

# Metrohm Columns and their Application



## Robust analysis of process and waste waters

### Contaminated samples and robust analysis – not a contradiction in itself

The monitoring of municipal and industrial waste waters is regulated by several norms and standards such as EPA 300.0, EPA 9056, or ISO 10304-1.

When automating such analyses the challenge lies in the presence of particles, colloids, algae, and bacteria, which often contaminate such matrices.



# Metrosep A Supp 4

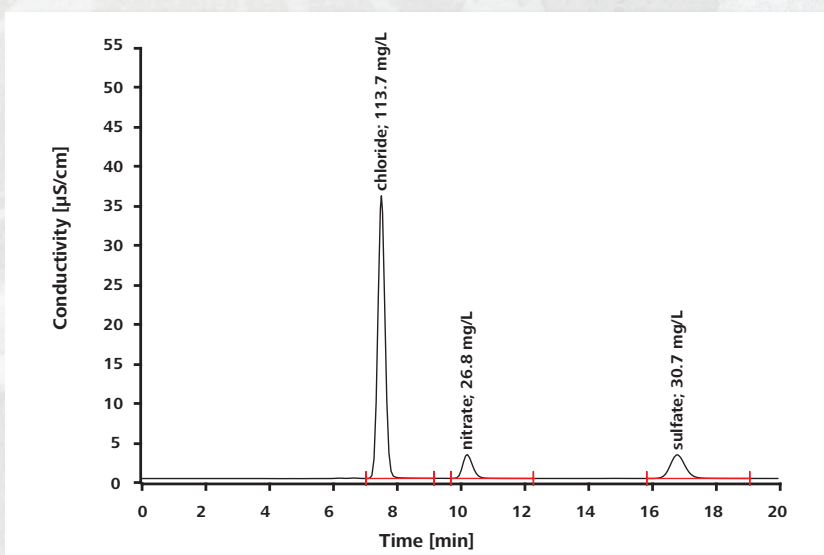
# Metrosep A Supp 4 – the perfect column for waste water analysis

The Metrosep A Supp 4 is a dedicated column enabling users to perform fast and precise analyses of municipal and other kinds of waste water. With a size of its polymer particles of 9  $\mu\text{m}$ , this column operates with a low back pressure providing for fast results. The proven Metrohm Inline Sample Preparation Technique of Inline Ultrafiltration reliably prevents the column from contamination by any bacteria present in the sample.

## Metrohm Inline Ultrafiltration for a long column life

The Metrohm Inline Sample Preparation Technique of Inline Ultrafiltration (pore size of filter membrane: 0.2  $\mu\text{m}$ ) provides for a long life of the separation column even when used with heavily contaminated matrices. Confronted with high sample loads, users can easily automate

this Inline Sample Preparation Technique saving time and increasing the reproducibility of results. In order to optimize the selectivity of lipophilic analytes, organic modifiers of up to 100% may be used with the eluent.



Sample of a waste water purification plant:  
Metrosep A Supp 4 - 250/2.0: 1.7 mmol/L sodium hydrogen-carbonate, 1.8 mmol/L sodium carbonate, column temperature 30 °C, sample volume 20  $\mu\text{L}$ , flow 0.25 mL/min, inline ultrafiltration, sequential suppression, conductivity detector.

## The Metrosep A Supp 4 also enables ...

- the separation of the halogens fluoride, chloride, bromide including iodide.
- the fast analysis of late eluting ions such as citrate/iodide.
- the separation of iodate and iodide in the same run.
- fast analyses of up to 2.0 mL/min flow rate.

## Did you know that all Metrohm columns ...

- record the number of injections and working hours of each column.
- can be used with organic modifiers such as acetone, acetonitrile, and methanol.
- offer robust Swiss Quality for a long column life.
- can be used with instruments from third party manufacturers as well.

## Ordering Information

6.1006.430 Metrosep A Supp 4 - 250/4.0  
6.01021.230 Metrosep A Supp 4 - 250/2.0

[www.metrohm.com](http://www.metrohm.com)

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