

Press Release

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New Ion Chromatograph HIC-ESP Best things come in small packages

**Built-in suppressor achieves high sensitivity and highly-reliable performance /
Patent-pending design covers a wide range of applications /
Small footprint: half the usual size of bench space needed**

Shimadzu, one of the world leaders in analytical instrumentation, has introduced the new HIC-ESP (Ion Chromatograph) featuring a built-in electrochemical suppressor. This outstanding anion suppressor minimizes band spreading and achieves high sensitivity and reliable performance for the quantitative determination of anions. The suppressor is rugged, providing stable functionality over long periods of operation. Furthermore, the system's small footprint requires less bench space in usually densely-packed laboratories: Best things come in small packages. The HIC-ESP covers a wide range of applications in environmental testing, pharma, chemistry and food science.

The HIC-ESP modular inert flow path system integrates a system controller, degasser, pump, CDD detector with temperature controlled flow cell, autosampler, slim-line oven and the anion suppressor. This new ion chromatography system combines a number of valuable features providing highly-reliable analytical results: Excellent solvent delivery performance, low carryover, fast injection speed (as low as 10 sec), high sample injection precision and repeatability, precise oven temperature regulation and more.

High efficiency and stability

The new ICDS-40A anion suppressor is located between the IC column and the detector. The unit features a low-volume design combined with a unique multi-layered structure. With a folded membrane, it provides highly efficient electrochemical background suppression and increased stability. The patent-pending design reduces peak

spreading, increasing sensitivity for components with low retention such as fluoride, and improves separation from the water dip.

The ICDS-40A allows for analysis as well as self-regeneration simultaneously, shortening analysis cycle time and maximizing workflow efficiency. Because the anion suppressor uses effluent from the detector as regenerant, it eliminates the need for cumbersome offline regeneration with environmentally unfriendly solutions such as sulfuric acid.

Seamless integration with software platform

In addition, the user-friendly ion chromatography system integrates seamlessly with Shimadzu's LabSolutions platform. This allows users to easily manage parameter setting for IC analysis, batch analyses, auto-shutdown, data processing and report creation. Data integrity is assured with the addition of LabSolutions DB and LabSolutions CS.

Special features and benefits of the new HIC-ESP ion chromatograph are:

- **Highly effective ion-exchange performance**

The ICDS-40A is a highly efficient, electrodialytic membrane suppressor for ion chromatography. It offers stable reduction of electrical conductivity of the eluent at the time of detection, enabling high sensitivity analysis of inorganic anions.

- **Minimized peak dispersion**

The ICDS-40A anion suppressor has a smaller inner volume compared to conventional systems, resulting in less peak dispersion. It offers improved peak shape and good separation of early eluting compounds from the water dip and enables accurate measurement of e.g. fluoride that elutes early in a chromatogram.

- **Small footprint**

The HIC-ESP ion chromatography system combines with the Nexera slim oven CTO-40S for a compact design. With a width of only 420 mm, it needs just half the bench space required by other comparable systems.

Web summary

Shimadzu has introduced the new HIC-ESP ion chromatograph featuring a built-in electrochemical suppressor. This outstanding anion suppressor minimizes band spreading and achieves high sensitivity and reliable performance for the quantitative determination of anions. The suppressor is rugged, providing stable functionality over long periods of operation. The HIC-ESP covers a wide range of applications in environmental testing, pharma, chemistry and food sciences. The system's compact design requires only half the bench space of comparable systems in the market. The user-friendly ion chromatograph integrates seamlessly with Shimadzu's LabSolutions software platform.



Figure 1: The new Ion Chromatograph HIC-ESP with its built-in suppressor provides high sensitivity analysis of anions for a wide range of applications.

Weblink: www.shimadzu.eu/liquid-chromatography/nexera/hicesp



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