

Dionex ERS 500 Electrolytically Regenerated Suppressor

Quick Start

1. Hydration

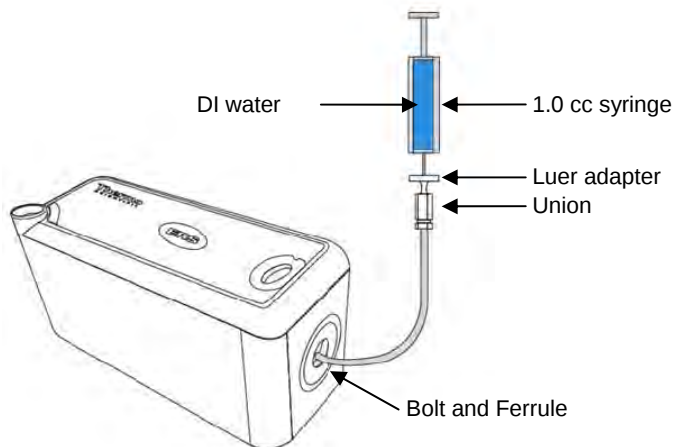
1. Hydrating the suppressor ensures that the ion exchange membranes and resins are in a swollen form for proper operation. A 20 minute static step is recommended during first time installation to ensure complete hydration.
2. Using a disposable plastic syringe and the 10-32 Luer adapter (P/N 046888), push approximately 3 mL (ERS 4 mm) or 0.75 mL (ERS 2 mm) of degassed DI water through the ELUENT OUT port. Using a disposable syringe and the 1/4-28 Luer adapter (P/N 024305), push 5 mL (ERS 4 mm) or 2 mL (ERS 2 mm) of degassed DI water through the REGEN IN port.



NOTE

Step 1 can be accomplished by installing the suppressor in the system in the recycle mode, bypassing the guard and analytical columns, and pumping 5 mL (Dionex ERS 500 4 mm) or 2 mL (Dionex ERS 500 2 mm) of deionized water through the suppressor. Care should be taken with this procedure not to exceed 100 psi of backpressure on the Dionex ERS 500 suppressor.

Figure 1 Hydrating the Suppressor



P/N	Description
016388	1 cc plastic syringe
024305	1/4-28 Luer adapter
046888	10-32 Luer adapter
042627	10-32 Union
043275	10-32 Bolt
043276	10-32 Double Cone Ferrule

3. Allow the suppressor to sit for approximately 20 minutes to fully hydrate the suppressor screens and membranes.



WARNING

Do not install a luer adapter directly into a Dionex ERS 500 port. Connect a luer adapter to a union and use two 10-32 bolt and ferrules with a few centimeters of tubing to connect to the Dionex ERS 500 ports.

2. Back Pressure Coil Pressure Test

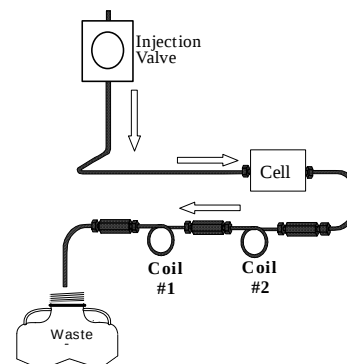
- A. Disconnect the eluent line from the injection valve to the column at the column inlet.
- B. Connect the eluent line from the injection valve directly to the detector cell inlet with the recommended number of back pressure coils attached for your application (see the table below). Turn the pump on at your application flow rate. After 2 to 3 minutes of equilibration record pressure P_1 .
- C. Disconnect the back pressure coils and with the pump on measure the system pressure P_2 .

4 mm Chromatography

1.0 mL/min. = 2 black backpressure coils
(P/N 045877)
2.0 mL/min. = 1 black backpressure coil
(P/N 045877)

2 mm Chromatography

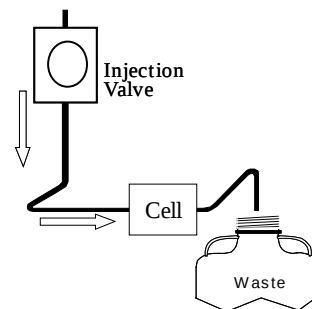
0.25 mL/min. = 2 red backpressure coils
(P/N 045878)
0.50 mL/min. = 1 red backpressure coil
(P/N 045878)



- D. The correct operating pressure range for the backpressure coil being tested is
Dionex ERS 500 $P_1 - P_2 = 30-40$ psi

If the pressure is greater than 40 psi, then trim the back pressure coil and repeat step 2 and 3 to achieve 30-40 psi in step 4.

If it is less than 30 psi, then add more tubing to achieve 30 - 40 psi.

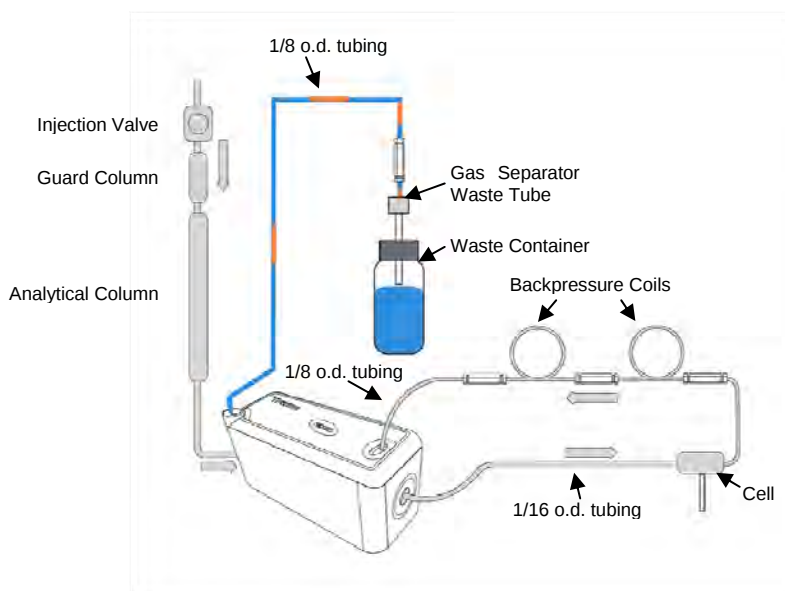


3. Quick Back Pressure Check

Refer to section 3.2.3. in ERS 500 Product Manual P/N 031956

4. Plumbing for the AutoSuppression Recycle Mode Operation

Figure 2 The Auto Suppression Recycle Mode Plumbing Diagram



The AutoSuppression Recycle Mode is the easiest and most common method of operation. As the eluent passes through the suppressor, it is neutralized to produce its weakly ionized form. After passing through the conductivity cell, this effluent can be redirected to the regenerant inlet on the suppressor, thus supplying it with a source of water containing a small amount of diluted analyte. The main advantage of this mode is its simplicity and ease of use. It is not necessary to have an external supply of water available for the suppressor.



CAUTION

Only use the AutoSuppression Recycle Mode for eluents and samples without organic solvents or metallic contaminants such as iron in ground water.



NOTE

Select the equivalent SRS Mode on the power supply to support the Dionex ERS 500 suppressor if ERS modes are not available. The Dionex ERS 500 is fully compatible with SRS settings.