



# Continuous Ion Chromatography Module

Enjoy the benefits of automatic generation of high-purity eluents

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CAN  
TRUST

 **Metrohm**

# Empowering your IC analysis with a sustainable solution

Manual preparation of hydroxide eluents costs valuable laboratory time, consumes substantial amounts of chemicals, and is prone to human error. The Continuous IC Module is the solution to these issues.

It is sustainable and cost-efficient, as it helps to reduce the consumption of chemicals and the equipment can be used multiple times. Moreover, automated hydroxide eluent generation with the Continuous IC Module provides for safe handling of hydroxide eluents while improving reproducibility and accuracy of results.

## Ideal for optimizing workflows in environmental, industrial, and research laboratories

The short reaction time and fast equilibration provide for high flexibility for isocratic and gradient elution

methods, which is ideal for method development or routine analyses with changing methods. High-throughput labs profit especially from automatic and almost reagent-free eluent production as this saves time and money and enables 24/7 analysis.

Applications range from isocratic methods for the determination of major anions to convenient gradient methods for the determination of oxyhalides. Also, more complex applications using hyphenated systems with ion chromatography and mass spectrometry such as the determination of haloacetic acids are easily feasible and benefit from high purity, accuracy, and ease-of-use.

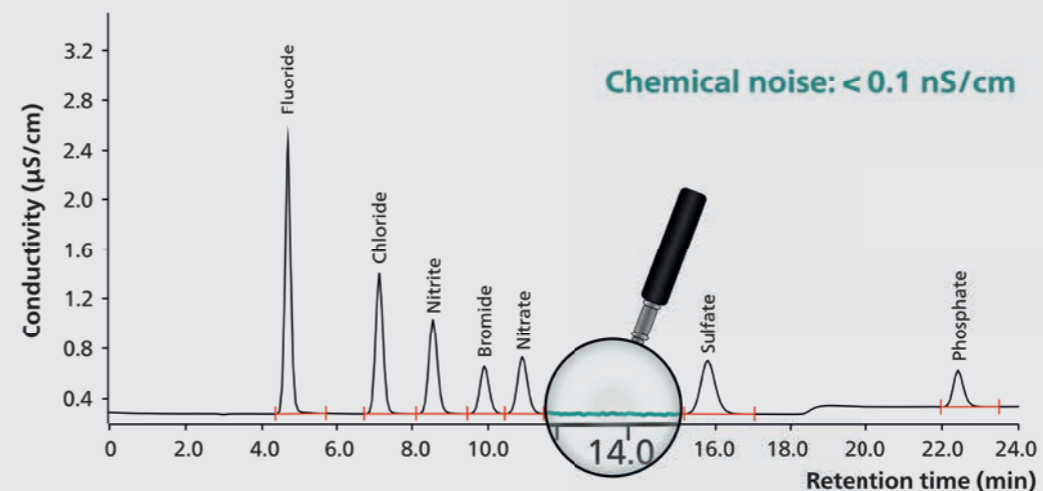
## HIGHLIGHTS

- High purity eluent generation
- For isocratic and easy gradient elution
- Elimination of manual eluent preparation procedures
- Sustainable solution with low running costs due to multiple use of the eluent producer cartridge (EPC) and free choice of chemicals
- Extremely low baseline, outstanding linearity and signal-to-noise ratio
- Upgradable for all Metrohm IC systems, small footprint, and easy to install
- Large portfolio of hydroxide suitable ion chromatography columns



