and bottles package.....P/N 052577



ASE Solvent Controller

SOLVENT CONTROLLER SPECIFICATIONS

Dimensions (h x w x d):

20.3 x 35.6 x 49.8 cm
(8.0 x 14.0 x 19.6 in.)

Weight:

4.5 kg (10 lb)

Power Requirements:

Provided via cable from the ASE 300

AutoASE—ASE Computer Control Software

AutoASE is control and reporting application software for ASE Accelerated Solvent Extractors.

Product Highlights

- Easy operator interface with ASE systems.
- Sample information can be stored and tracked electronically.
- Provides variable rinse volumes.
- Allows up to five static cycles.
- Provides preheat sample mode.
- Allows text and numeric sample identifiers.
- Virtually unlimited methods and schedules can be stored.
- Easy-to-use icon bar allows quick access to control functions.
- Colorful graphic display of system. Up to eight ASE systems can be controlled or monitored from one PC, making it easier to transfer methods between systems.
- Compatible with bar code readers.

Method Editor Screen

The Method Editor screen allows the operator to create new methods and to review and edit existing methods.

Schedule Editor Screen

The Schedule Editor screen lets the operator schedule the extraction conditions for a series of extractions and request variable rinse volumes. Allows the re-extraction of the same cell into separate vials.

Operating Status Screen

This screen provides all of the operating details of a method, including a graphical display of the current status and detailed information on operating parameters.

Ordering Information

In the U.S., call 1-800-346-6390 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 below.

AutoASE (includes software, moduleware, two LAN cards, cable, and connectors) P/N 057082

ASE Solvent Controller Package (includes Solvent Controller, AutoASE software, four 2-L bottles, and cap assemblies)..... P/N 052577

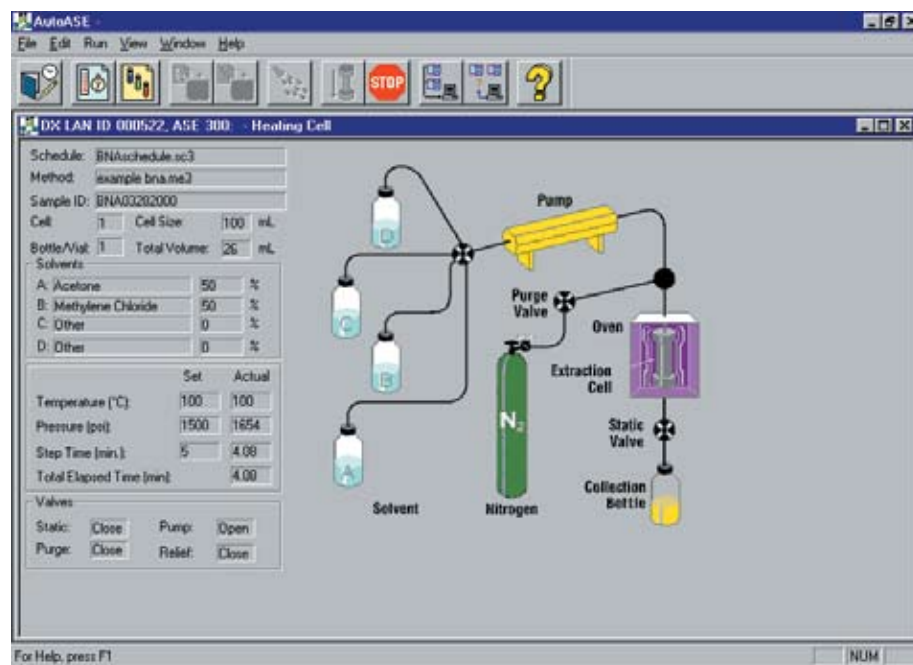
AutoASE SPECIFICATIONS

System Requirements:

Pentium®-based PC with one open PCI slot

Windows® 95, 98, or NT 4.0

CD-ROM drive



The user-friendly main operating screen of AutoASE software displays current operating information, such as cell size, total solvent volume, solvents used, and set vs. actual temperatures and pressures. The graphical display shows the operator what the ASE 300 is doing, with solvent lines that light up and an oven that radiates when in use.

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Pentium is a registered trademark of Intel Corporation.

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

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