

Intelligent ion chromatography in compact form – the new generation of Compact IC instruments



The 881 Compact IC pro and 882 Compact IC plus – the new generation in the Compact IC family of instruments.

One year after the successful introduction of the 850 Professional IC, the first intelligent ion chromatograph worldwide, Metrohm is now presenting a new generation of compact IC instruments. The new intelligent ion chromatographs of the Compact IC family, the 881 Compact IC pro and 882 Compact IC plus, are equipped with the same excellent components as the 850 Professional IC.

Compact IC stands for demanding routine analysis

In 1999 Metrohm brought the first Compact IC instrument, the 761 Compact IC, onto the market and revolutionized ion chromatography with it. Thanks to its space-saving design, easy operation and convincing performance, this instrument opened up many new fields of application. The 761 Compact IC was further developed so that in 2005 the second generation of Compact IC instruments could be introduced with the 861 Advanced Compact IC. Together with the Metrohm Suppressor Module II (MSM II) and the 853 Metrohm CO₂ Suppressor (MCS), the 861 Advanced Compact IC set new standards with respect to analytical sensitivity and accuracy. With the introduction of the third generation of Compact IC instruments – the new 881 Compact IC pro and 882 Compact IC plus – Metrohm is once again offering more user-friendly ion chromatographs with a higher performance. The Compact IC instruments are intended for users in all branches who need to determine anions, cations or polar substances in the $\mu\text{g/L}$ to g/L range.

Compact IC stands for an outstanding price/performance ratio

Just like the 850 Professional IC, the 881 and 882 Compact IC instruments are equipped with intelligent system components. The iPump, iDetector and the intelligent iColumns guarantee the highest precision and optimal ease of operating. All FDA and GLP requirements are complied with. The detection limits of the new 881 Compact IC pro and 882 Compact IC plus are in the region of $1 \mu\text{g/L}$. This opens up new fields of application, particularly in cation analysis.

Despite the compactness of the new 881 and 882 ion chromatographs, all the relevant parts are easily accessible and well laid out. These compact instruments contain system modules that were newly developed for the 850 Professional IC.

The 881 Compact IC pro is equipped with a column oven that can heat the eluents and column to maximum 70 °C. This offers the possibility of also optimizing a chromatographic separation by adjusting the column temperature. As an eluent degasser is also built into the 881 Compact IC pro, the start-up of the ion chromatograph only requires a minimum of preparation steps.

Although the 882 Compact IC plus does not have a column oven, it does have a thermally insulated column chamber that shields its contents safely and reliably against external influences.



The 881 Compact IC pro is well laid out and has a pleasant design.

Compact IC stands for applications in all fields

For a long time now, ion chromatography has been the analytical method of choice in water and environmental analysis. Compact IC instruments from Metrohm are used, for example, for the analysis of drinking and surface water as well as wastewater. But ion analysis is also playing an ever more important role in other branches. The high reliability of the Compact IC instruments allows them to be used in the pharmaceutical industry. Thanks to their versatility, they are also highly valued in the chemical industry. The excellent price/performance ratio of the Compact IC instruments meets the requirements of the food industry. The low detection limits allow them to be used in the energy sector, where their range of applications has been considerably extended in recent times. In addition to classical power plant and petrochemistry applications, Metrohm's compact ion chromatographs are also being increasingly used for the analysis of alternative fuels such as bioethanol or biodiesel. To put it short: the Compact IC instruments are providing reliable, precise and exact analytical results in a large variety of branches.

MagIC Net™

The MagIC Net™ chromatography software controls the new ion chromatographs of the Compact IC family and records all the data obtained. The new MagIC Net™ 1.1 release is offered in three different versions:

- **MagIC Net™ 1.1 Professional** supports the whole spectrum of intelligent ion chromatographs and sample changers. This means that it can also control all peripheral instruments for inline sample preparation and liquid handling as well as remotely control already existing Metrohm instruments or instruments from other manufacturers.
- **MagIC Net™ 1.1 Compact** includes all the functionality of MagIC Net™ 1.1 Professional. However, only Compact IC instruments and one sample changer for automation can be connected.

- **MagIC Net™ 1.1 Multi** makes MagIC Net™ 1.1 Professional fully available as a client-server installation.

All three versions are characterized by their well laid out presentation, clear symbols and intuitive operation. The control and monitoring functions of the MagIC Net™ software are unique: all system parameters, service intervals or expiry dates as well as all measuring results of samples and standards can be checked. If a value lies outside a predefined range then previously defined actions, e.g. sending a message by e-mail / mobile phone or switching off the system, can be triggered. Thanks to the modern data management of MagIC Net™, you always stay informed, as all the necessary data is available immediately.

Automation and inline sample preparation

Of course, the new Compact IC instruments can also be extended to a fully automated system – this saves both time and money. For example, the versatile 858 Professional Sample Processor can be used as a sample changer. This also makes available Metrohm's proven Inline Sample Preparation Technique (MISP) with inline ultrafiltration, inline dilution or inline dialysis. In this way, tedious manual steps during sample preparation can be minimized.

The new 863 Compact IC Autosampler can also be easily combined with the new Compact IC instruments. It is the ideal helper in routine analysis. The 863 Compact IC Autosampler has a turntable that can accommodate up to 36 sample vessels with capacities from 0.5 to 11 mL. The complete flow path is metal-free, which means that it is suitable for both trace analysis and the analysis of aggressive main components. The operation of the compact sample changer is very easy and takes place via the built-in keyboard or via MagIC Net™. Remote control by existing Metrohm ion chromatographs or instruments from other manufacturers is possible via Remote signals. This means that the 863 Compact IC Autosampler can be used very individually for the small tasks in day-to-day lab work.



Save both time and money by automating your analyses with the 882 Compact IC plus and 863 Compact IC Autosampler!