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Thermo Scientific Dionex DRS 600
Dynamically Regenerated Suppressor

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High quality, robust suppression

When performing ion chromatography analyses, counter-ions in the eluent and sample can cause increased background, leading to poor chromatography.

Ion chromatography (IC) suppressors exchange counter-ions with hydronium or hydroxide, reducing both background signal and noise. At the same time, analyte signal is enhanced, improving the signal-to-noise ratio and increasing sensitivity.

The new **Thermo Scientific™ Dionex™ DRS™ 600 Dynamically Regenerated Suppressor** makes analysis easier for system operators by:

Minimizing training and operation time

- Eliminates error-prone manual calculation of electrical currents

Improving gradient performance

- Improves signal-to-noise ratio with gradient eluents by dynamically adapting to the changing eluent composition

Compatibility across a wide variety of applications

The Dionex ADRS 600 Anion Dynamically Regenerated Suppressor allows external water mode operation and enables analyses requiring IC coupled with mass spectrometry (MS).



Minimized training and operation time

On/Off Control

The On/Off Control draws the optimum amount of current from the power supply as the eluent concentration changes, without operator input.

This feature accommodates:

- changes in eluent concentration, making it ideal for gradient eluent profiles
- sudden changes in ion load, maintaining suppression efficiency even with strong ionic strength matrices

The Dionex DRS 600 Anion Dynamically Regenerated Suppressor is available in two formats:

- Thermo Scientific™ Dionex™ ADRS™ 600 Anion Dynamically Regenerated Suppressor – use with traditional eluents, and more concentrated eluents up to 200 mM NaOH
- Thermo Scientific™ Dionex™ CDRS™ 600 Cation Dynamically Regenerated Suppressor – for use with traditional eluents and more concentrated eluents up to 100 mM MSA.

Dionex DRS 600 suppressors offer backward compatibility with, and are direct replacements for, the Thermo Scientific™ Dionex™ ERS 500 Electrolytically Regenerated Suppressors.

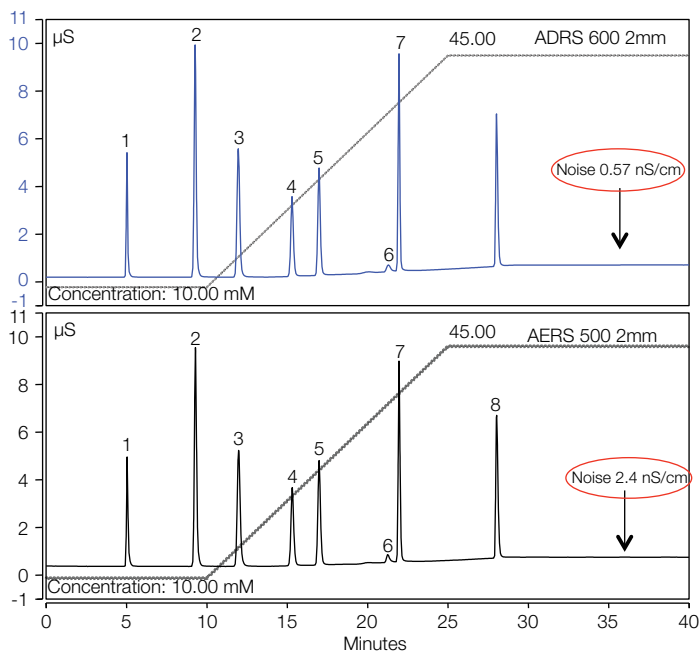
Improving Gradient Performance

Gradient Adaption

The Dionex DRS 600 Dynamically Regenerated Suppressor is designed to operate in constant voltage mode rather than the traditional constant current mode. By operating in constant voltage mode, the Dionex DRS 600 Suppressor:

- Self-governs electrical current as long as a constant voltage is applied
- Accommodates changes in eluent concentration, which improves the signal-to-noise ratio. When performing gradient analysis, this feature reduces the noise at lower eluent concentrations, which improves the signal-to-noise ratio. When performing gradient analysis, this feature reduces the noise at lower eluent concentrations, making it ideal for gradient eluent profiles
- Maintains suppression efficiency with strong ionic matrices by accommodating sudden changes in ion load

Suppressor	Dionex AERS theoretical plates	Dionex ADRS theoretical plates
Fluoride	18923	19115
Chloride	23211	23768
Nitrite	23010	23224
Bromide	23019	23138
Nitrate	23856	24033
Sulfate	22014	21975



Column: Thermo Scientific™ Dionex™ IonPac™ AS19-4μm 2mm
 Eluent (EG gradient): 10 mM from 0–10 min; 10 mM to 45 mM from 10–25min; 45 mM from 25 min to 40 min
 Flow Rate: 0.25 mL/min
 Inj. Volume: 2.5 μL
 Detection: Suppressed conductivity
 ADRS 600 4.5 V
 AERS 500 28 mA
 Oven Temp: 30 °C

Peaks:

1. Fluoride
2. Chloride
3. Nitrite
4. Bromide
5. Nitrate
6. Carbonate
7. Sulfate
8. Phosphate

Comparison of the Dionex ADRS 600 suppressor to the Dionex AERS 500 suppressor under gradient conditions. The Dionex ADRS 600 suppressor outperforms the Dionex AERS 500 suppressor, as shown by the noise values



Compatibility with a Wide Variety of Applications

External Water Mode

The Dionex DRS 600 Suppressor is compatible with external water mode, featuring:

- Minimal interference with destructive detectors such as IC-MS
- Ability to use borated eluents
- Compatibility with solvents

Enabled for Ion Chromatography-Mass Spectrometry (IC-MS)

The Dionex DRS 600 (2 mm) Dynamically Regenerated Suppressor is optimized and designed to offer minimal interference for IC-MS applications. The suppressor provides improved efficiencies, and compatibility with the lower operational flow rates typically used with MS detection, to achieve better sensitivity and/or peak confirmation.

We support and recognize you and your mission to ensure that the world is healthier, cleaner and safer in everything we do.

This is why, since 1975, we have dedicated ourselves to the development and innovation of ion chromatography (IC) technologies including instruments, separation chemistries, suppressors, and software. We understand that when you purchase an IC instrument, you are purchasing a relationship as well. We strive to support your laboratory by sharing what we've learned as an industry leader, acting as trusted advisors, and providing the level of service and support you need to keep your laboratory in flow.

Ordering information

Description	Format		Part Number
	Ion	Size	
Thermo Scientific Dionex DRS 600 Dynamically Regenerated Suppressor	Anion	4 mm	088666
		2 mm	088667
	Cation	4 mm	088668
		2 mm	088670
Thermo Scientific Dinex ERS 500e Electrolytically Regenerated Suppressor for External Water Mode	Anion	4 mm	302661
		2 mm	302662
	Cation	4 mm	302663
		2 mm	302664

www.thermofisher.com/suppressor

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