

System description

designed for fast analysis of cations and anions

compact, expandable

Conductivity detector

Thermostated stainless steel electrodes
Noise: 0.02 μ S, 1s
Drift: $<1,0 \times 10^{-5}$ μ S/hr
Linearity: $<1\%$
Measurement range: 0 – 10.000 μ S / cm
Analogue output: +/- 5 Volt
Autozero function: for the entire range
effective cell volume: 1 μ L volume
Base line adjustment
Auto-Zero funktion free programmable
Maintenance free

Pump

Pump Head: 10 mL Titanium
Flow Rate: 0.01 – 10.00 mL /min in 0,01 ml increments
Pressure: 0–35 MPa (0–5000 psi)
Flow precision: $<1\%$ (RSD) at 100 μ L/min
Flow accuracy: $<1\%$
Vacuum degasser

Separation column

Cation exchange column
Anion exchange column
Different dimensions; stainless steel or PEEK

Sample injection

Manual injection
6-port, 2-position Rheodyne valve, electrically activated

Tubings

PEEK or FEP

Data Acquisition

Data-Acquisition and analysis with iPeak
Fast and easy operation

Interfaces

1 USB ports
Analogue output (conductivity)

optional: Autosampler unit

x y z- robot
Sample cooling 8° C by Peltier elements
Syringe pump, Motor-Injection valve
Sample rack for 4 x 48 Vials (1,5 mL Standard) or 2 micro plates (96 format)

Sample injection: 50 μ L, 100 μ L in 1 μ L- steps,
free programmable

optional: Column heater

Temperature free programmable 20 - 80° C by Peltier elements
Temperature accuracy: 0,1° C

IONUS



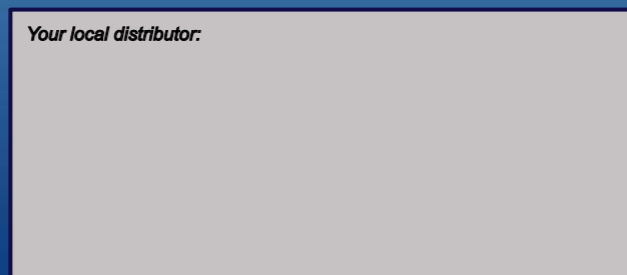
*fast determination of
cations and anions*

All information is subject to change without further notice.

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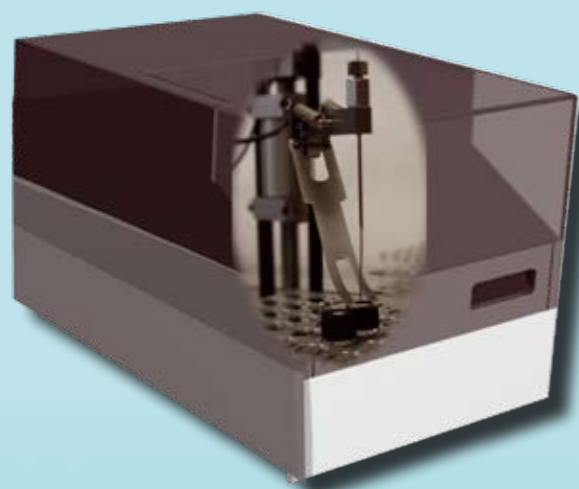
Version2009-Rev.1

www.membrapure.de

IONUS - easy handling

The ion chromatograph IONUS is the ideal instrument for the analysis of cations and anions in water, drinking water, environmental samples, in research, quality control of process water in semiconductor industry and in power plants.

This produces on the day by day use results with the highest precision, reproducibility and accuracy.



Sample injection can be done manually or with the optional autosampler. The autosampler allows the continuous analysis of up to 192 samples (4 x 48 vials). The samples are stored at 8°C in the autosampler. The mechanics of the xyz-robot allow the injection of the samples in 1µl steps without sample loss. A washing routine of the injection valve and syringe pump guarantees zero cross-contamination.

- easy handling

The Compounds

Eluent system - the double-head pump guarantees the high precision of the eluent flowrate. In combination with the pulse dampening unit the almost pulsfree operation is possible.

Degasser - the integrated degassing unit reduces the time of eluent preparation and guarantees continuous operation.

Sample separation - columns with different separation resins and capacities enable the user to get optimal results with a very high reproducibility.

Suppression - the automated suppression system is pressure stable resulting in a low signal/noise ratio. This guarantees detection limits down to 1 µg/L.

Conductivity detector - highest sensitivity and a broad measuring range allow the determination of samples from trace analysis up to process water.

