



881 Compact IC pro / 882 Compact IC plus
for ion chromatography.
Intelligent. Reliable. Precise.

881 Compact IC pro and 882 Compact IC plus. Intelligent. Reliable. Precise.

Metrohm's top ion chromatograph is the 850 Professional IC, whose intelligent system components are defining standards regarding the precision of results and ease of operation. This technology is now also made available in the new generation of compact IC instruments. The 881 Compact IC pro and the 882 Compact IC plus are ideal for users in all fields with clearly defined analytical requirements. These instruments ensure the rapid and safe determination of anions, cations and polar substances in the parts per billion (ppb) to the percent (%) range.

All intelligent functions of the Professional IC instrument series have been integrated into the new compact instruments 881 and 882: iPump, iDetector, iColumn technology. These features guarantee precise results and help prevent operator errors. The MagIC Net™ chromatography software controls all system components and monitors all parameters that are relevant to the chromatographic analysis.

> The new generation of
Metrohm compact IC instruments.



> The highlights

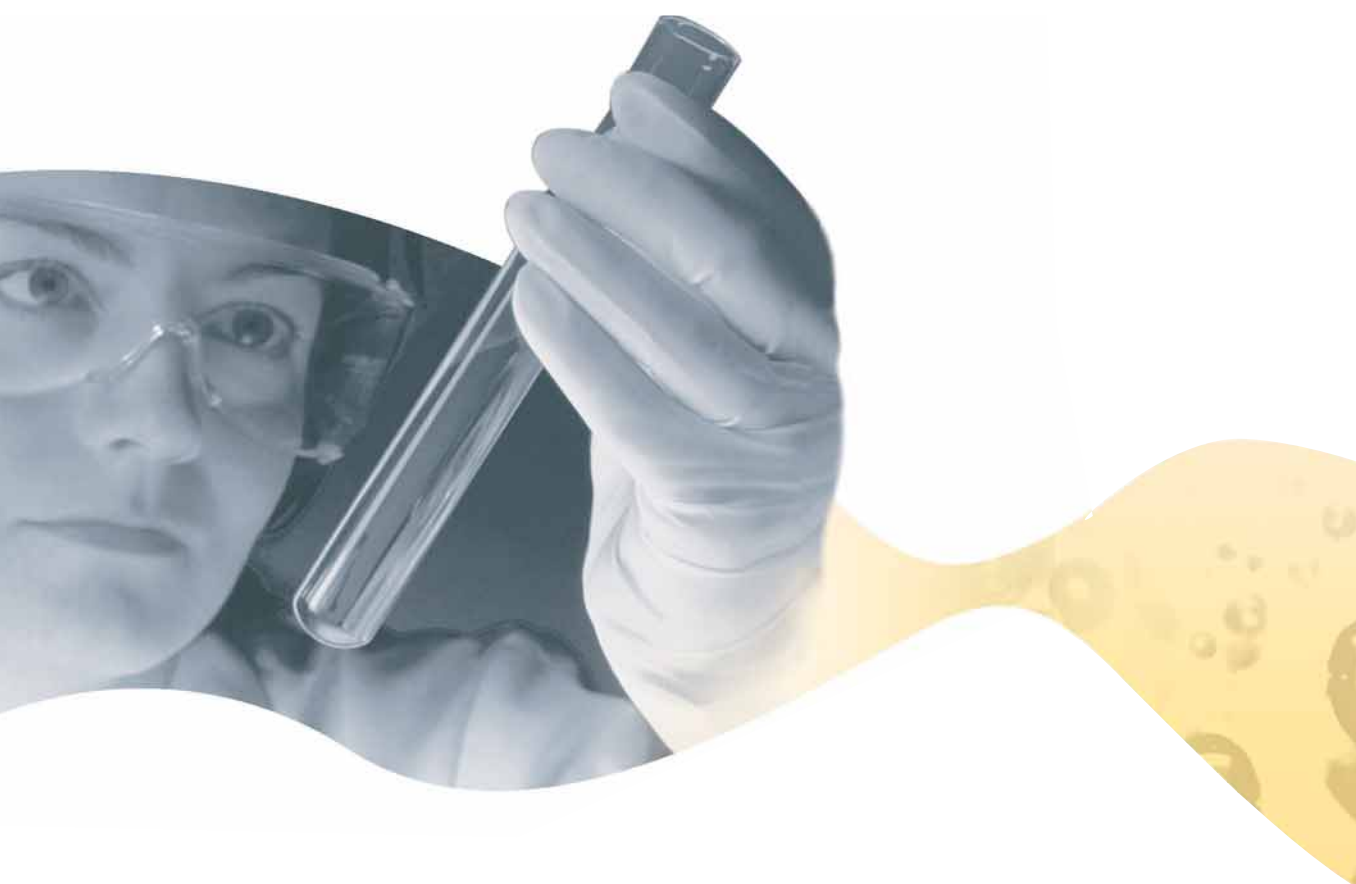
- Intelligent ion chromatography
- For routine analyses that satisfy the highest demands in the range ppb – ppm – %
- Limits of detection <1 ppb
- Space-saving footprint, compact design
- Excellent price-performance ratio
- Complies with all GLP and FDA requirements
- Intelligent system components: iPump, iDetector, iColumn
- System control by MagIC Net™
- Comprehensive monitoring and control functions
- Wide range of automation options
- Unique Metrohm Inline Sample Preparation – MISIP
- Reliable, accurate and precise ion analysis