## Ultra-low noise and lowest detection limits

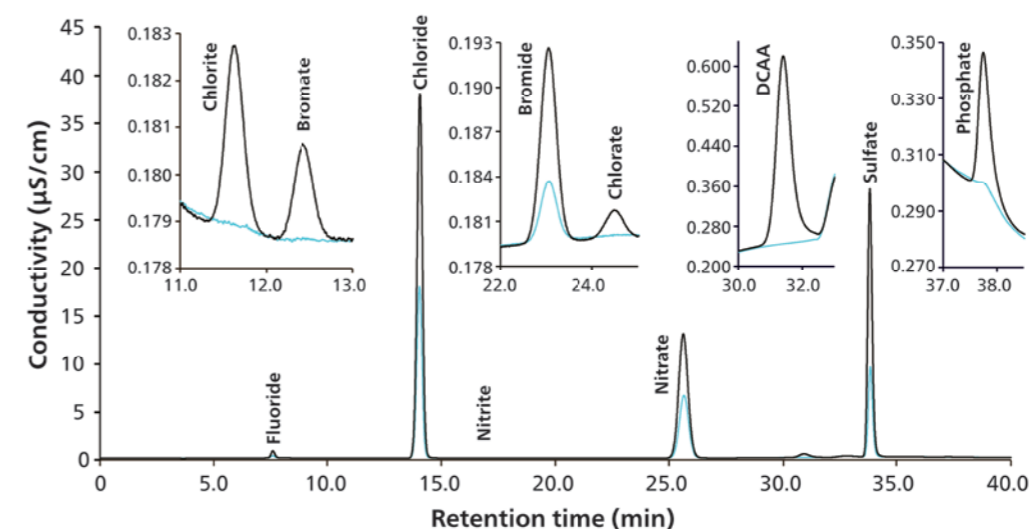
Combining eluent production with the unique MSM-HC Rotor A, Hydroxide results in ultra-low noise to achieve the lowest detection limits.



Standard anion determination with sequentially suppressed conductivity detection in a mixed anion standard with 1 mg/L concentration each. Performed using a Metrosep A Supp 19 -150/4.0 column and a KOH-gradient generated by the 948 Continuous IC Module.

## Compliance with international standards and specific audits

The Continuous IC Module, CEP, delivers an extremely low baseline, outstanding linearity, and a superior signal-to-noise ratio, confidently aligning with international standards such as U.S. EPA 300.1 Parts A and B, ISO 10304-1 and 4, or U.S. EPA 557.



Straightforward determination of inorganic anions, oxyhalides, and dichloroacetic acid (DCAA) according to U.S. EPA 300.1 Parts A and B using the Metrosep A Supp 21 - 250/4.0 column. The tap water (blue line) was spiked (black line) with a mixed standard containing 10 mg/L chloride, nitrate and sulfate, 1 mg/L DCAA, 100 µg/L fluoride and phosphate, 20 µg/L nitrite and bromide, and 5 µg/L chlorite, bromate, and chlorate.

# High purity automatic eluent generation – maximize productivity and reproducibility with the 948 Continuous IC Module, CEP

## FREEDOM TO CREATE YOUR OWN HYDROXIDE CONCENTRATE



- Create your own concentrate (LiOH, NaOH or KOH) in a concentration of 4 mol/L or even higher. Or use the 4 mol/L KOH from Merck to maximize ease-of-use
- Refill the concentrate bottle multiple times and reduce total cost of ownership (TCO)

The greener IC: Reduce chemical consumption and waste!