- fast determination

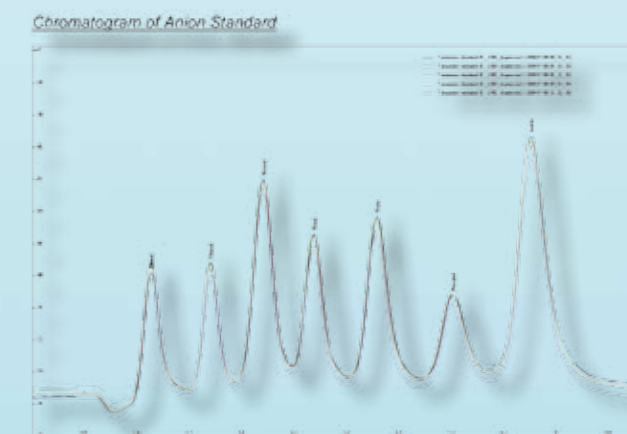
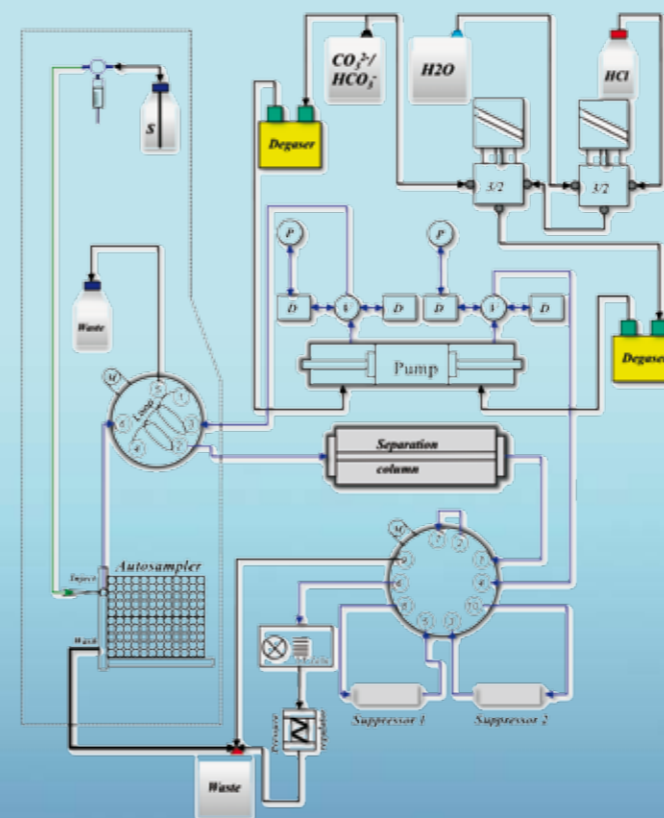
Operation software iControl

IONUS is operated with the user friendly, self-explaining software **iControl**. Implemented, optimized separation programs are correlated with each sample for the analysis. Correlation with new samples can be done when the instrument is analyzing a sample.

The current status of important instrument parameters is shown.

All operation parameters and events of each analysis are documented in a log-File.

Individual separation programs can be easily created and stored in the software.

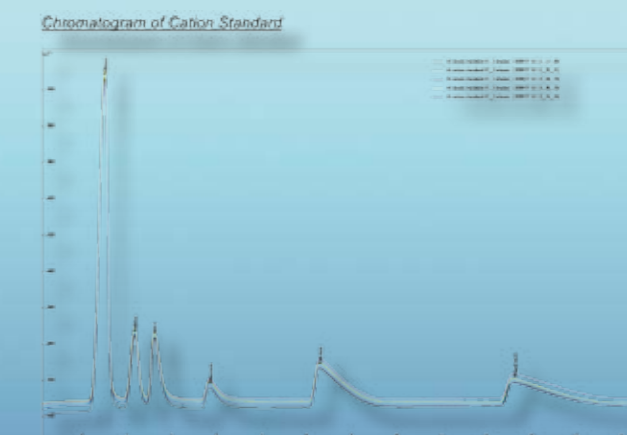


Data Acquisition and Handling

The data acquisition and data analysis system **iPeak** records the data sent by the conductivity detector. Chromatograms are shown on-line.

Internal data banks allow the fast peak identification. Quantitative calculations are performed with internal or external standards, dilution and/or multiplication factors.

Several analysis runs can be compared using compiler programs. The results of each analysis is documented in an individual report.



Anion determination with suppression
Standard analysis of F, Cl, Br, NO₂, NO₃, PO₄, SO₄ according to DIN and EPA300

Cation determination
Analysis of NH₄, Na, Li, Ca, Mg

Analysis of specific anion and cations
Analysis of heavy metals, organic anions