Compact **IC**

> Applications

Metrohm's Compact IC instruments have revolutionized IC applications. They now dominate in routine water and environmental analysis involving drinking, surface and ground water as well as effluents. While developing the new 881 Compact IC pro and 882 Compact IC plus, we considered a much larger application area. With their outstanding reliability the Compact ICs are being used more and more in the pharmaceutical industry. Moreover, their flexibility makes them highly useful for the chemical industry and for food analysis. Small to medium analytical laboratories profit from the excellent price-performance ratio. The low limits of detection achieved by the new Compact ICs allow for their use in the energy sector, where we have recently seen a significant widening in the scope of application. In addition to the classical analyses in the petrochemical and power plant area, the Compact ICs are increasingly utilized in the analysis of alternative fuels such as bioethanol and biodiesel.



➤ Automation and inline sample preparation



The 881 and 882 Compact ICs can be fully automated, saving time and money. The 858 Professional Sample Processor or the 863 Compact IC Autosampler (shown here) can be used as sample changers.



MISP – Metrohm Inline Sample Preparation – coupled with the Compact ICs provide a unique inline sample preparation capability that is key to increasing productivity. Time-consuming manual steps can be fully automated with MISP ultrafiltration, dilution or dialysis.



Do you wish to perform anion and cation determinations down to the lower ppb range, in parallel and independently of each other? By combining two compact instruments and one sample changer you get an automated analysis system that processes large numbers of widely varying samples – round the clock!

➤ The details



1 Housing

The predominant feature of the new 881 and 882 ion chromatographs is their compact design. All components are clearly arranged and easy to access. The complete flow path is metal-free and preinstalled. The transparent door allows for visual monitoring during the analysis.

2 Eluent Flow

The iPump is a central element of the new instruments. Its extremely low pulsation translates into low noise and maximum sensitivity of the analysis system. All instruments are equipped with purge valve, inline filter and pulsation dampener. Thanks to the integrated eluent degasser, the 881 Compact IC pro has very short start-up times.

3 Separation

iColumn, the analytical separation column, is the heart of every application. iColumn technology allows monitoring of this critical component. The system knows the optimal chromatographic conditions and prevents damages that can result from operator error. Complete traceability is guaranteed.

4 Temperature

The application can be optimized by varying the temperature of the separation column. The 881 Compact IC pro is equipped with a column heater that can heat the eluent and column up to 70 °C. The thermally insulated column compartment of the 882 Compact IC plus provides protection from external temperature fluctuations.

5 Suppression

Chemical or sequential suppression – thanks to the low background noise level, both facilitate very sensitive analyses. At <0.2 nS/cm, both have the lowest noise level of all commercially available suppressors. This guarantees limits of detection in the 1 ppb range. The Metrohm suppressors are extremely robust, solvent- and pressure-resistant. The chemical suppressor (MSM II) is so rugged that it is backed by a 10-year warranty.

6 Detection

The 881 and 882 Compact IC's detection is based on conductivity measurement. The intelligent detector – iDetector – is an integral part of the analysis system. With Digital Signal Processing (DSP), the conductivity is digitally transmitted to the MagIC Net™ software free of interferences. The large measuring range of the iDetector of 0...15 000 μ S/cm ensures correct and precise results from the trace to the percent range within one analysis.

➤ MagIC Net™



The MagIC Net™ chromatography software controls the new compact instruments and processes the measuring data. All three software versions – Multi, Professional and Compact – excel by their clear graphical user interface, well-organized layout and intuitive operation. But that's not all: MagIC Net™ also manages system control plus data management and offers many possibilities for making the analyses both easy and reliable.

The screenshot displays the MagIC Net software interface with several key components:

- Method List:** A table listing various methods with columns for 'Method name', 'Sample type', and 'Method name'. The list includes entries like '1. 2008-02-27 19:40:28 (UTC+1) 57 Sample' and '11. 2008-02-27 19:40:28 (UTC+1) 63 Standard'.
- Chromatogram:** A graph showing detector response over time with several distinct peaks. The x-axis represents time in minutes, ranging from approximately 1.0 to 10.0.
- System Configuration:** A detailed view of the hardware setup, including:
 - High Pressure Pump:** Model 895, Serial number 3778.
 - Detector:** Conductivity detector 3.
 - Conductivity detector:** Model 9240, Serial number 2128.
 - Temperature:** 40°C.
 - Reinjection Pump:** Model 9240, Serial number 2128.
- Multi-program Table:** A table defining different analysis programs:

