

941 Eluent Production Module



Inline Eluent Preparation for ion chromatography

Inline eluent production simplifies ion chromatography

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With the 941 Eluent Production Module, Metrohm integrates Inline Eluent preparation in the ion chromatographs of the 940 Professional IC Vario and 930 Compact IC Flex series, as well as in any other intelligent ion chromatographs from Metrohm.

User benefits:

• More reliability

The dilution of the eluent concentrates with ultrapure water to the desired concentration takes place automatically. Manual steps – always a potential source of error – are no longer required.

• More flexibility

The 941 Eluent Production Module is supplied ex works for the production of one eluent. However, it can be upgraded without difficulty with optional accessories to enable the production of up to four eluents, no matter whether it be for the analysis of anions or cations, including the monitoring of auxiliary solutions and waste canisters.

• Free selection of the eluent

Each application has its own ideal eluent, be it a combination of different salts or the addition of organic solvents. Thanks to Inline Dilution and the patented Dosino technology, the 941 Eluent Production Module can be used to produce whichever eluent is required from the respective concentrate.

• Continuous availability and stable conditions

If a dilution factor of 20 is selected, then two liters of concentrated eluent are sufficient for operating the IC system for an entire month without interruption.

• Low maintenance costs

The production of eluents from concentrates is highly affordable, as all that is required is the dilution of the respective concentrate with ultrapure water.



Benefits of Inline Eluent Preparation

- Automated Inline Eluent Preparation ensures stable retention times, contamination-free working and reliable measurement results
- Free selection of the eluent with respect to component and concentration
- Simple installation and integration of new and existing applications
- Continuous, maintenance-free operation up to one month
- Eluent concentrates can be produced inexpensively on your own or purchased conveniently from dealers
- Direct connection of an ultrapure water system for high-purity eluents possible
- Up to four eluents, parallel with one module

Modular system integration: 940 Professional IC Vario ONE/SeS/PP with IC Conductivity Detector, 942 Extension Module Vario LQH, and 941 Eluent Production Module





941 Eluent Production Module, 940 Professional IC Vario, and ELGA PURELAB flex 5 ultrapure water system

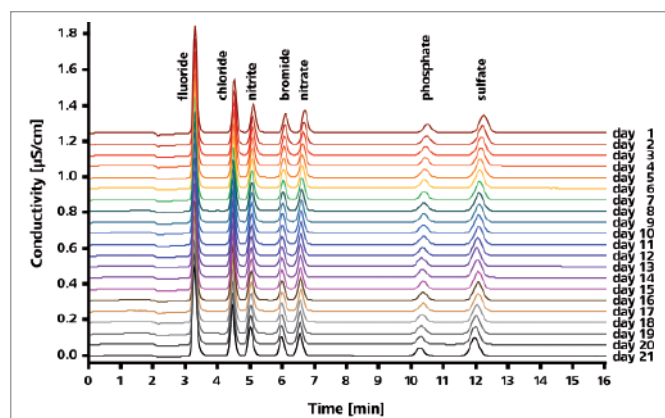
Stable measurements – guaranteed

The Metrohm ion chromatographs of the latest generation leave the choice to you: You can produce the eluent concentrates required by weighing in and diluting the desired salts yourself. Alternatively, the eluent concentrates can be obtained directly from our partner SIGMA-ALDRICH.

Inline Eluent Preparation – convenient, time-saving, safe, and traceable ion chromatography

The more convenient option is automated Inline Eluent Preparation. In this case, the eluent concentrates are diluted inline. The ultrapure water required for this purpose can be provided in a 10-liter canister. Even more convenience and reliability is possible by integrating an optionally available PURELAB flex 5/6 ultrapure water system from ELGA LabWater. In this case the ultrapure water needed for eluent preparation too is provided inline to the system: at any time, unlimited, fresh and free of contamination. The ultrapure water system can be fed with conventional tap water.

If required, the PURELAB flex system also provides ultrapure water through a dispensing unit without interruption of the automated supply to the 941 Eluent Production Module.



