

Dionex ERS 500e Manual Addendum

The Thermo Scientific™ Dionex™ ERS 500e Special Part is a variant of the Dionex ERS 500 suppressor optimized for external water mode applications. This suppressor is recommended for all applications where external water mode is employed, but in particular this suppressor is required when borate eluents or eluents containing organic solvents are used.

The Dionex ERS 500e differs from the standard Dionex ERS 500 in the use of parallel regenerant flow. Because of this change some differences in operation should be noted. The operating conditions and instructions from the Dionex ERS 500 Product Manual and Quick Start Guide should be followed, with the following variations taken into consideration.

Due to the parallel regeneration configuration, the back-pressure of the Dionex ERS 500e regenerant chambers is significantly lower than the Dionex ERS 500 suppressor. When switching from a Dionex ERS 500 to a Dionex ERS 500e suppressor, the regenerant pressure will need to be adjusted to achieve the recommended eluent flow rate if pneumatic delivery is being used; this adjustment should be performed while the power is on.

The Dionex ERS 500e is compatible with the Chemical Suppression Mode; however overall capacity is reduced compared to the Dionex CRS 500 Chemically Regenerated Suppressor. Therefore the Dionex CRS 500 is recommended for this mode. Please follow the instructions in the Dionex CRS 500 Product Manual for Chemical Suppression Mode operating conditions.

The Dionex ERS 500e is compatible with the Recycled Eluent, MPIC and Neutralization Modes of operation, however for best performance the Dionex ERS 500 is recommended for Recycled Eluent and Neutralization Modes.

When selecting the suppressor type on the instrument front panel or in the Thermo Scientific Chromeleon CDS Software, the closest matching SRS or ERS type should be selected. The SRS and ERS modes are identical in operational parameters.

The external water flow requirements of the Dionex ERS 500e are shown below. If using a non-flow-regulated pump (such as pressurized reservoir) measurement of the external water flow rate should be made when the power is on. If using a flow-regulated pump set the flow rate to the minimum recommended regenerant flow. Operation above the recommended flow rate will not improve performance or extend suppressor life-time, but will not damage the suppressor as long as the maximum flow is not exceeded.

Suppressor	Recommended Regenerant Flow for External Water Mode	Maximum Regenerant Flow
Dionex AERS 500e (4 mm)	3 – 5 mL/min; at least 2x the eluent flow rate	5 mL/min
Dionex AERS 500e (2 mm)	1 – 2 mL/min; at least 2x the eluent flow rate	2 mL/min
Dionex CERS 500e (4 mm)	3 – 5 mL/min; at least 2x the eluent flow rate	5 mL/min
Dionex CERS 500e (2 mm)	1 – 2 mL/min; at least 2x the eluent flow rate	2 mL/min