Time	Device	Module	Command	Parameter	Comment
0.0	895 Professional Sample Processor	Start	Start		Sample position
0.0	895 Compact IC-Box	Injector	INJ		Inject
0.0	895 Compact IC-Box	INJ	INJ		Inject
0.0	895 Professional Sample Processor	Peristaltic	PER		ON, Release
0.0	895 Professional Sample Processor	Peristaltic	PER		OFF
0.0	895 Compact IC-Box	INJECTOR	INJECT		Inject
0.0	895		Start		Start data acquisition
- Component Table:** A table listing chemical components:

Component	Name	Time [min]	Retention [%]	Reference
1	Fluoride	3.402	5.0	none
2	Chloride	4.626	6.0	none
3	Nitrate	5.851	8.0	none
4	Bromide	6.470	9.0	none
5	Sulfate	7.294	9.0	none
6	Phosphate	8.545	9.0	none
7	Sulfate	10.826	9.0	none

> Technical information

	881 Compact IC pro			882 Compact IC plus		
	2.881.0010	2.881.0020	2.881.0030	2.882.0010	2.882.0020	2.882.0030
Intelligent ion chromatography	•	•	•	•	•	•
Complies with FDA and GLP requirements	•	•	•	•	•	•
MagIC Net™	•	•	•	•	•	•
iPump with 0.001... 20 mL/min flow rate	•	•	•	•	•	•
iDetector with 0...15 000 µS/cm measuring range	•	•	•	•	•	•
iColumn technology	1 separation column			1 separation column		
Peristaltic pump		•	•		•	•
MSM II (Metrohm Suppressor Module)		•	•		•	•
MCS (Metrohm CO ₂ Suppressor)			•			•
Column heater	•	•	•			
Thermally insulated column compartment	•	•	•	•	•	•
Eluent Degasser	•	•	•			
Sample Degasser			•			
Pulsation dampener	•	•	•	•	•	•
Leak detector	•	•	•	•	•	•
PC connection	USB			USB		
USB ports	2x			2x		
Can be automated	•	•	•	•	•	•
Connection of intelligent Dosing Units and stirrer	Via 2 MSB ports			Via 2 MSB ports		
«Remote» signal transmission	Via Remote Box			Via Remote Box		
Housing dimensions	W/H/D 302/562/368 mm			W/H/D 302/562/368 mm		

➤ Ordering information

- 2.881.0010** 881 Compact IC pro – Cation: intelligent ion chromatograph for determining cations or anions without chemical suppression
- 2.881.0020** 881 Compact IC pro – Anion: intelligent ion chromatograph for determining anions with chemical suppression
- 2.881.0030** 881 Compact IC pro – Anion – MCS: intelligent ion chromatograph for determining anions with sequential suppression
- 2.882.0010** 882 Compact IC plus – Cation: intelligent ion chromatograph for determining cations or anions without chemical suppression
- 2.882.0020** 882 Compact IC plus – Anion: intelligent ion chromatograph for determining anions with chemical suppression
- 2.882.0030** 882 Compact IC plus – Anion – MCS: intelligent ion chromatograph for determining anions with sequential suppression



Automation and inline sample preparation

- 2.800.0010** Dosino
- 2.801.0010** Magnetic Stirrer
- 2.858.0010** 858 Professional Sample Processor
- 2.858.0020** 858 Professional Sample Processor – Pump
- 2.858.0030** 858 Professional Sample Processor – Pump – Injector
- 2.863.0010** 863 Compact IC Autosampler



Software

- 6.6059.111 MagIC Net™ 1.1 Compact
- 6.6059.112 MagIC Net™ 1.1 Professional
- 6.6059.113 MagIC Net™ 1.1 Multi
- 6.6059.116 MagIC Net™ 1.1 upgrade Compact to Professional
- 6.6059.117 MagIC Net™ 1.1 upgrade Compact to Multi
- 6.6059.118 MagIC Net™ 1.1 upgrade Professional to Multi
- 6.6059.901 MagIC Net™ update 1.1

Accessories

- 6.2041.440 Standard sample rack for 858 Professional Sample Processor (148 x 11 mL + 3 x 300 mL)
- 6.2041.760 Sample rack for 858 Professional Sample Processor (54 x 11 mL + 1 x 300 mL)
- 6.2743.050 PP sample vessels (11 mL); 2000 pieces
- 6.2743.040 PP sample vessels (2.5 mL); 2000 pieces
- 6.2743.070 PP stopper with perforation for sealing the sample vessels; 2000 pieces
- 6.3032.210 Dosing Unit 10 mL
- 6.5330.000 IC equipment for dialysis
- 6.5330.010 IC equipment for ultrafiltration
- 6.5330.020 IC equipment for sample dilution
- 6.2148.010 Remote Box for remote control





s w i s s m a d e 

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Ion analysis

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