Continuous injections of a 250 µg/L multi-anion standard solution over a time period of 21 days reveal an unprecedented retention time stability

ELGA PURELAB flex 5/6: compact ultrapure water system for any feeder water

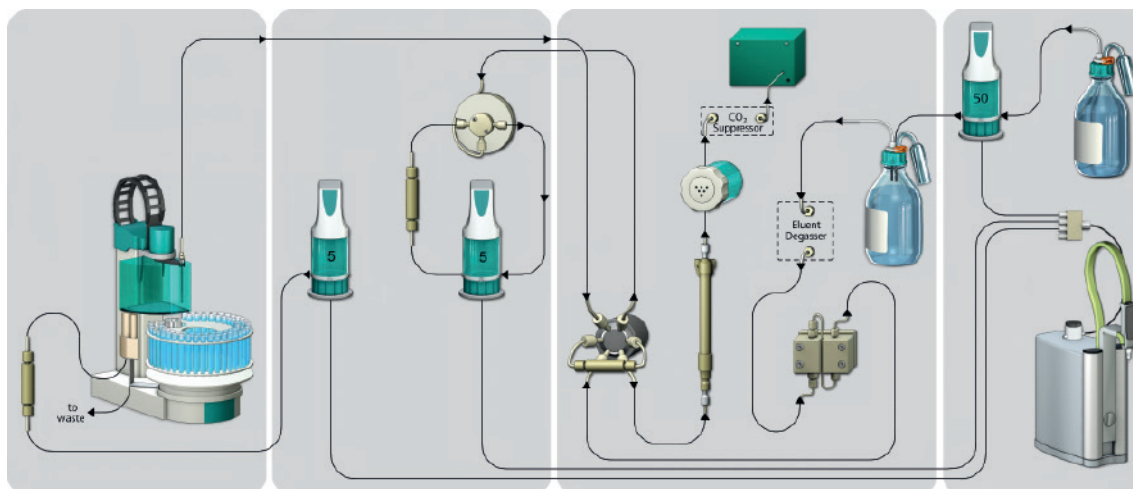
The PURELAB flex 5/6 ultrapure water system from ELGA LabWater was developed in cooperation with Metrohm especially for the requirements of ion chromatography. The «direct feed» flex 5 and flex 6 versions of the PURELAB system have an integrated recirculation chamber that ensures a supply of ultrapure water to Metrohm ion chromatographs that is guaranteed to be fresh.



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- Compact and reliable ultrapure water system for any feeder water
- System for 18.2 MΩ-cm Type I ultrapure water in continuous operation (24/7)
- Integrated UV lamp prevents bacterial contamination
- Flexible dosing, variable extraction from drops up to 2 L/min
- Preparation cartridge and UV lamp with rapid and simple replacement

IC flow chart with integrated ultrapure water system



IC system with Inline Eluent Preparation for the trace analysis of anions following Inline Preconcentration and matrix elimination

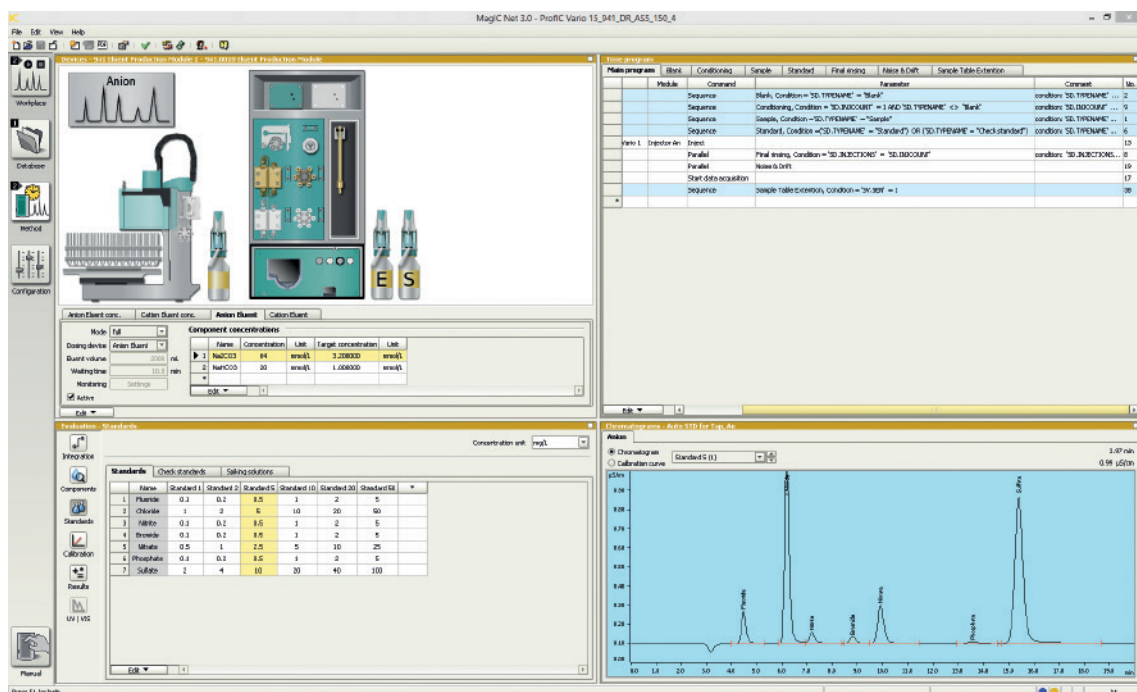
MagIC Net – the proven software for ion chromatography

