

# Thermo Scientific Dionex ASE Prep Sorbents

Thermo Scientific™ Dionex™ ASE™ Prep sorbent cartridges can be used for post extraction cleanup of samples, resulting in cleaner extracts with low background and less frequent detector maintenance.



Analytical techniques in the environmental and food safety industries are often times preceded by cumbersome and labor-intensive sample preparation procedures. The typical sample preparation workflow involves Soxhlet extraction or sonication followed by cleanup using gel permeation chromatography, and evaporation to concentrate the sample. Each step involves a manual transfer of sample and increases the likelihood that laboratory error can affect the analysis. Additionally these sample preparation techniques have demonstrated to account for greater than 60% of all laboratory errors.

These techniques demand long extraction times and large volumes of highly purified and hazardous organic solvents, generating

dirty extracts that involve extensive clean-up steps prior to analysis. As a result there has been an increasing demand for new techniques; accelerated solvent extraction is gaining in popularity for the extraction of a variety of environmental and food matrices. This technique uses conventional liquid solvents at high temperatures and pressures to extract compounds from solid samples quickly, with a small solvent volume. The use of sorbents for post extraction cleanup sample has offered some of the highest level of selectivity for post accelerated solvent extraction technique. The most common adsorbents used for post accelerated solvent extraction sample cleanup are Florisil, and alumina.

### Dionex ASE Prep Florisil Cartridges

A selective synthetic form of magnesium silicate, and is a normal-phase sorbent used to remove polar interferences from extracts prior to GC or GC-MS analysis. This sorbent is specially processed to give consistent results when used for column cleanup and separation of chlorinated pesticide residues prior to quantification by GC. Dionex ASE Prep Florisil cartridges are recommended for cleanup of soil extracts for pesticide analysis. The Dionex ASE Prep Florisil cleanup cartridges can be used for post accelerated solvent extraction cleanup of extracts. The extract cleanup reduces high background levels that result in difficult quantification and frequent detector maintenance. The extracts show lower backgrounds and chromatograms with less interference, after cleanup with Dionex ASE Prep Florisil. The pesticide analytes are retained and concentrated on the cartridge; the analytes can then be eluted with a weak solvent while polar interferences remain on the cartridge.

### Dionex ASE Prep Alumina Cartridges

Dionex ASE Prep Alumina is a highly porous and granular form of aluminum oxide available in three pH ranges (basic, neutral, and acidic) for use in post extraction cleanup.

#### Dionex ASE Prep Alumina Acid

Acidic alumina has a pH of 4–5, with a 50–200 µm particle size for anion exchange and adsorption extraction of polar compounds, such as vitamins.

#### Dionex ASE Prep Alumina Basic

Basic alumina has a pH of 9–10, with a 50–200 µm particle size for adsorption extraction of polar compounds, and cation exchange.

#### Dionex ASE Prep Alumina Neutral

Neutral alumina has a pH of 6–8, with a 50–200 µm particle size that can be used to separate aldehydes, ketones, quinones, esters, lactones, glycoside.



Figure 1. Dionex ASE Prep Florisil Cartridges.

<b>DIONEX ASE PREP SORBENT SPECIFICATIONS</b>	
<b>Florisil Cartridges</b>	
<b>Particle Size</b>	60–100 Mesh
<b>Surface Area</b>	158 m <sup>2</sup> /g
<b>Shelf Life</b>	24 months
<b>Alumina Acid Cartridges</b>	
<b>pH</b>	4–5
<b>Particle Size</b>	50–200 µm
<b>Surface Area</b>	200 m <sup>2</sup> /g
<b>Shelf Life</b>	24 months
<b>Alumina Basic Cartridges</b>	
<b>pH</b>	9–10
<b>Particle Size</b>	50–200 µm
<b>Surface Area</b>	200 m <sup>2</sup> /g
<b>Shelf Life</b>	24 months
<b>Alumina Neutral Cartridges</b>	
<b>pH</b>	6–8
<b>Particle Size</b>	50–200 µm
<b>Surface Area</b>	200 m <sup>2</sup> /g
<b>Shelf Life</b>	24 months

## 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.

Product Description	Part Number
Dionex ASE Prep Florisil Cartridges, 6 mL, 500 mg Resin, 30 Pack	088428
Dionex ASE Prep Alumina Neutral Cartridges, 6 mL, 500 mg Resin, 30 Pack	088430
Dionex ASE Prep Alumina Base, 6 mL, 500 mg Resin, 30 Pack	088434
Dionex ASE Prep Alumina Acid Cartridges, 6 mL, 500 mg Resin, 30 Pack	088433
Dionex ASE Prep MAP, Moisture Absorbing Polymer 200 g	083475
Diatomaceous Earth Dispersant for ASE, 1 kg Bottle	062819
Dionex ASE Prep CR, Na Form, Mineral Acid Neutralizer, 500 g	080024
Dionex ASE Prep CR H+ Form, Mineral Base Neutralizer, 400 g	071397
Thimbles Cellulose, 10 mL Dionex ASE 350 Cell	088345
Thimbles, Glass Fiber, 10 mL Dionex ASE 350 Cell	088346
Thimbles, Cellulose, 22 mL Dionex ASE 350 Cell	088347
Thimbles, Glass Fiber, 22 mL Dionex ASE 350 Cell	088348
Thimbles, Cellulose, 34 mL Dionex ASE 350 Cell	088349
Thimbles, Glass Fiber, 34 mL Dionex ASE 350 Cell	088350
Thimbles, Cellulose, 66 mL Dionex ASE 350 Cell	088351
Thimbles, Glass Fiber, 66 mL Dionex ASE 350 Cell	088352
Thimbles, Cellulose, 100 mL Dionex ASE 350 Cell	088353
Thimbles, Glass Fiber, 100 mL Dionex ASE 350 Cell	088354
Glass Fiber Filters for 1, 5, 10 or 22 mL Cells, Pkg of 100, Dionex ASE 150/350	068092
Cellulose Filters for 1, 5, 10 or 22 mL Cells, Pkg of 100, Dionex ASE 150/350	068093
Filters, Cellulose for 34, 66 or 100 mL Cells, Pkg of 100, Dionex ASE 150/350	056780
Filters, Glass Fiber, for 34, 66, or 100 mL Cell, Pkg Of 100, Dionex ASE 150/350	056781

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