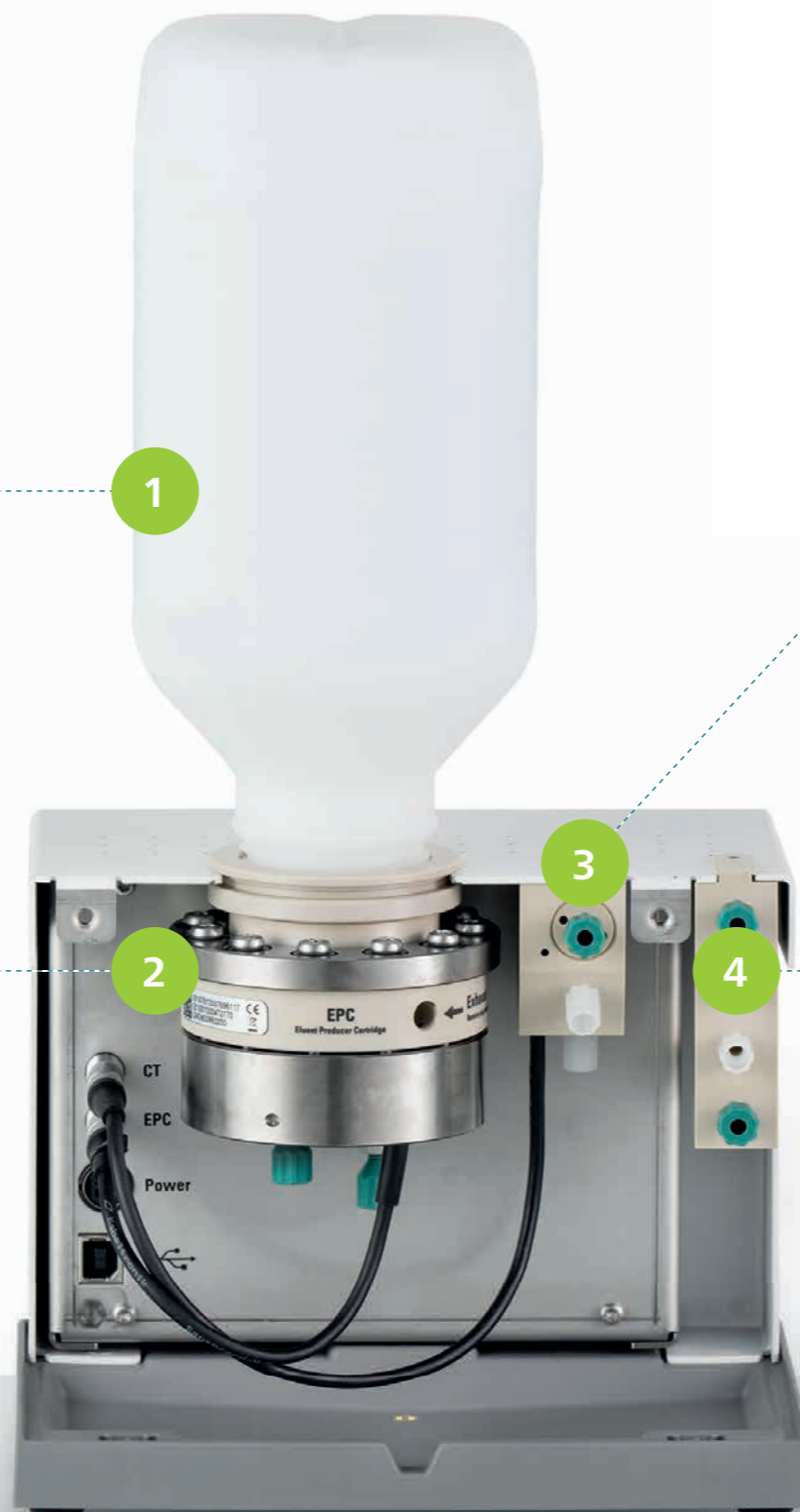
## THE ELUENT PRODUCER CARTRIDGE A (EPC A)



Produces the high-purity hydroxide eluent from the hydroxide concentrate.

- Based on the electrolysis of water
- Cation exchange membrane for selective ion migration into the eluent
- Fed by ultrapure water
- Can be fully automated when connected to a water purification system
- EPC A can be used multiple times

Self-monitoring to always ensure perfect eluent composition; extended lifetime by design.



## CONTINUOUS ANION TRAP (CT-A)

Removes anionic impurities and carbonate from the eluent.

Guarantees the high purity of the eluent, ensuring lowest detection limits due to exceptional low baseline and noise.



## HIGH-PRESSURE DEGASSER (H-DEG)

High-pressure degassing unit for the elimination of H<sub>2</sub> gas produced during eluent formation.

- Works passively using the principle of differential pressure
- Tube-in-tube design
- Optional rinsing possibilities



## METROHM SEQUENTIAL SUPPRESSION

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Can be combined with the Metrohm Suppressor Module (MSM) and Metrohm CO<sub>2</sub>-suppression technique for the best signal-to-noise ratios

- High capacity Metrohm Suppressor Module (MSM-HC Rotor A, Hydroxide) for hydroxide eluents
- MCS for additional CO<sub>2</sub> removal





# Ordering information

Continuous IC Module	
<b>2.948.0010</b>	<b>948 Continuous IC Module, CEP</b> including:
6.02850.200	Eluent Producer Cartridge A
6.02850.100	Continuous Anion Trap
6.02850.000	High-Pressure Degasser
6.05000.300	Accessory kit: CEP
Suppressor for hydroxide eluents	
6.2842.100	MSM-HC Rotor A, Hydroxide
High purity eluent concentrate	
67109	4 M Potassium hydroxide solution (Supelco, Merck)
High performance columns	
6.1005.3x0	Metrosep A Supp 1 - x50/4.6
6.1020.0x0	Metrosep A Supp 10 - xxx/4.0
6.1020.2x0	Metrosep A Supp 10 - xxx/2.0
6.01032.4x0	Metrosep A Supp 17 - xxx/4.0
6.01033.4x0	Metrosep A Supp 18 - xxx/4.0
6.01034.4x0	Metrosep A Supp 19 - xxx/4.0
6.01036.4x0	Metrosep A Supp 21 - xxx/4.0