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The new 941 Eluent Production Module is controlled by the proven MagIC Net software for ion chromatography. The software controls the ion chromatographs and any peripheral devices for Liquid Handling and automation. MagIC Net records all data produced, enables modern data management, and permits customized reports.

The preparation of any eluent is programmed within the instrument parameters of the desired method. Only the kind of eluent concentrate and the desired end concentration need to be specified. The dilution factor is calculated and documented automatically.

MagIC Net handles system monitoring and ensures the automated checking of results.



Fill level monitoring for greater safety

In addition to eluent preparation, the integrated fill level monitoring module enables reliable monitoring of auxiliary solutions and the waste canister. Sensors in various lengths are optionally. Thus, for example, it is possible to

ensure that the system never runs dry and that samples are only processed when solutions for the upcoming tasks have already been prepared. Fill level sensors guarantee maximum reliability and safety.

Technical information

Number of eluents	4
Operating mode	optionally Full or Empty
Connectors	1 × Controller socket (USB) 2 × USB sockets 3 × MSB sockets (Dosino) 4 × Level sensor sockets
Warranty	3 years

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Ordering information

Metrohm instruments

2.941.0010	941 Eluent Production Module
2.800.0010	800 Dosino (for additional eluent)

Accessories

6.5330.090	IC equipment: additional eluent on the Eluent Production Module
6.2061.100	Bottle holder
6.2061.110	Base tray with sensor
6.2061.120	System connector
6.1626.000	Bottle attachment GL 45 for level sensor
6.2769.000	FULL sensor for level sensor
6.2769.100	EMPTY sensor for level sensor for 1 L bottles
6.2769.110	EMPTY sensor for level sensor for 2 L bottles
6.2769.120	EMPTY sensor for level sensor for 10 L canisters
6.2151.060	Cable for Level Control and Eluent Production Module

IC eluent concentrates

(can be ordered directly from SIGMA-ALDRICH: www.sigmaaldrich.com)

61905	1 L HNO ₃ 34 mM and dipicolinic acid 14 mM, (20 ×) for Metrosep C 4
62414	1 L Na ₂ CO ₃ 64 mM and NaHCO ₃ 20 mM, (20 ×) for Metrosep A Supp 5
72784	1 L Na ₂ CO ₃ 72 mM, (20 ×) for Metrosep A Supp 7
75335	1 L Na ₂ CO ₃ 100 mM and NaHCO ₃ 100 mM, (20 ×) for Metrosep A Supp 10
38302	1 L Na ₂ CO ₃ 150 mM and NaOH 15 mM, (20 ×) for Metrosep A Supp 16

ELGA ultrapure water system

(can be ordered directly from ELGA LabWater: www.elgalabwater.com)

PURELAB flex 5	Type I ultrapure water system including RO module Feeder water: pretreated water or drinking water
PURELAB flex 6	Type I ultrapure water system Feeder water: pretreated water

www.metrohm.com